RISK MANAGEMENT FRAMEWORK IN BANKS

Thank you for inviting Reserve Bank of India to participate in this 8th Seminar of SAARCFINANCE to be hosted by State Bank of Pakistan. I intend to talk briefly on different types of risk, organizational structure for risk management and steps taken by RBI for implementation of Basel III guidelines in the Indian perspective.

Banking Regulation - Legal Framework

1. The Banking Regulation Act, 1949 (BR Act) provides the legal framework for regulation and supervision of banks in India. This statute, together with some provisions in the Reserve Bank of India Act, 1934 specifically empower the Reserve Bank of India (RBI) to prescribe standards and monitor liquidity, solvency and soundness of banks, so as to ensure that depositors' interests are protected at all times. In addition, Reserve Bank also derives such powers from certain specific statutes viz. State Bank of India Act, 1955, State Bank of India (Subsidiary Banks) Act, 1959 and Banking Companies (Acquisition and Transfer of Undertakings) Acts, 1970 & 1980.

Risk Management in Banks - Indian regulatory framework

2. Banks in the process of financial intermediation are confronted with various kinds of financial and non-financial risks viz., credit, interest rate, foreign exchange rate, liquidity, equity price, commodity price, legal, regulatory, reputational, operational, etc. These risks are highly interdependent and events that affect one area of risk can have ramifications for a range of other risk categories. Reserve Bank of India has been giving importance on sound risk management infrastructure within banks. RBI has issued guidelines to banks on all aspects of risk management including risk management governance, asset liability management, interest rate risk management, stress testing, asset classification and provisioning norms, exposure norms, investment operations of

banks, specific guidance to banks on credit, market and operational risk. RBI has been emphasizing the importance of adopting the international best practices in bank regulation and supervision. Recently, Basel III norms have been implemented in India from April 2013 in phased manner as agreed to by the G20 jurisdictions. The current focus of RBI is on implementation of Basel II advanced approaches for credit, market and operational risk. Implementation of advanced approaches for credit, market and operational risk capital computation will help banks in instituting a robust risk management quantification infrastructure and also install an effective risk management governance system in banks as well as ensuring financial stability.

Besides, RBI has– been using macroprudential tools to ensure risk in the banking system is contained and banks' exposure to sensitive sectors like commercial real estate, equity exposures, etc. is reduced through use of time varying capital and provisioning norms. More recently, RBI has been working in implementing the macroprudential elements of Basel III framework viz., countercyclical capital buffer, and systemically important bank framework. It is felt that a sound implementation of these macro prudential frameworks will help the banking system in reducing the probability of crisis and its severity in case a crisis occurs.

RBI fully appreciates that risk management framework in a bank cannot be strengthened independent on general corporate governance framework in the banks and overall incentive structure in banks. The RBI guidelines on corporate governance and salary structure within the banks ensure that incentive structure is aligned with the overall long-term health of the bank.

In a developing economy like India, where banks are dominant providers of credit to productive sectors of the economy, there is a need to ensure that any signs of impairment of loan assets are recognized early and banks take appropriate timely actions. Recently, RBI guidelines on early recognition of deterioration in the quality of assets and restructuring of loans require banks to monitor their assets diligently and make early provisions for stress assets if required.

In India banks are required to invest 23% of their net demand and time liabilities in the form of government securities and other approved securities. The classification of investments is required to be in three categories HTM, AFS and HFT. The classification norms are quite stringent and securities kept in AFS and HFT portfolio are required to be mark to market and provided for in the case of depreciation. The netting of appreciation and depreciation is allowed in a limited manner only. This helps banks to have robust reserves in times of stress.

3. The primary responsibility of laying down risk parameters and establishing the risk management and control system rests with the Board of Directors. The implementation of the integrated risk management could be assigned to a Risk Management Committee or a Committee of Top Executives that reports to the Board. Banks should constitute a high-level Credit Policy Committee (CPC) to deal with issues pertaining to credit sanction, disbursement and follow-up procedures and to manage and control credit risk on a whole bank basis. Concurrently, banks should also set up an independent Credit Risk Management Department to enforce and monitor compliance of the risk parameters and prudential limits set by the Board / CPC. The financial crises in some countries have revealed a strong correlation between unhedged market risk and credit risk. The activities of Asset-Liability Management Committee (ALCO) and CPC for management of credit and market risks need to be integrated.

Credit Risk

3.1 The management of credit risk should receive the prime attention of the top management. The Loan Policy, approved by the Board, should cover the methodologies for measurement, monitoring and control of credit risk. Each bank should have a clearly defined scheme of delegation of powers and also evolve a credit approving system, where the loan proposals beyond a pre-specified limit are approved by an 'Approval Grid' or a 'Committee'. In order to control the magnitude of credit risk, prudential norms on benchmark financial ratios, single borrower or borrower - group exposure, substantial exposure, industry-specific, region-specific and sector-specific exposures, exposure to sensitive sectors, etc. should be covered in the Loan Policy.

Banks should evolve comprehensive risk rating system that serves as a single point indicator of diverse risk factors of counterparties in relation to credit and investment decisions. At the same time, banks should adopt scientific method to price the credit and investment risk, which should reflect the expected probability of defaults.

The method of tracking non-performing loans near about the balance sheet date does not reveal the true quality of the Loan Book. The portfolio quality should be evaluated as an on-going exercise by tracking migration (upward or downward) of borrowers from one rating scale to another. Banks should undertake rapid portfolio reviews, stress tests and scenario analysis when the environment undergoes rapid changes.

Banks have been advised to put in place a Loan Review Mechanism (LRM) for large advances. The Loan Review / Audit Department should be assigned the responsibility of evaluating the effectiveness of loan administration and maintaining the integrity of credit grading process, assessing the loan loss provision in an objective manner and ensuring the portfolio quality.

Investments

3.2 The proposals for investment should be subjected to same degree of credit risk analysis, as loan proposals. The portfolio evaluation should cover the total exposures, including investments.

Off-balance Sheet Exposure

3.3 The off-balance sheet exposures should be subjected to risk evaluation. The current and potential credit exposures may be measured on a daily basis and the potential exposures may be quantified by subjecting the position to market movements involving normal and abnormal movements in market variables like forex rate, interest rate, equity prices, liquidity conditions, etc.

Inter-bank Exposure and Country Risk

3.4 Banks should evolve a suitable framework to provide a centralised overview of the aggregate exposure on other banks. Banks should also endeavour for developing an internal matrix that reckons the counterparty and country risks.

Market Risk

3.5 Keeping the level of computerisation and MIS, banks have been advised to adopt easy-to-comprehend analytical tools for management of market risk. International banks, on the other hand, have made considerable progress in adopting more sophisticated techniques like Duration, Earnings at Risk (EaR), Value at Risk (VaR) and complex simulation models. Most of these banks have also adopted the Risk Adjusted Return on Capital (RAROC) framework and allocated economic capital on the basis of risks or variability of returns. The Basel Committee recommends that capital adequacy in relation to economic risk is a necessary condition for the long-term soundness of banks. The Committee also proposes to develop a capital charge for interest rate risk in the banking book for banks where the interest rate risk is significantly above average. In the backdrop of gradual integration of domestic markets with external markets, large banks in India should also adopt more sophisticated techniques in the management of market risk. The banks should take the following steps for improving the existing systems.

Liquidity Risk

3.5.1~~6~~ Apart from complying with the prudential limits on cash flow mismatches stipulated under ALM Guidelines, banks should also consider putting in place prudential limits on inter-bank borrowings, especially call fundings, purchased funds, core deposits to core assets, off-balance sheet commitments, swapped funds, etc. Banks should also evaluate liquidity profile under bank-specific and market crisis scenarios. Contingency plans should be prepared to measure the ability to withstand sudden adverse swings in liquidity conditions.

Interest Rate Risk

3.5.2~~7~~ Banks should fix a definite timeframe for moving over to VaR and Duration approaches for measurement of interest rate risk. Banks should also develop capabilities to undertake stress tests to capture the adverse effects of extreme volatile conditions or outlier events. A scientific internal Funds Transfer Price (FTP) mechanism could be evolved to supplement the ALM.

Capital for Market Risk

3.5.3~~8~~ It would be desirable to adopt international standards on providing explicit capital cushion for the market risk to which banks are exposed. While small banks operating predominantly in India could adopt the standardised approach, large banks as well as banks operating in international markets should develop expertise in evolving internal models for measurement of market risk.

Operational Risk

3.6~~9~~ Operational risk is emerging as an important feature of sound risk management in the wake of phenomenal increase in the volume of financial transactions, high degree of structural changes and complex technological support systems. Banks should adopt proper systems for measurement, monitoring and control of operational risk.

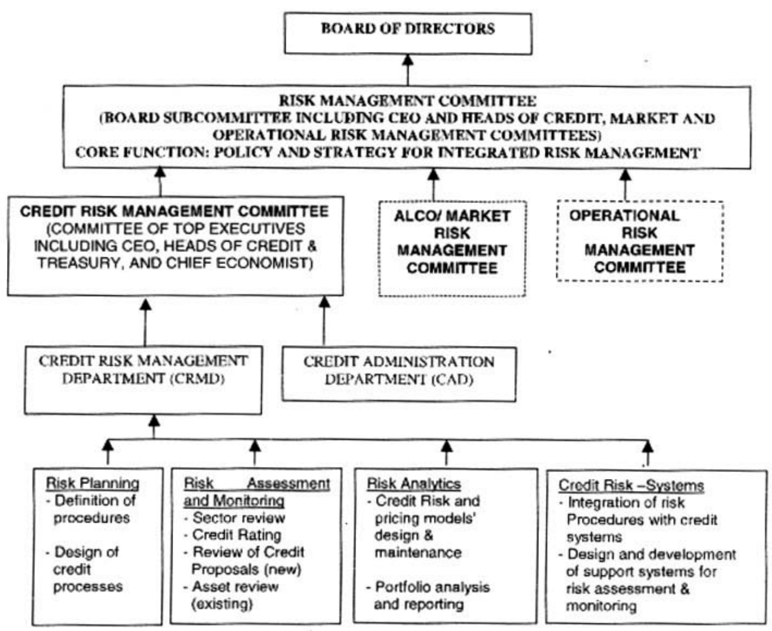
Organisational Structure

4. The **Board of Directors** should have the overall responsibility for management of risks. The Board should decide the risk management policy of the bank and set limits for liquidity, interest rate, foreign exchange and equity price risks.

The **Risk Management Committee** will be a Board level Sub-committee including CEO and heads of Credit, Market and Operational Risk Management Committees. It will devise the policy and strategy for integrated risk management containing various risk exposures of the bank including the credit risk. For this purpose, this Committee should effectively coordinate between the Credit Risk Management Committee (CRMC), the Asset Liability Management Committee and other risk committees of the bank, if any.

Each bank may, depending on the size of the organization or loan/ investment book, constitute a high level **Credit Risk Management Committee (CRMC)**. The Committee should be headed by the Chairman/CEO/ED, and should comprise of heads of Credit Department, Treasury, Credit Risk Management Department (CRMD) and the Chief Economist.

Typical Organisational Structure for Risk Management



Basel III - Capital Regulations

Part A: Guidelines on Minimum Capital Requirement

5. Reserve Bank issued Guidelines based on the Basel III reforms on capital regulation on May 2, 2012, to the extent applicable to banks operating in India. The Basel III capital regulation has been implemented from April 1, 2013 in India in phases and it will be fully implemented as on March 31, 2018.

Further, on a review, the parallel run and prudential floor for implementation of Basel II vis-à-vis Basel I have been discontinued.

Approach to Implementation and Effective Date

5.1 The Basel III capital regulations continue to be based on three-mutually reinforcing Pillars, viz. minimum capital requirements, supervisory review of capital adequacy, and market discipline of the Basel II capital adequacy framework. Under Pillar 1, the Basel III framework will continue to offer the three distinct options for computing capital requirement for credit risk and three other options for computing capital requirement for operational risk, *albeit* with certain modifications / enhancements. These options for credit and operational risks are based on increasing risk sensitivity and allow banks to select an approach that is most appropriate to the stage of development of bank's operations. The options available for computing capital for credit risk are Standardised Approach, Foundation Internal Rating Based Approach and Advanced Internal Rating Based Approach. The options available for computing capital for operational risk are Basic Indicator Approach (BIA), The Standardised Approach (TSA) and Advanced Measurement Approach (AMA).

5.2 Keeping in view the Reserve Bank's goal to have consistency and harmony with international standards, it was decided in 2007 that all commercial banks in India (excluding Local Area Banks and Regional Rural Banks) should adopt Standardised Approach for credit risk, Basic Indicator Approach for operational risk by March 2009 and banks should continue to apply the Standardised Duration Approach (SDA) for computing capital requirement for market risks.

5.3 Having regard to the necessary upgradation of risk management framework as also capital efficiency likely to accrue to the banks by adoption of the advanced approaches, the following time schedule was laid down for implementation of the advanced approaches for the regulatory capital measurement in July 2009:

S. No.	Approach	The earliest date of making application by banks to the RBI	Likely date of approval by the RBI
a.	Internal Models Approach (IMA) for Market Risk	April 1, 2010	March 31, 2011
b.	The Standardised Approach (TSA) for Operational Risk	April 1, 2010	September 30, 2010
c.	Advanced Measurement Approach (AMA) for Operational Risk	April 1, 2012	March 31, 2014
d.	Internal Ratings-Based (IRB) Approaches for Credit Risk (Foundation- as well as Advanced IRB)	April 1, 2012	March 31, 2014

Thus, with full implementation of capital ratios and CCB the capital requirements are summarised as follows:

Regulatory Capital		As % to RWAs
(i)	Minimum Common Equity Tier 1 Ratio	5.5
(ii)	Capital Conservation Buffer (comprised of Common Equity)	2.5
(iii)	Minimum Common Equity Tier 1 Ratio plus Capital Conservation Buffer [(i)+(ii)]	8.0
(iv)	Additional Tier 1 Capital	1.5
(v)	Minimum Tier 1 Capital Ratio [(i) +(iv)]	7.0
(vi)	Tier 2 Capital	2.0
(vii)	Minimum Total Capital Ratio (MTC) [(v)+(vi)]	9.0
(viii)	Minimum Total Capital Ratio plus Capital Conservation Buffer [(vii)+(ii)]	11.5

5.4 In order to ensure smooth migration to Basel III without aggravating any near term stress, appropriate transitional arrangements have been made. The transitional arrangements for capital ratios begin **as on April 1, 2013**. However, the phasing out of non-Basel III compliant regulatory capital instruments begins **as on January 1, 2013**. Capital ratios and deductions from Common Equity will be fully phased-in and implemented as on March 31, 2018. The phase-in arrangements for banks operating in India are indicated in the following Table:

Table 1: Transitional Arrangements-Scheduled Commercial Banks (excluding LABs and RRBs)

(% of RWAs) **Minimum capital ratios**	April 1, 2013	March 31, 2014	March 31, 2015	March 31, 2016	March 31, 2017	March 31, 2018
Minimum Common Equity Tier 1 (CET1)	4.5	5	5.5	5.5	5.5	5.5
Capital conservation buffer (CCB)	-	-	0.625	1.25	1.875	2.5
Minimum CET1+ CCB	4.5	5	6.125	6.75	7.375	8
Minimum Tier 1 capital	6	6.5	7	7	7	7
Minimum Total Capital*	9	9	9	9	9	9
Minimum Total Capital +CCB	9	9	9.625	10.25	10.875	11.5
Phase-in of all deductions from CET1 (in %)	20	40	60	80	100	100

Part B: Supervisory Review and Evaluation Process (SREP)
Introduction to the SREP under Pillar 2

5.5 The New Capital Adequacy Framework (NCAF), based on the Basel II Framework evolved by the Basel Committee on Banking Supervision, was adapted for India vide Circular DBOD.No.BP.BC.90/20.06.001/ 2006-07 dated April 27, 2007. These guidelines were further strengthened under Basel 2.5 amendments to the extent applicable. A reference may be made to the Master Circular on Basel III Capital

Regulations. Banks are required to have a Board-approved policy on Internal Capital Adequacy Assessment Process (ICAAP) and to assess the capital requirement as per ICAAP. It is presumed that banks would have formulated the policy and also undertaken the capital adequacy assessment accordingly.

5.6 The Capital Adequacy Framework rests on three components or three Pillars. Pillar 1 is the Minimum Capital Ratio while Pillar 2 and Pillar 3 are the Supervisory Review Process (SRP) and Market Discipline, respectively. The objective of the SRP is to ensure that banks have adequate capital to support all the risks in their business as also to encourage them to develop and use better risk management techniques for monitoring and managing their risks. This in turn would require a well-defined internal assessment process within banks through which they assure the RBI that adequate capital is indeed held towards the various risks to which they are exposed. The process of assurance could also involve an active dialogue between the bank and the RBI so that, when warranted, appropriate intervention could be made ~~to~~ either to reduce the risk exposure of the bank or augment / restore its capital. Thus, Internal Capital Adequacy Assessment Process (ICAAP) ~~ICAAP~~ is an important component of the SRP. The main aspects to be addressed under the SRP, and therefore, under the ICAAP, would include:

(a) the risks that are not fully captured by the minimum capital ratio prescribed under Pillar 1;

(b) the risks that are not at all taken into account by the Pillar 1; and

(c) the factors external to the bank.

The Structural Aspects of the ICAAP

6. This section outlines the broad parameters of the ICAAP that banks are required to comply with in designing and implementing their ICAAP.

Every bank to have an ICAAP

The ICAAP should be prepared, on a solo basis, at every tier for each banking entity within the banking group, as also at the level of the consolidated bank (i.e., a group of entities where the licensed bank is the controlling entity). This requirement would also apply to the foreign banks which have a branch presence in India and their ICAAP should cover their Indian operations only.

Guidelines for Market Discipline - General

7. The purpose of Market discipline is to complement the minimum capital requirements (detailed under Pillar 1) and the supervisory review process (detailed under Pillar 2). The aim is to encourage market discipline by developing a set of disclosure requirements which will allow market participants to assess key pieces of information on the scope of application, capital, risk exposures, risk assessment processes and hence, the capital adequacy of the institution.

In principle, banks' disclosures should be consistent with how senior management and the Board of Directors assess and manage the risks of the bank. Under Pillar 1, banks use specified approaches / methodologies for measuring the various risks they face and the resulting capital requirements. It is believed that providing disclosures that are based on a common framework is an effective means of informing the market about a bank's exposure to those risks and provides a consistent and comprehensive disclosure framework that enhances comparability.

Reserve Bank has provided detailed Pillar 3 disclosure templates including the Basel III composition of capital disclosure requirements for banks with a view to improving market discipline.

Capital Conservation Buffer - Objective

8. The capital conservation buffer (CCB) is designed to ensure that banks build up capital buffers during normal times (i.e. outside periods of stress) which can be drawn down as losses are incurred during a stressed period. The requirement is based on simple capital conservation rules designed to avoid breaches of minimum capital requirements.

9. High Level Steering Committee (HLSC) under the Chairmanship of Deputy Governor

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- Committee with representation from RBI, commercial banks and the academia to review of Supervisory Processes for Commercial Banks. The Committee was mandated to review the extant approaches, methodologies, processes/tools for onsite and off-site supervision, Supervisory Rating & Stress Testing Frameworks and recommend measures for a gradual progression to a Risk Based Supervision Framework.
- Committee submitted its report on June 11, 2012.

Guidelines issued by RBI to banks on Stress Testing

~~9~~10. Guidelines on stress testing were issued to banks o~~i~~n June 26, 2007. Banks were required to operationalise their formal stress testing framework in accordance with these guidelines from March 31, 2008.

The guidelines on stress testing were updated ~~i~~on December 2, 2013, in tune with BCBS Principles for Sound Stress Testing Practices and Supervision, after considering the stress experienced by banks in the recent past. Banks are expected to adopt these guidelines on stress testing from April 1, 2014.

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What the guidelines focus on

~~9~~10.1 The guidelines focus on overall objectives, governance, design and implementation of stress testing programmes. Further, three sets of shock-scenarios for various risks, viz., credit, market and liquidity risks, with increasing severity~~,~~ have been designed for the use of the banks in their stress tests. All banks will now be required, at a minimum, to carry out certain single factor stress tests involving shocks prescribed. The shocks prescribed are largely based on the FSAP of IMF, stress tests carried out by Financial Stability Unit (FSU) of RBI and BCBS guidelines. The baseline shocks are drawn from the recent historical experience in India, while medium and severe scenarios are hypothetical. The shocks have been simplified considering the differences

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in types of banks in India, their business models and sophistication levels. All banks will now be required, at a minimum, to carry out certain single factor stress tests involving shocks prescribed. Banks should be able to survive, at least the baseline shocks.

~~9~~10.2 Banks may also endeavour to assess their resilience to the possibility of more than one shock materialising simultaneously. Banks which have already realised shocks more severe than the ones indicated should have them built into their stress testing framework as baseline shocks and apply more stringent shocks to make the stress testing exercise meaningful. Banks with advanced capabilities may adopt more sophisticated methodologies for stress testing.

~~9~~10.3 Stress testing should form an integral part of the ~~i~~Internal C~~c~~apital A~~a~~dequacy A~~a~~ssessment P~~p~~rocess (ICAAP), which requires banks to undertake rigorous, forward-looking stress testing that identifies severe events or changes in market conditions that could adversely impact the bank. The stress testing guidelines, will apply both at solo as well as group level and would be considered by RBI to review the suitability of stress testing programmes and resultant actions including the requirement of additional capital and liquidity buffers as part of Supervisory Review and Evaluation Process (SREP) under the Basel II framework. Banks may perform the stress tests in terms of these guidelines at least at half yearly intervals.

Category of banks and Stress Testing

~~9~~10.4 The degree of sophistication adopted by banks in their stress testing programmes is expected to be commensurate with the nature, scope, scale and the degree of complexity in the bank's business operations and the risks associated with those operations.

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Accordingly, banks have been classified into three groups for the purpose of stress testing as under :

Group A – Bank with Total Risk Weighted Assets of more than Rs.200,000 crore

Group B – Bank with Total Risk Weighted Assets between Rs.50,000 crore and Rs.200,000 crore

Group C – Bank with Total Risk Weighted Assets less than Rs.50,000 crore

~~9~~10.5 The broad approach which could be considered by banks in formulating their stress testing programmes is detailed in the guidelines. While banks classified under Group C may use multi-factor sensitivity analysis as an option, banks classified under Group B and Group A should invariably use multi-factor sensitivity analysis as part of their stress testing. Large and complex banks i.e., Group A banks are required to regularly carry out reverse stress testing to investigate the risk factors that wipe out their capital resources and also make their business unviable.

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In addition, the guidelines aim to encourage banks to use multiple perspectives and a range of techniques and methodologies in order to achieve comprehensive coverage in their stress testing programme. The suite may include quantitative and qualitative techniques to support and complement the use of models and to extend stress testing to areas where effective risk management requires greater use of judgments. Banks are advised to identify and develop appropriate and meaningful mechanisms to convert scenarios into relevant internal risk parameters and losses and to test them regularly to check their reliability.

To recap, the stress testing guidelines

- incorporate BCBS principles on the subject,
- relate the complexity of the stress testing to the size of a given bank, and
- provide a set of shock-scenarios for banks to use in this regard.

~~10. High Level Steering Committee (HLSC) under the Chairmanship of Deputy Governor~~

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- ~~Committee with representation from RBI, commercial banks and the academia to review of Supervisory Processes for Commercial Banks. The Committee was mandated to review the extant approaches, methodologies, processes/tools for onsite and off-site supervision, Supervisory Rating & Stress Testing Frameworks~~

~~and recommend measures for a gradual progression to a Risk Based Supervision Framework.~~

- ~~Committee submitted its report on June 11, 2012.~~

11. Reserve Bank's approach to Risk Management in respect of other aspect is given in following paragraphs:

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a~~1~~. Even at the height of belief in the self correcting nature of free markets, which has now been debunked in the aftermath of crisis, Reserve Bank maintained a stance of conscious gradualism in fostering innovation and permitting sophisticated products in the markets. Reserve Bank's approach is more guided by the imperatives of ensuring that finance remains linked to the real sector and does not derive dynamics of its own. Given the nature of our economy with wide disparities in the income levels, education and sophistication and the pressing need for ensuring inclusive growth, the market development strategy has been carefully calibrated so as to avert any excesses which could lead to market failures. New products were introduced taking into account the preparedness of the financial markets in particular and the economy in general. The products are initially made open to a select set of well regulated participants and only after the products are stabilised and fine tuned, other participants are permitted. Only regulated entities such as banks have been permitted market making in derivate markets while others are permitted to use such products for only hedging risks on their balance sheet and not for punting. The opening up of markets, thus, has followed a gradualist strategy. This has kept us in good stead with no major market seizure even during the height of global financial crisis. In recognition of the precautionary approach to the regulation of the derivative market in facilitating financial innovation in a responsible manner, Reserve Bank has been awarded the 2012 Dufrenoy Prize for responsible innovation.

~~2~~b. Even in the context of prudential regulation of financial system, Reserve Bank adopted a considered approach of limiting the systemic risk originating from both the procyclicality as well as interconnectedness dimensions. The countercyclical measures were adopted as back as 2004 when specific sectors were observed to be heating up.

The risk weights and provisioning ratios were increased for sensitive sectors such as capital market, housing, commercial real estate during the period when the boom was building up. The ratios were brought down post Oct 2008 when the economy started slowing down on the back of global turmoil. Such macroprudential approach, which was not widely prevalent then, saved the domestic economy from the adverse shocks during the height of the crisis. Several measures have also been taken to reduce the inter-connectedness among banks on the one hand and between banks and NBFCs on the other, and limits have been placed on exposures to sensitive sectors to address the cross-sectional dimension of systemic risk.

~~3~~c. In the implementation of Basel III guidelines also, we have adopted a cautious approach inasmuch as the minimum capital requirement has been kept at 1 percentage point higher than that stipulated under Basel III to address the possible inadequacies in the capital allocation process and also the model risks in banks. The implementation schedule is also marginally advanced by 9 months, to be complied by March 31, 2018 against the Basel requirement of January 01, 2019.

~~4~~d. Having deliberated on Reserve Banks' approach towards risk management, I would now like to touch upon some of the contemporary issues in the context of Basel III implementation in India as well as some other issues.

Why implement Capital regulations?

~~5~~e. There is an argument that why an emerging economy like ours which neither was a direct cause nor the direct victim of the global crisis, should adopt onerous regulation such as Basel III which could, potentially, have a negative impact on output growth. The rationale for adopting these standards are two fold: One, we cannot remain non-complaint with international standards especially when Indian banks are venturing abroad and our markets are opened for international participants. Two, even while our financial system is much simpler and does not have much of the features which led to the crisis, we are vulnerable to the contagion from global economy as we are witnessing today and higher defences built under Basel III will provide our financial system the much needed resilience.

Issues with liquidity

~~6~~f. Basel III requires a high level of liquidity to be maintained through a pool of unencumbered liquid assets. While Indian banks maintain a large pool of liquid assets in compliance with the Statutory Liquidity Ratio, they may not technically qualify as liquid assets under Basel III as these are not freely available to banks for liquidity purposes. Requiring banks to maintain liquid assets over and above the SLR could put them in a competitively disadvantageous position. We are, therefore, considering as to what extent the SLR can be reckoned towards Basel III requirements for holding liquid assets.

Countercyclical capital

~~7~~g. While the idea of maintaining countercyclical capital to withstand the impact of vagaries of business cycles is theoretically appealing, its implementation has certain issues. The metric '*Credit to GDP ratio*' used by BCBS framework may not be suitable in the Indian context, given our traditionally low Credit to GDP ratio and the structural changes that our economy is experiencing on the back of financial inclusion and relatively high growth. The secotral approach that we had adopted in the past (i.e. altering the risk weights and provisioning requirement for sectors witnessing very high growth) seems more suitable. Deviations from the Basel framework are permissible in the "comply or explain" framework. The risk, however is that markets may interpret such deviation as non-compliance. Communication, therefore, during peer group review by Basel Committee as well as with markets assumes great significance.

Leverage Ratio

~~8~~h. Basel III prescribes a leverage ratio (ratio of Tier 1 capital to total exposures including off-balance sheet items) as backstop measure to supplement the risk-based capital adequacy ratio. Our view has been that since~~,~~ for Indian banks, the SLR requirements are substantial and carry little risks, these should be kept out of the leverage ratio. However, this was not accepted by the BCBS. But the comforting news is that the leverage ratio of Indian banks is modest compared to the levels being contemplated. Additionally, since under Basel III liquidity framework, all banks will have to maintain liquid assets, the perceived competitive disadvantage of Indian banks would get addressed substantially.

Implementation challenges in Basel II advanced approaches (skills,technology)

~~9~~i. While all commercial banks in India have adopted standardised approaches under Basel II by March 2009, the implementation of advanced approaches is under various stages. As the advanced approaches are technology intensive and also require highly skilled workforce, it is going to be challenging for banks going forward. Availability of data for building and testing advanced models and for building scenarios would be another serious challenge.

Compensation policy

~~10~~j. Perverse incentives fostered by irrational compensation policies were one of the causes attributed to the outbreak of global financial crisis. The compensation policies encouraged employees to increase short term profit without adequate recognition of risks and long-term consequences that their activities posed to the organisation. To address these concerns, Reserve Bank issued guidelines on compensation practices for private and foreign banks, based on the international initiatives.

Corporate Governance

~~11~~k. To strengthen the corporate governance and bolster risk management practices in banks, various capacity building measures in the form of trainings and workshops are held by RBI. In order to leverage on the Core Banking Solution (CBS) platform built by commercial banks and address, inter alia, potential operational risks arising out of technology adoption in the banking sector, Reserve Bank released an IT Vision Document for 2011-17 emphasising the need for risk controls, risk mitigation systems, fraud detection and prevention and business continuity plans (BCP). The establishment of the Centre for Advanced Financial Research and Learning (CAFRAL) should boost the capacity building efforts as well as promote research in regulation and supervision – an area in which India has to do a lot of catching up.

Financial Stability Reviews and Reports

~~12~~l**.** To create awareness of the vulnerabilities in the system and to initiate prompt corrective action, Reserve Bank periodically (on a half-yearly basis) brings out Financial Stability Reports and reviews sharing the results of its macroprudential surveillance. These reports have become very crucial in assessing the systemic risk build up especially in the light of the fast changing global and domestic scenario.

Dynamic Provisioning

~~13~~m**.** Building of countercyclical provisions is prudential measure which goes a long way in strengthening the resilience against the cyclical shocks. BCBS is working on an expected loss-based countercyclical provisioning methodology in consultation with IASB which is likely to take time. In India, banks have a stock of floating provisions which we have not permitted to be used, except under a situation of systemic stress. While the floating provisions may serve the purpose of countercyclical provision, a framework is necessary for allowing its use. As an interim measure, we have developed a methodology based on the Spanish dynamic provisioning system which has been put up for public comments.

Securitisation

~~14~~n**.** In the light of the lessons learnt from the global crisis the securitisation guidelines have been extensively redesigned to dissuade the '*originate to distribute*' model and to build the '*skin in the game*' by prescribing Minimum Holding Period (MHP) prior to securitisation and Minimum Retention Requirement (MRR) after securitisation.

Financial Stability and Development Council (FSDC)

~~15~~o. One of the prominent lessons taught by the crisis is to have a systemic view of risk and to be in readiness to take corrective action as and when required, which calls for a close coordination among different regulators. In order to have a formalised coordination mechanism, a Financial Stability and Development Council (FSDC) under

the Chairmanship of the Finance Minister has been constituted. A sub-committee of FSDC under the chairmanship of the Governor, Reserve Bank of India ensures coordination amongst the regulators during normal times.

Setting up of Holding Companies

~~16~~p. At present, most of the financial groups in India are led by banks and organised under the Bank Subsidiary model. This model, however, puts the onus on the parent bank for corporate governance, performance and capital requirement of the subsidiaries. Besides, the parent carries very substantial reputational risk. The Working Group on 'Introduction of Holding Company structure in India for banks' has recommended migration of major financial conglomerates to the holding company structure to address these limitations to some extent. Necessary legal amendments will have to be put in place for facilitating such migration.

Financial Sector Legislative Reforms Commission (FSLRC)

~~17~~q. Sound and unambiguous legislative framework is a prerequisite for an efficient regulatory system. At present, in India, there are about 60 Acts and multiple rules and regulations, many of which are archaic and the large number of amendments have made the laws ambiguous and complex. Government of India has constituted a Financial Sector Legislative Reforms Commission (FSLRC) to rewrite and streamline the financial sector laws, rules and regulations to bring them in harmony with India's fast growing financial sector.

Thank you.

References :

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1. DBOD.No.BP.(SC).BC.98/21.04.103/99 dated October 7, 1999.
2. DBOD.No.BP.520/21.04.103/2002-03 dated October 12, 2002.
3. DBOD.No.BP.BC.2 /21.06.201/2013-14 dated July 1, 2013
4. DBOD.BP.BC.No.75/21.04.103/2013-14 dated December 2, 2013

5. Address by Mr. Anand Sinha, Deputy Governor, Reserve Bank of India at the Risk & Governance Summit organised by the Indian School of Business, Hyderabad and Deloitte at Mumbai on August 23, 2012.