Basel II and Risk Management

Globalisation is the most important factor shaping today's world. India is no exception. The financial segments are gearing up to face the global competitive environment by initiating reforms by adopting prudential norms, best practices in corporate governance, internal control and risk-based auditing. There is a sea change in the working of banks. Risk management has become a new emerging tool used by banks for their sustainability. Basel II compliance and risk management in banks go hand-in-hand. The industry is gearing up to implement the standard. This article offers an insight into the concept of Basel II and the challenges involved.

Bank for International Settlements (BIS), a bank created in the 1930s to manage and monitor the repatriation from the war in Europe would have hardly thought that it would go on to provide guidelines for the risks that bankers face the world over. BIS is, today, one of the most formidable institutions in economics and financial sector.

In June 2004, the BIS finalised Basel II, after five years of industry and regulatory consultation. The objective behind this regulation is to align regulatory capital measures with the inherent risk profile of a bank considering credit, market, operational and other risks.

First Step

Basel I recommendation was the first among the series of reforms suggested. The greatest drawback of the Basel I proposal was that it prescribed a one-fits-all solution for all circumstances and focused on single risk to measure credit and market risk capital adequacy ratio. It does not cover the main risk element 'Operational Risk'. BIS defines operational risk as, *"the risk of loss resulting from inadequate or failed internal processes, people and system or from external events."* In short, operational risk identifies:

a. Why loss has happened, and

b. A breakdown of the causes into:

- People
- Process
- System, and
- External events

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Basel II and Its Basic Architecture

Even though India has one of the strongest banking systems compared to many peer group countries, our credit, market and operational risk measurement and management system is lagging behind the banks of many developed countries. Basel II implementation will certainly improve the working efficiency and competitiveness of Indian banks.

Basel II provides a more comprehensive and flexible approach for measuring and managing risk. It adds a new dimension called operational risk and encourages the bank's internal risk management methodologies. The new accord is based on three pillars:

Pillar 1: Minimum Capital Requirement: The minimum capital requirement is still kept at 8% of risk weighted assets. This lays emphasis on regulatory requirement for credit, market and operational risk.

$$\text{Capital adequacy ratio} = \frac{\text{Total Regulatory capital Tier I + Tier II + Tier III}}{\text{Risk weighted assets (Credit + Market + Operational)}}$$

To deal with the credit risk, Basel II suggests the following approaches:

a. Standardised Approach

b. Foundation Internal Rating Based (IRB) approach

Pillar 3: Market Discipline: This pillar emphasises the basic need of corporate governance and effective use of market discipline by enhanced disclosure. The comparison of Basel I with the enhanced Basel II standard is given in the following table 1.

Basel I	Basel II
Focused on Single risk Measure	More emphasis on bank's own internal risk management methodologies, supervisory review and market discipline
One-size-fits- all	Flexibility; Menu of approaches; Capital incentive for better risk management; Granularity in the valuation of assets and type of business and in the risk profile of their systems and operations
Broad Brush structure	More risk sensitive; multi-dimensional; focus on all operational components of banks

Table 1: Comparison of Basel I and Basel II standards
Source: The new Basel capital accord: an explanatory note, "BIS"

c. Advanced Internal Rating Based (IRB) approach

The first approach requires allocation of risk weight to each of the assets. Bank may use external credit assessment institutions for determining risk weights. The latter two approaches require assessment by banks internally using sophisticated models.

Pillar 2: Supervisory Review: The supervisory review process needs to ensure that each financial institution adopts effective internal processes for risk management. The supervisory process is based on the following principles. Banks to have:

a. A process for assessing the capital adequacy based on the risk profile,

b. Strategy for maintaining the capital levels,

c. A system to evaluate and monitor the capital requirement and ensure compliance,

d. Mechanism to intervene, prevent at early stage, the capital from falling below the minimum levels.

Operational Risk

The key difference of the new accord is the introduction of operational risk. This is not a new practice. However, the growing number of operational loss events worldwide has forced the management of the banks to look into this aspect more critically to prevent any frauds, reduce errors by implementing controls as a part of operating process. Evolving banking practices suggest that the risk other than credit and market risks can be substantial. The importance of operational risk has increased due to the following changes in operation and introduction of sophisticated methods and technology.

a. Highly automated technology, if uncontrolled can cause system failure. The loss may be much more as compared to manual system.

b. Emergence of E-banking and E-commerce has potential for internal, external fraud and system securities issues. This needs sound internal controls and back up systems.

c. Large-scale acquisitions, mergers and consolidations test the viability of integrated

system and HR practices.

Basel committee has identified the following types of operational risks:

- ✓ People Risk – connected with placement, competency, work environment and motivation
- ✓ Process Risk – connected with errors in processing, complexity of process, documentation and contract, violation of controls, money laundering, frauds, model and methodology errors
- ✓ Regulatory risk – connected with failing to comply with laws
- ✓ Technology risk – connected with system and technology failure
- ✓ Event Risk – unanticipated changes in external environment.

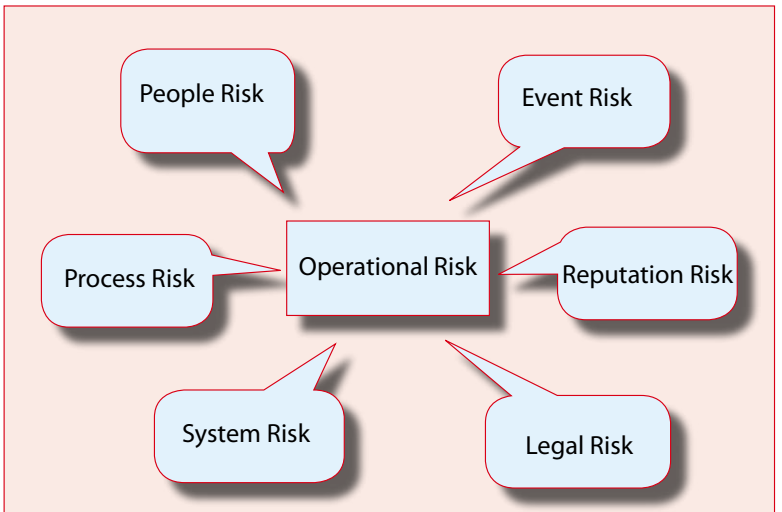

Fig 1: Types of Operational Risk

- ✓ Reputation Risk

Steps for Implementing Risk Management

Broadly the following steps are followed to implement the risk management system.

- ➢ Study the existing process organisation-wide and identify the risk that matters.
- ➢ Classify the risk according to criticality
- ➢ Set up systems and controls for monitoring and reporting to management

The first step towards the risk assessment is to identify the risk elements. Normally the organisations appoint risk consultants to study and identify the various risks pertaining to the different processes. This step involves interaction with various groups by organising workshops/meetings. Risk events are associated with people, process, and technology. They are recognised by experience, judgment, intuition and regulatory requirement. Different types of risk exposures thus identified are listed in matrix form in which risk/ exposures are categorised according to event/process in a business line.

Each risk element is classified according to its frequency and severity as given below:

- o High frequency – High Severity
- o High frequency – Low Severity
- o Low frequency – High Severity
- o Low frequency – Low Severity

For this purpose, each risk is associated with the probability of risk. This may require expertise, past data and judgment in the event of loss, and a methodology for finding the value to be established. This is called Value at Risk (VAR).

Next, internal controls for averting the loss is to be implemented. The existing internal control is studied and a gap analysis is performed. Monitoring risk should be an integral part of the process. Senior management should regularly receive risk and internal control weakness and it has to be put up to the board after review by audit committee. As per the proposed listing agreement with stock exchanges, it is mandatory for the CFO and CEO to certify annually in the financial statements that the organisation has a risk management system. Normally, Internal Audit plays a key role in surveillance function. The risk management system should have a process for mitigation of risk.

Basic Requirement for Sound Implementation

Basic requirement for effective implementation starts from identifying risk that matters and documenting the policies and procedures. The next important requirement is the structure that identifies, tracks, and measures the risk, and reports it to senior management. The above framework should be validated periodically. A sound database has to be developed for tracking and analysis. The basic requirement for implementation is given in Fig 2 below:

The backbone of Basel II implementation is the strong internal control system and supervisory control. It is essential to have a sound internal control for effective implementation. The basic reasons for the breakdown of internal control is given in Fig 3.

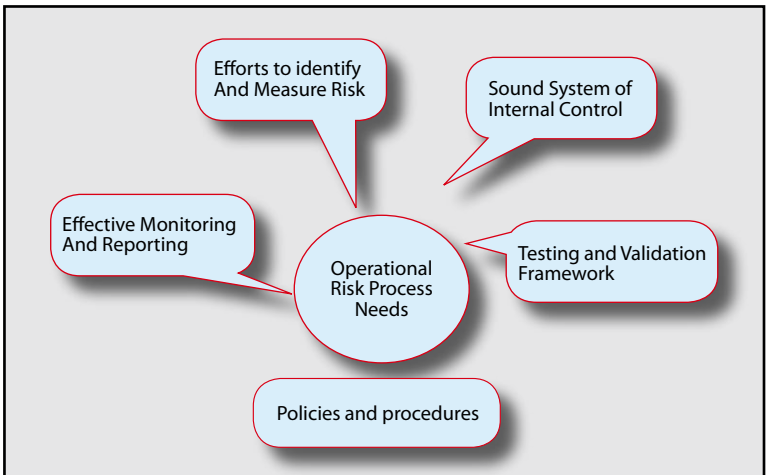

Fig2: Basic requirements for Implementation

Basel II Drivers

The first and most important driver is that implementation has to cover all areas of business processes and operations. Programme governance is the next important driver. This requires that the role and responsibilities of each individual has to be defined clearly. The third important driver of the Basel II accord is to upgrade data and existing IT systems for consistency across the organisation. It should be compatible with existing system architecture.

Challenges and Issues

There are no two opinions on the purpose and usefulness of the proposed new accord. The techniques and methods suggested may pose certain challenges for the banks, specially in a developing country like India. Fig. 4 broadly outlines the challenges and issues.

Capital Requirement

The capital requirement will almost invariably increase in all banks. Although capital requirement for credit risk may go down due to adoption of more risk sensitive models—such an advantage will be more than offset by additional capital charge for operational risk and increased capital requirement for market risk. This partly explains the current trend of consolidation in the banking industry.

Architecture, Supervisory Framework, Technology

The new standard is based on international best practices and calls for introduction of advanced risk management system with wider application throughout the organisation. It would be a Challenging task to create the required level of technological architecture and human skill across the institution.

Supervisory cadre has to be properly trained for understanding of critical issues for risk profiling of supervised entities and validating and guiding development of complex models. They are required to prescribe higher than the minimum capital levels for the bank and ensure that the minimum level is maintained by proper internal control and monitoring. Computation of probability of default, loss given default, migration-mapping and supervisory validation require creation of historical database, which is a time consuming process.

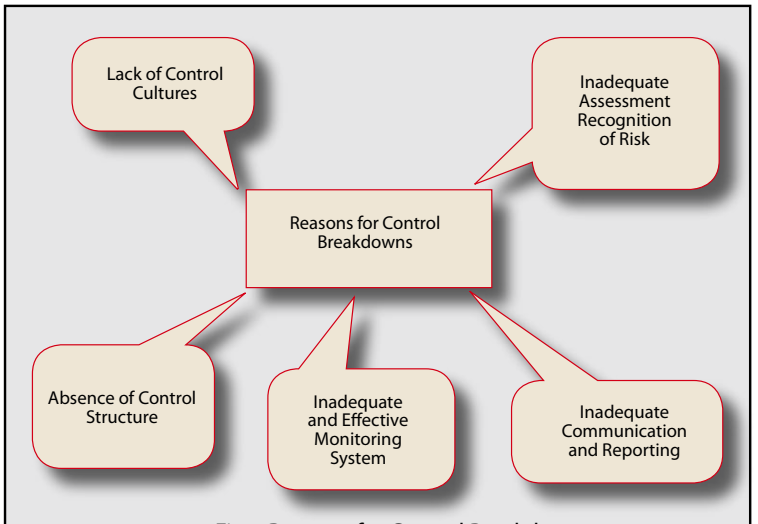

Fig3: Reasons for Control Breakdown

Corporate Governance Issues

Corporate governance is one of the key elements in the Basel II Standard. The proposal underscores the interaction between sound risk management practices and corporate good governance. It is the responsibility of the board for setting the basic tolerance levels for various types of risk. It should also ensure that management establishes a framework for assessing the risks, develops a system to relate risk to the bank's capital levels and establishes a method for monitoring compliance with internal policies.

Other Factors

- In case of unrated sovereigns, banks and corporates, the prescribed risk weight is 100%, whereas in case of those entities with lowest rating, the risk weight is 150%. This may create incentive to remain un-rated.
- Huge implementation cost may also impact profitability for smaller banks
- The new framework provides for alternative approaches for computation of capital requirement of various risks. This may result in high-risk assets flowing to banks on standardised approach. Hence, the system as a whole may maintain lower capital than warranted and become more vulnerable.
- Pillar 3 purports to enforce market discipline through stricter disclosure requirement. While admitting that such disclosure may be useful for supervisory authorities and rating agencies, the expertise and ability of the general public to comprehend and interpret disclosed information is open to question. Moreover, too much disclosure may cause information overload and may even damage financial position of bank.
- The new framework is very complex and difficult to understand. It calls for revamping the entire management information system and allocation of substantial resources. Therefore, it may be out of reach for many smaller banks.

Basel II - What it Means and How Far the Industry is Prepared for This

The new accord may bring forth not only the issues of risk measurement but also active risk management. This may require a vast amount of

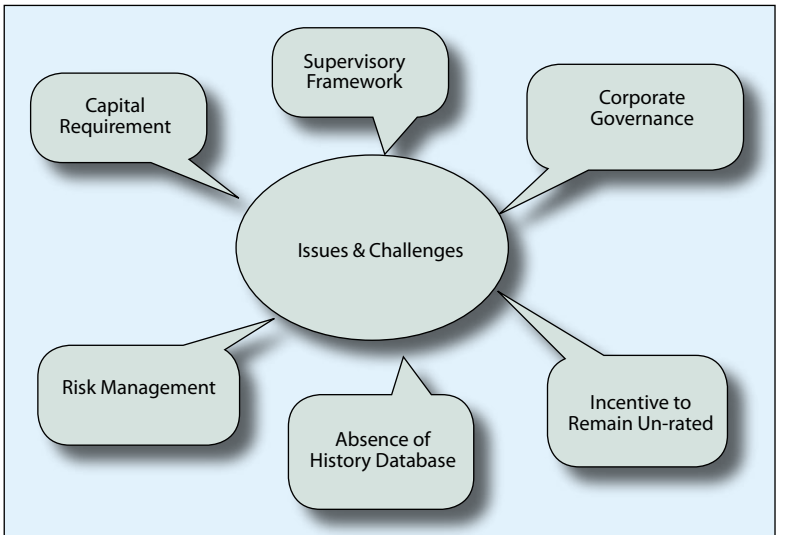

Fig 4 : Issues and challenges for Basel II

historical data and advanced technique. Cost of implementation varies from $10 m to $150 m. This may be a huge cost for medium and small banks.

According to a survey on *'Basel II – A challenge and opportunities to Indian banking'* by FICCI:

a. 87% of respondents are confident of meeting the deadline set for implementing Basel II guidelines by March 31, 2007.

b. The biggest challenge faced by banks is that of data collection and building database and training the personnel.

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c. Technology upgrade is perceived as one of the challenges by banks and is estimated to incur capital investment.

d. 77% are working hard to set the processes and robust MIS to comply the pillar III requirement.

Conclusion

India has one of the strongest banking systems as compared to many developing countries, but has to go a long way in technology dissemination and risk management. The precondition for Basel II implementation is that there should be a suitably developed national accounting and auditing standards and framework, which are in line with the best international practices. A minimum qualifying criteria for firms should be those that have a dedicated financial services or banking division and have proven ability to respond to training and upgrades required of its own staff to complete the tasks adequately. It also calls for a new mindset, an organisational culture to be developed and requires a lot of investment in technology and training of personnel. This may be a daunting task for small and medium banks. This may trigger mergers and consolidation.

With the gradual implementation of banking reforms in India, Indian banking system has shown a lot of improvement and has become robust and shown ample resilience to shocks and turnovers in the economy. It is hoped that by March 31, 2007, we will be comparable to the banks in developed countries. ❐