Coping with Basel-II: New Rules of the Game

The Reserve Bank of India has proposed a transition of Indian banks to the Basel-II norms for capital adequacy from March 31, 2007, and has adopted a consultative approach to ensure the same. A Steering Committee comprising of senior officials from 14 banks (private, public and foreign) has been constituted where Indian Banks' Association is also represented. This article provides an overview of Basel-II norms and related issues in Indian context.

—Uday M. Chitale

Until 1980s the quantum of capital of banking institutions did not receive the attention that it deserved. The catastrophic consequences of bank failures on the local economy and indeed, on all geographies where the bank has operations were brought home by spectacular collapse of banks such as Herstatt in 1974 and forced the bank regulators of affluent nations to focus and 'do something' about capital adequacy of international banks. The result was formulation of the Basel Committee on Banking Supervision comprising of the central bank governors of the Group of Ten counties in 1975. It consists of senior representatives of bank supervisory authorities and central banks from Belgium, Canada, France, Germany, Italy, Japan, Luxembourg, the Netherlands, Spain, Sweden, Switzerland, the United Kingdom, and the United States. It usually meets at the Bank for International Settlements in Basel, Switzerland where its permanent Secretariat is located. The Committee does not possess any formal supranational supervisory authority, and its conclusions do not, and were never intended to, have legal force. Rather, it formulates broad supervisory standards and guidelines and recommends statements of best practice in the expectation that individual authorities will take steps to implement them through detailed arrangements - statutory or otherwise - which are best suited to their own national systems. In this way, the Committee encourages convergence towards common approaches and common standards without attempting detailed harmonization of member countries' supervisory techniques.

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Basel-I Accord, 1988

In 1988, the Committee decided to introduce a capital measurement system commonly referred to as the Basel Capital Framework. Since 1988, this framework has been progressively introduced not only in member countries but also in virtually all other countries with active international banks. This system provided for the implementation of a credit risk measurement framework with a minimum capital standard of 8% by end-1992. Weightages were assigned by the committee for different categories of exposure of banks so that risky assets like unsecured commercial loans had a risk weight of 100% whereas risk-free investment in sovereign paper carried zero percent risk weight. Capital was categorized as Tier I representing equity and Tier II consisting of supplementary capital such as subordinate debt. This Basel I framework was relatively simple to understand and implement and mainstream banking institutions worldwide adopted the minimum capital adequacy standards which by and large improved their capitalization ratios. Our banking regulator RBI mandated a higher CRAR - Capital to Risk Weighted Assets Ratio - of 9% as against 8% suggested by Basel-I Framework.

No doubt the Basel Committee's initiatives to ensure adequate capital base of banks succeeded to a great extent. However, the 1988 Framework focused solely on the assets - mainly advances and investments -

with a one-size - fits – all approach by a prescription of 8% CRAR across the entire banking spectrum. This approach was considered too simplistic and therefore ineffective to grapple with evolving innovative financial products of banks such as derivatives and securitisation, which could be used to manipulate minimum capital numbers. Basel-I did not consider capital requirements to take care of substantial and real operational risks of banks. A need was also felt to recognize modern risk management techniques developed and implemented by major banks during the past decade since the norms did not distinguish between high and low quality assets within the same class.

Basel-II: New Capital Adequacy Framework, 2004

To set right these deficiencies, the Basel Committee issued a proposal in June 1999 for a New Capital Adequacy Framework to replace the 1988 Framework. Following extensive interaction with banks and industry groups worldwide, the proposal underwent a couple of revisions at its drafting stage and the final version - *'International Convergence of Capital Measurement and Capital Standards: A Revised Framework'* was issued by the Basel Committee on Banking Supervision in June 2004. This framework (popularly known as Basel-II) is intended to serve as a basis for national rule making and approval processes to continue, and for banks to complete their preparations for the new framework's implementation.

The revised Framework has been designed to provide options for banks and banking systems, for determining the capital requirements for credit risk and operational risk and enables banks / supervisors to select approaches that are most appropriate for their operations and financial markets. The Framework is expected to promote adoption of stronger risk management practices in banks. The revised framework builds on the current framework to align regulatory capital requirements more closely with underlying risks and to provide banks and their supervisors with several options for assessment of capital adequacy. Basel-II is based on three mutually reinforcing 'pillars':

Pillar I: minimum capital requirements, which seek to refine the standardized rules set forth in the 1988 Framework,

Pillar II: supervisory review of an institution's internal capital assessment process, and

Pillar III: market discipline by way of effective use of disclosure requirements as a complement to supervision efforts.

The three 'pillars' attempt to achieve comprehensive coverage of risks, enhance risk sensitivity of capital requirements and provide a menu of options to choose for achieving a refined measurement of capital requirements. Thus, key objective of the new Framework is to align regulatory capital to underlying risk and induce banks to strengthen their risk management capabilities.

Pillar I is designed to ensure that banks maintain sufficient capital to cover their risks based on their systematic measurement. It is well recognized that capital by itself cannot prevent bank failures. Therefore Basel-II Framework leans equally heavily on the pillars of supervisory reviews and market discipline. Pillar II seeks to ensure that banks follow improved risk management practices so as to contain risks to the minimum. Pillar III seeks to complement supervisory function through improved disclosure requirements and transparency in bank operations.

Credit Risk

With the objective of giving due consideration to the improvement and strengthening of a bank's risk management systems which should logically reduce its capital requirement, the Basel-II Framework prescribes 3 principal approaches for estimating capital:

1. Standard Approach
2. Foundation Internal Rating Based Approach (Foundation IRB)
3. Advanced Internal Rating Based Approach (Advanced IRB)

Standardised Approach: Under the Standardised Approach, risk weight would be applied to each asset based on its external credit rating (assigned by a rating agency). In each country, the regulator would approve the rating agencies in the country and decide on the applicable risk weight for each rating category. The Framework proposes four risk weights – 20%, 50%, 100% and 150%. The Framework provides the weights to be assigned for each of Standard & Poors (S&P)'s rating categories. For rating agencies in other countries, the regulator would be required to map the domestic rating agencies' ratings with those of S&P. In India, RBI has mapped CRISIL and ICRA ratings to those of S&P and has also prescribed risk weights for these ratings. The details of this mapping are set out in the following table:

As may be observed from the table, an asset with an investment grade rating of BBB from CRISIL or ICRA would carry a risk weight of

CRISIL / ICRA rating	S&P rating	Risk weight
AAA	AAA to AA-	20%
AA	A+ to A-	50%
A	BBB+ to BB-	100%
BBB and below	Below BB-	150%
Unrated	Unrated	100%

150%, which could lead to conservative estimates of capital requirement, especially for project finance loans (which are usually rated BBB by the rating agencies).

For retail portfolios, the Framework provides for lower risk weights to account for the higher granularity and diversification effects embedded in these portfolios. As per the Framework, the risk weight would be 35% for retail mortgages and 75% for all retail portfolios, including mortgages.

Foundation IRB Approach: In the Foundation IRB Approach, banks would internally estimate the Probability of default (PD) for each rating category. The estimate of Loss Given Default (LGD) would be provided by the regulator. The Framework provides a risk weight curve, which gives the risk weight for each combination of PD and LGD. To be eligible for adopting the Foundation IRB Approach, the bank would need to satisfy the following minimum requirements:

- Existence of an independent group within the bank carrying out credit rating;
- Separate assessment of default risk of borrower and transaction;
- Minimum seven rating grades of performing and one grade of non-performing borrowers;
- Specific rating criteria for distinguishing each rating grade;
- Enough grades for avoiding undue concentrations of borrowers in a grade;
- Minimum five years history of PD estimates; and
- Exposures categorized into asset classes (corporate, sovereign, bank, retail and equity).

Advanced IRB Approach: Under the Advanced IRB Approach, a bank with a sufficiently developed internal capital allocation process would be permitted to use its own inputs for estimation of potential future loss. Banks seeking to use this approach would need to have LGD and Exposure at Default (EAD) data history for at least seven years, in addition to meeting all the criteria stipulated for Foundation IRB Approach.

Market Risk

Jurisdictions where banks are statutorily required to maintain liquid assets in the form of cash and government/ approved securities (as in India - statutory liquidity ratio) tend to cause the banks to expose them to market risk. Banks' investment portfolio is subject to volatility in the value of securities due to change in their prices which, in turn, may be a result of changes in interest rates, currency rates or changes in equity and commodity prices. Market risk is not covered under Basel-II. Prior to Basel-II itself, two approaches to capital allocation for market risk were outlined—standardised measurement method and internal models approach. RBI has recently issued guidelines for computation of capital for market risk based on the standardized measurement method. This method involves computing capital based on the duration of the portfolio.

The three 'pillars' of Basel-II attempt to achieve comprehensive coverage of risks, enhance risk sensitivity of capital requirements and provide a menu of options to choose for achieving a refined measurement of capital requirements. The key objective of the new Framework is to align regulatory capital to underlying risk and induce banks to strengthen their risk management capabilities.

Operational Risk

Operational risks are attributable to losses on account of failure of internal systems and non-adherence to processes, human errors and fraud. These are neither due to payment defaults by borrowers nor because of adverse trends in the market. Three approaches have been proposed by the Basel-II Framework for treatment of operational risk:

- Basic indicator approach: the capital charge is derived as a percentage of gross income (15% of gross income).
- Standardised approach: the approach is similar to basic indicator approach except that the gross income from each line of business is taken separately and different multiples are applied to each business.
- Internal measurement approach: uses the bank's internal loss data for capital calculation.

The standardised approach tends to penalise the larger, more profitable banks. It does not factor in the risk profile of the bank or the control systems in place in the bank.

Pillar II – Supervisory Review

Pillar II of the Framework refers to the supervisory review process. The regulator would need to exercise oversight on the capital allocation process adopted by the banks. The supervisory process is based on following principles:

(a) Banks should have a process for assessing their capital requirements *vis-à-vis* their risk profile and a strategy for maintaining their capital levels.

(b) Supervisors should review and evaluate banks' internal capital adequacy assessments and strategies, as well as their ability to monitor and ensure compli-

ance with regulatory capital ratios. Supervisors should take appropriate supervisory action if they are not satisfied with the result of this process.

(c) Supervisors should expect banks to operate above the minimum regulatory capital ratios and should have the ability to require banks to hold capital in excess of the minimum.

(d) Supervisors should seek to intervene at an early stage to prevent capital from falling below the minimum levels required to support the risk characteristics of a particular bank and should require rapid remedial action if capital is not maintained or restored.

Thus, the supervisor's role assumes great importance in the new Basel-II Framework. It may be noted that the Pillar II does not talk of harmonization of supervisory processes across various jurisdictions. It does recognize that each country could have different supervisory objectives and legal frameworks and therefore allows some discretion to supervisors, while expecting them to maintain some degree of consistency in their approaches.

Pillar III - Market Discipline

Pillar III refers to disclosure requirements and greater transparency. All over the world, banking business is becoming more complicated by the day and concomitantly more difficult for regulators to monitor. It is recognised that tracking signals emanating from the market can assist supervisors in their monitoring function. This pillar seeks to bring market discipline through greater transparency by asking banks to make adequate disclosures for the benefit of shareholders/investors, depositors, customers, rating agencies, government and policy makers and of course for the regulators/ supervisors.

Market discipline has two components— (a) market signals, manifest from share price movement, banks' lending and borrowing rates etc., (b) responsiveness of the bank as also the supervisor to the market signals. Pillar III provides a comprehensive menu of public and regulatory disclosures related to the capital structure, capital adequacy, risk assessment and risk management processes to enhance transparency in banking operations. The disclosure requirements increase as the banks move towards more advanced approaches.

Keeping in view the RBI's goal to have consistency and harmony with international standards it has been decided that at a minimum all banks in India will adopt Standardized Approach for credit risk and Basic Indicator Approach for operational risk with effect from March 31, 2007. After adequate skills are developed some banks may be allowed to migrate to IRB Approach after obtaining the specific approval of the RBI.

Key Issues for Banks in India

Credit risk – Standardised Approach

- Substantial proportion of bank assets would not have any external rating. Since un-rated assets attract 100% risk weight under the Standardised Approach, this methodology is unlikely to yield risk sensitive capital estimates. Further, banks with low quality asset portfolios could actually benefit if their assets do not carry external ratings.
- RBI has indicated the risk weights applicable for various rating categories of CRISIL and ICRA. These risk weights were derived based on the mapping of CRISIL/ICRA ratings to S&P. A risk weight of 150% would be applicable for BBB rating of CRISIL/ICRA.

Credit risk – Foundation IRB Approach

- To be eligible for Foundation IRB, banks would need to have Probability of Default (PD) data for at least five years. In the Indian context, most banks would not presently have past data for the stipulated minimum period.
- The reference definition of default as per the Framework includes 90 days overdue status as one of the criteria. The computation of probability of default (PD) is also linked to this definition.
  - However, the regulatory definition of default/non-performing asset was more liberal than the 90 days overdue rule in the past. The banks' recovery strategy in respect of overdue assets in the past would have been aligned to the regulatory definition extant at that time. In this context, if PD is computed with the past data taking 90 days overdue definition, the computation is likely to yield very conservative results.
  - To address this issue, the PD computation could be based on the applicable overdue definition for the past data (i.e. the regulatory definition at that time).
- The risk weights as per the risk weight curve are sensitive to Loss Given Default (LGD) and the choice of implied confidence level. This could be an issue considering that LGD data is quite difficult to obtain in India (since there is no active trading in defaulted bonds).

The Framework stipulates the regulator would provide the estimates of LGD. The issues in this context are:

— A significant data collection exercise with respect to LGD would have to be undertaken across all banks in the country.

— Applying the same LGD across banks could be unfair to the banks, which have demonstrated better recovery capabilities in the past.

— The introduction of SARFAESI Act and the creation of asset reconstruction companies may significantly impact LGD values going forward. However, the impact of these initiatives on LGD would be observable over a period of time, going forward.

Credit risk – Advanced IRB Approach

- The key issue in implementation of advanced IRB approach would be the availability of data for internal estimation of Loss Given Default (LGD) and Exposure at Default (EAD).
- Diversification benefit is not considered in capital estimation under the Framework. This could be a disadvantage for large banks with a well-diversified portfolio spread across geographies, corporate and retail segments, and industrial sectors.

Operational Risk

- Presently, there is no capital allocated for operational risk as per the regulatory guidelines. The implementation of capital requirements for operational risk would lead to an overall increase in capital requirement for the banks.
- In the Indian context, most banks would not be ready for advanced measurement approach. This would require considerable effort in terms of development of methodologies and data collection.

Market Discipline

- Some of the information, especially with respect to IRB approaches could be sensitive in nature. The market needs to be mature to absorb this information. For example, if the information on probability of default were to be disclosed by a bank, the market as a whole would need to be mature enough to understand and interpret this information. Till such time, one option would be to restrict disclosure of some of the sensitive information to the regulator only and not to the market as a whole. This is important in a scenario where some banks are more advanced than others in terms of implementing credit risk management methodologies, and the levels of disclosure therefore differ across banks.

CRISIL has estimated that there would be a 1.6% decline in the capital adequacy for the banking sector on account of implementation of the New Capital Framework. As per CRISIL's analysis, there would be gain of 0.7% on account of credit risk and a decline of 1.2% and 1.1% respectively on account of market and operational risk.

Implementation of Basel-II in India – RBI Approach

With a view to ensuring migration to Basel-II in a non-disruptive manner, the Reserve Bank has adopted a consultative approach. A Steering Committee comprising of senior officials from 14 banks (private, public and foreign) has been constituted where Indian Banks' Association is also represented.

Keeping in view the Reserve Bank's goal to have consistency and harmony with international standards it has been decided that at a minimum all banks in India will adopt Standardized Approach for credit risk and Basic Indicator Approach for operational risk with effect from March 31, 2007. After adequate skills are developed, both in banks and at supervisory levels, some banks may be allowed to migrate to IRB Approach after obtaining the specific approval of Reserve Bank.

On the basis of the inputs received from the Steering Committee 'draft' guidelines for implementation of Basel II in India have been prepared by Reserve Bank and has requested banks to study these guidelines and furnish their feedback.

Case for Consolidation

As stated above, the RBI has proposed that Indian banks transit to the Basel-II norms for capital adequacy by March 2007. We have seen that the Basel-II Framework, apart from covering operational risks for the first time, encourages active risk management as opposed to mere passive allocation of capital to risk as per the current norms. As a result, banks that are able to manage risks better could even reduce their capital requirement. On the other hand, banks saddled with poor quality assets and inadequate level of capital may have little choice but to merge with stronger banks. Further, graduating to the new system of dealing with operational risks and improved disclosures has its attendant costs in terms of investing huge amounts in information systems. It is very likely that smaller and weaker banks will find this too much of a burden, the only way out would be to merge with a larger institution. These aspects clearly indicate that major upheaval is on cards in Indian banking and therefore RBI must simultaneously think of allowing a more liberal M&A regime so that the consolidation route is realistically available to those banks that find it impossible to cope with Basel-II. ■