

Developing a Rating System – Key Considerations

Introduction

3.1 The Committee recognised that the introduction of differential premium system (DPS) for deposit insurance is a proposal with far reaching consequences for both the insured banks and the DICGC. A perusal of the developments in some of the other deposit insurance systems, as presented elsewhere in Chapter 2 of the Report highlights the challenges involved in the designing, introducing and operating of a DPS. Being conscious of this, the Committee systematically outlined the key considerations in this regard, discussed them in detail by taking into account various perspectives and trade-offs, to arrive at a consensus on a pragmatic approach, suited for the Indian environment.

Approaches for differentiating banks

3.2 A good DPS should attempt to achieve (a) differentiating banks into different risk categories, (b) be forward-looking in assessment, (c) utilise and access a variety of information and (d) find acceptability among the insured member banks. International literature on deposit insurance indicates various methodologies for differentiating banks based on their risk profile. The methodologies could be highly objective using only quantitative parameters or somewhat subjective evaluating qualitative aspects of a bank. Quantitative aspects may include meeting the regulatory capital requirements, asset portfolio diversification, earnings and profitability, asset quality, liquidity, etc. At advanced level, the quantitative evaluation may also be done through the “expected loss” method. For example, Merton compared deposit insurance to the equivalent of a put option on the insured institution’s assets and the value of these assets therefore could be calculated by using Black-Scholes option

pricing model. Later Marcus and Shaked (1984) and Ronn and Verma (1986) applied option-pricing model for discovering individual institution's premium rate¹. The Committee on Credit Risk Model (2006) set up by the Corporation had recommended option-pricing model for India. Although theoretically appealing, use of an option-pricing model is a data intensive exercise and poses serious challenges, given the banking environment of India.

3.3 Qualitative criteria use a number of factors such as management quality, governance standards, and quality of internal controls and processes, which not only indicate the current state but also have a predictive power about at least the near future state of the insured institution. Qualitative evaluation requires instituting an appropriate examination system of the insured institutions for collecting soft information and assessing the quality.

3.4 Jurisdictions like US, Canada, Malaysia and Turkey combine the quantitative and qualitative parameters in their risk assessment exercise. The Qualitative parameters essentially include supervisory rating by way of weights in the over all model. For large institutions, FDIC combines CAMELS rating and forward looking financial measures through which the FDIC attempts to predict the future risk. The advantage of using a combination of qualitative and quantitative parameters is that risk assessment system becomes a comprehensive and effective one with forward-looking risk profiling. Adoption of such a system assumes the existence of an appropriate set up for gathering qualitative information, which can be achieved through onsite assessment of the institutions or information sharing arrangement with the supervisory agencies.

Universe of Insured Banks and Model Selection

3.5 After having discussed the various approaches to the rating exercise, the Committee recognised that a rating model would need to take into consideration the characteristics of the banks it would address the model to. The members recognised the diversity in membership of the Corporation. The membership constituted of public sector and private sector banks, domestic and foreign banks, special category banks like Regional Rural Banks (RRBs), Local Area Banks (LABs) and Cooperative Banks. These classes of banks

differed in size and nature of operations, level of sophistication, levels of technology adoption, governance characteristics and standards of data management. The Committee noted that the number of insured banks as on March 31, 2015 aggregated to 2,129 including 92 commercial banks, 1,977 Cooperative banks, 56 RRBs, and 4 LABs. The category-wise share of assessable deposits (i.e. the deposits subjected to premium collection), correspondingly was 90.3%, 7.0%, 2.7%, and the LABs' share was negligible.

The Committee debated upon the magnitude of task likely to devolve on the Corporation in finalising the rating process and the heterogeneity in the different classes of banks in the context of their adaptive capabilities. It was felt that the model should be a simple and easy to understand but robust one, capturing key risk parameters. (Recommendation 1)

3.6 The Committee additionally appreciated the status of public sector banks – perceived to have implicit government guarantee or backing. The Committee considered that internationally a preponderant view is that all safety-net tools should apply uniformly across all classes of institutions and the taxpayers' money should not be used in resolving any institution. In the similar vein, implicit guarantees in the form of government ownership should not be given weightage in risk profiling of institutions. The Committee also took note of the fact that over the time, the government ownership of public sector banks may be diluted substantially. The committee therefore recommended that in all fairness, the rating system should, as far as possible, be ownership neutral.

Number of Rating Categories

3.7 The Committee considered the question of number of categories into which the banks could be grouped based on the assigned scores. The Committee felt that while across the scale, there is a possibility of any number of ratings, the argument against several is that more categories result in a less visible distinction among them along the scale, and there is less incentive for moving from a lower to a higher category because gains from moving a step up may not be very material. FDIC, which had categorised small banks

into nine categories at some stage, on a review, had concluded that number of institutions in several categories had remained consistently low and had therefore reduced the categories to four. ***A review of practices in some jurisdictions revealed that number of rating categories ranged from 3 to 5. The Committee also referred to the IADI Core Principle relating to the differential premium system, which inter alia envisaged that premium categories should be significantly differentiated. The consensus view, therefore, was that number of rating categories for assigning premium rates should be limited to four or five. (Recommendation 2)***

Model Input Variables

3.8 The Committee was of the opinion that in assessing a bank for its risk, besides the balance sheet data that would essentially mean quantitative; qualitative information such as management quality, governance and systems and control should be considered for the completeness of the exercise. The Committee discussed about the ways to source qualitative inputs for the rating exercise. The Committee observed that rating models of Malaysia, Turkey and Canada had the supervisory ratings as one input parameter, carrying a weight of about 35%. The Deposit Insurance Agencies in these jurisdictions have access to the supervisory rating under an arrangement formalised through law and/or information sharing arrangement between the DIAs and the supervisors. Accordingly, the Committee felt that inputs from supervisors for respective banking sectors, based on their annual inspections could be provided to the Corporation. Considering, the inspection schedules of the supervisors and the corresponding lags in availability of the qualitative findings, accessing supervisors' inputs were not considered feasible at this stage. Other alternative considered was that the Corporation could have its own set up for bank visits to assess the qualitative indicators. The Committee however was of the opinion that given the number of banks insured, such an exercise would require the Corporation to have massive manpower resources which weighed against such an arrangement in the medium term. ***The Committee therefore came to the view that the input variables could be designed based on the annual audited/published data of the individual banks for a large part say weighing upto 90% in the overall score. The***

Committee also drew comfort from the fact that many of the items in the balance sheet and profit and loss account intuitively were reflective of the quality of soft parameters such as internal controls and processes, personnel skills and governance. ‘Other information’ like conduct of a member in dealings with the Corporation, eligibility for access to Reserve Bank’s liquidity window, regulatory penalties, adoption of IT and other soft information may constitute remaining 10%. (Recommendation3)

Predictive Power of the Model

3.9 The Committee observed that the Corporation, like any insurance system, was insuring the depositors’ risk for a prospective period. Hence any model to be used for rating should have the power to predict the risk of insured banks in the near future. The Committee felt that such an assurance could be derived only from forward looking inputs into the model; qualitative indicators, being some of them. Risk based inspection format adopted by the supervisors was indicated to have predictive power for the risk direction but complete implementation thereof across the entire universe of insured banks was still far away. *The Committee was of the view that following the practice of quite a few jurisdictions (Canada, Malaysia, Turkey, US) in which supervisor’s rating is an important input, the Corporation and Supervisors may initiate a dialogue to consider entering into a formal arrangement under which the supervisors could share their ratings with the Corporation under appropriate safeguards of confidentiality and usage, in due course of time by which the supervisors would have subjected all the banks to the forward looking risk assessment. Corporation then can use supervisory rating as an additional input in the rating process to refine the model. (Recommendation4)*

Data source, Data Quality, Quality Assurance and Frequency

3.10 Sourcing of quality data is a key in development of risk rating. The Committee, accordingly, deliberated on the sources of data for the model. The Committee members from the regulatory and supervisory departments were

requested to inform the Committee whether they could assist in providing the requisite data on a regular basis at desired frequencies. The members concerned observed that while the data pertaining to commercial banks was fairly current and sufficiently exhaustive at any point of time, there were apprehensions about the quality and timeliness in getting the data from cooperative banks particularly, the non-scheduled ones, which were substantial in number. Notwithstanding the above, the Committee decided to use the data presently available with the regulator/supervisor for a limited purpose of simulation exercise for developing the rating model. ***For operationalization of the rating system, the Committee felt that the Corporation could institute its own MIS for the member banks and tag it to the half yearly Deposit Insurance (DI) returns being presently received from the banks. (Recommendation 5)***

3.11 For ensuring the integrity of the data, the committee viewed the importance of sample verification of the data submitted, by accessing the primary source at banks' site. It was informed to the Committee that the Corporation is currently utilising the services of supervisors for feedback collected during the course of their inspections, on the correctness of compilation of returns submitted to the Corporation. ***The Committee desired that during the course of their inspections and when taken up, the supervisors could extend the checking to the information to be submitted by the banks in the context of rating also for the feedback to the Corporation. (Recommendation 6)***

3.12 The Corporation could also utilise the supplementary information available from sources easily accessible, to upgrade its market intelligence about general well being of the member banks and also to use this information to validate the Corporation's assessment of banks. For example, in the case of commercial banks and scheduled UCBs, the peer reviews being prepared by regulatory/supervisory departments would provide a good indication about banks' current state and the likely future. The Committee also suggests obtaining appropriate

periodic inputs from NABARD in respect of RRBs, and State/District Central Cooperative Banks. (Recommendation 7)

3.13 The Committee stressed that timely receipt of the data from member banks was crucial for the rating exercise. It was appreciated that there was no case for forbearance in this respect, because late submission or non-submission could also be with an intention of beating the rating process particularly when bank could have deteriorated in its performance. ***The Committee felt that non-receipt of data in time from a bank should earn it a straight downgrade of rating by a notch and accordingly a higher premium be charged at the corresponding rate. (Recommendation 8)***

Rating of New Members and Merged entities

3.14 As per the Section 11 of the DICGC Act 1961, it is mandatory for the Corporation to admit any new bank as its member under deposit insurance system soon after it is granted license under Section 22 of the Banking Regulation Act, 1949. A bank, which has just been licensed, will not have financial history required for rating it for deposit insurance premium purposes. ***The Committee therefore decided that such a bank may be assigned a premium category corresponding to a 'base premium rate' (delineated in paragraph 3.17 below) till it produces its first annual financial accounts at the first annual accounting date (i.e. 31 March) after the commencement of operations. (Recommendation 9)***

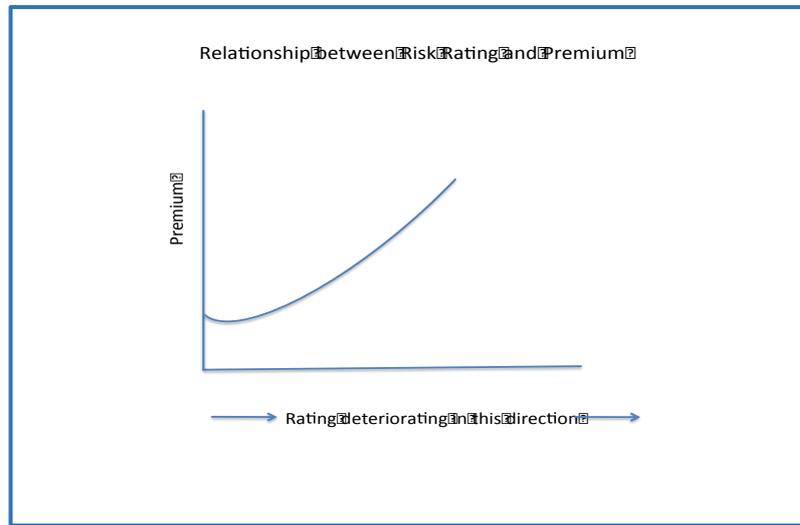
3.15 There are also instances when an existing member entity merges with another bank and loses its own identity. As per the current deposit insurance regulations, the merging entity is required to clear its premium liability upto the date of its deregistration and thereafter the bank taking over owes the insurance premium liability on the deposits of the merged bank. With the flat rate premium, the application of premium rates, pre and post merger, would not raise any issue. ***Under Differential Premium System however, it is likely that the two entities may be subject to application of different premium rates. In this situation, the Committee recommends that while the merging entity will discharge its liability upto the date of***

deregistration at the premium rates applicable to it, post merger the bank taking over would continue to pay the premium at a rate as applicable to it (till the next reset). (Recommendation 10)

Building in the Incentives

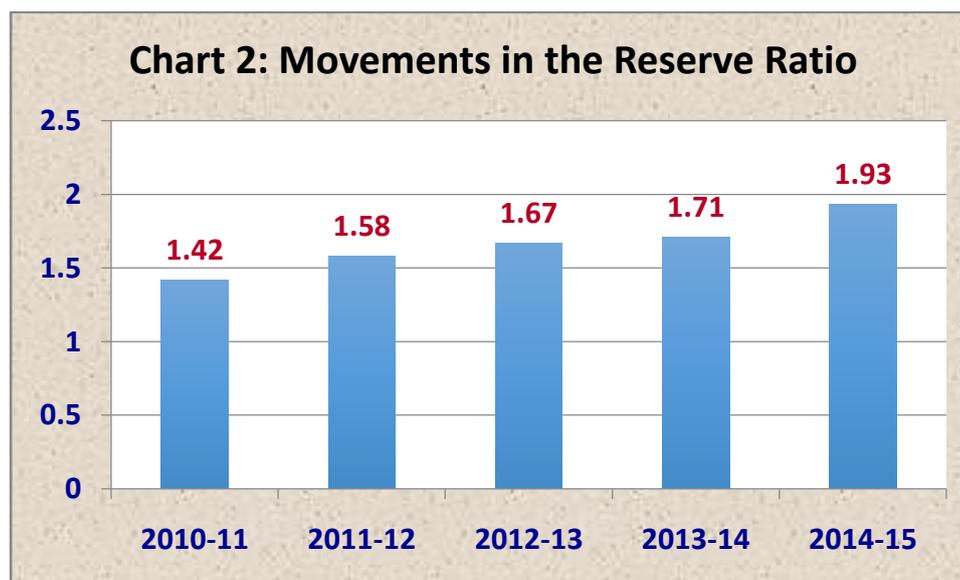
3.16 The Committee recognised the role of a rating system as a tool for incentivising the good performance and as an instrument to encourage lower rated banks to strive towards improving their ratings. ***For building incentives in favour of better rating and dis-incentivising worse rating, Committee’s view was that the premium rates should move along the rating ladder in geometric/curvilinear progression rather than arithmetic/linear progression. (Recommendation 11)***

3.17 The Committee also looked two possible approaches to scale the premium rates along the rating ladder. One process could be to assign the premium rates as a multiple of a base premium rate - multiples changing as per the rating; and the other to assign the absolute premium rates differentiated based on the rating of banks. It was felt that either of the systems would have same results. For operationalizing, the Committee felt that the Corporation could have a “base premium rate” and the effective premium rate might be derived by multiplying the base rate by a multiple (a Multiplicative Factor) representing rating. For example, the base premium rate could be 10 paise (the current premium rate per annum per hundred of Indian Rupees) and multiple for a top category bank could be .95, resulting in effective premium of 9.5 paise. While the multiples may remain unchanged, the revisions in the effective premium rates could be achieved through the variations in the base premium rate. The effective premium rate would progress along the rating scale on a convex curve, as presented in Chart 1:

Chart 1: Relationship between the Risk Rating and the Premium Rate**Discovering Premium Rates Across the Rating Scale**

3.18A Deposit Insurance Agency requires funds to be accumulated in a fund account usually referred to as Deposit insurance Fund, to meet its insurance obligations to the insured depositors in the event of bank failure. Identifying the funding requirements for meeting insurance obligations and instituting a sound funding arrangement for meeting those requirements are critical for the effectiveness of a Deposit Insurance System. The funding requirements are usually representative of the probability of a net loss on portfolio basis that a deposit insurance agency could have to suffer on account of its insurance liabilities. This requirement is termed generally as Target Reserve Ratio (Reserve Ratio is defined as the ratio of Deposit Insurance Fund (DIF) to the Insured Deposits). The DIF fund is built by way of surplus of premium payments by member banks on ex-ante basis, after meeting the operating expenses and payment of claims of depositors of insured failed banks. The Corporation, by regulation, is entitled to collect premium on ex-ante basis and is accordingly collecting the premium in advance. The Corporation has not yet set up a Target for Deposit Insurance Fund either absolute or in the form of Reserve Ratio. There are a good number of jurisdictions, which have set up Reserve Fund Targets for their deposit insurance operations, which vary from as low as 0.25% (Hong Kong) to 5% (Argentina)². Internationally, the work is

still on for refining the process of determining the size of Target Fund. IADI has set up a Sub Group under the aegis of Research and Guidance Committee for developing a Guidance Note for the IADI member institutions on setting up Target Fund. As of now, the Corporation is informally moving towards a Reserve Ratio of 2.5%. The Reserve ratio as on 31 March 2015 was 1.93%. The movement in the Reserve Ratio during the past 5 years is depicted in Chart 2.



3.19 Since the Corporation is still 57 basis points away from its informal target, in this context, one of the terms of reference of the Committee namely to recommend a matrix of premium rates for various rating categories in a manner as not to adversely affect the current premium inflows, is material. The Committee conducted a simulation exercise to discover the appropriate set of multiples of the base premium rate, at different scale points so that current premium inflows and their trends are preserved. The premium rate matrix corresponding to the different rating points is presented in Chapter 4.

Frequency for resetting of rating and premium rates

3.20 The Corporation collects premium from the banks at half yearly frequencies, in advance. For example, for the insurance period of April - September of any year, the premium is collected during the April-May months with reference to the deposit base of immediate previous 31 March; and

similarly for the October-March insurance period. Thus the Corporation collects the premium separately for two insured half-years based on two different deposit bases. Ideally, premium collection and risk premium assessment should go hand in hand, which would mean discovering the risk rating of each bank on a half yearly basis. The Committee deliberated on this aspect and felt that half yearly assessment of rating would be too onerous a task both for the Corporation and the member banks in terms of data submission by the banks and data collection and collation by the Corporation. Moreover, mid year data of a bank is usually audited under a limited review and therefore reliance thereon would be of limited value. ***The international practice too largely is that of an annual discovery. The Committee therefore decided to recommend rating assessment on an annual basis based on the annual audited data of the bank. (Recommendation 12)***

3.21 The next action on hand was to decide on the correspondence between the time reference point for rating discovery and the insurance period for which the rating would be applicable. ***Taking a cue from the manner in which premium is collected and given the lag between the reference date for rating (i.e. 31 March) and completion of the process of rating discovery, the Committee felt that each year's rating would apply to the prospective two half-year premium periods namely October – March and April - September. (Recommendation 13)***

3.22 The Committee observed that the Corporation was collecting information for deposit insurance and premium purposes at half yearly intervals. ***Though the Committee had decided that rating calculation and premium reset should be an annual exercise, the Committee was not averse to obtaining information for the model's inputs from the banks on a half yearly basis, to take advantage of the benefits accruing from tracking a bank's performance in the context of a possible unexpected deterioration in its performance and consequent remedial action. Such an action would be of substantial value particularly in tracking the banks, which were in the lowest or second lowest rating category in the latest available rating. It therefore recommends that the***

MIS to be instituted for the rating purposes may have a half yearly frequency. (Recommendation 14)

3.23 The Committee also discussed the desirability of bringing in the pro-cyclicality to the premium rate reset under which, during the times of stability and growth, banks would be able to contribute to the insurance fund more liberally. Hence, the Corporation could strengthen the Insurance Fund during these times and could reduce the premium rates during the times of stress. The proposal however did not find favour for two reasons. One, determining of stressed periods and good periods for the financial sector would be subjective and hence may be subject to questioning. Second, during the good times, the devolvement of the Corporation's liability would be less and correspondingly, net savings could improve, hence achieving the objective of strengthening the Insurance Fund during such times. The Committee therefore recommends that introduction of pro-cyclicality in the premium rates reset may not be considered. (Recommendation 15)

Transparency and Confidentiality

3.24 The rating connotations can have a significant perceptive impact on the functioning and operations of a bank. Therefore, a bank is reasonably and legitimately entitled to know the rating process. The transparency also imparts credibility to the differential premium system as the transparency enhances accountability and sound management of the premium system. Further IADI Core Principle 9 recommends that differential premium should be transparent to all the participants. Therefore the balance between the confidentiality and transparency requires to be managed prudently.

3.25 The practice with different deposit insurance agencies is that at minimum a basic rating framework with input variables and their weights is disclosed to the banks at large. However a bank's actual rating is shared with only the bank concerned, the latter being important as a disclosure of rating in public may have negative consequences for a bank such as fears of bank runs if the rating is low on the scale.

3.26*The Committee therefore was of the opinion that the Corporation should publish in public domain, the key characteristics of the rating model. (Recommendation 16)*

3.27*The rating process and results, within the Corporation, would have to be managed with due care of confidentiality. In the world outside the Corporation, only the rated bank should know its rating. The Committee observed that the confidentiality safeguards adopted by the Reserve Bank with regard to their rating system could be looked at for instituting the confidentiality and usage requirements within the Corporation. (Recommendation 17)*

3.28*Further, the Committee felt that the rated bank would ensure its rating's confidentiality within the bank and that the rating is made known only to the important and key personnel within the bank. It was also indicated that the rating was for the specific purpose of assigning the premium rates and the rated bank would not use it for any other purpose, including canvassing for business or any type of capital funding. The member institutions should also be prohibited from disclosing the premium rate assigned to it, total score assigned or any score assigned to a member's quantitative or qualitative factor(s) and any other information relating to rating the Corporation may decide to share with a member bank. (Recommendation 18)*

Transition to the new rating system

3.29The transition to rating based premium, despite its immense value and benefits, could be painful not only to those banks which could fall in the high risk category and hence end with higher financial burden by way of higher premium, but also to others for fear of the possibility of being in the similar state on a future date. Therefore, success in the adoption of differential premium would depend on how well the transition is managed. ***The Committee deliberated on this aspect and came to a view that there should be adequate consultations on various aspects of the DPS, with***

the stakeholders viz. representative bodies of the member banks, supervisors and regulators and the government. Corporation would also need to draw up a clear transition plan which should explain transition objectives, responsibilities identified with the resource personnel within the Corporation and time table with deliverables and design an appropriate reporting system. The plan should also require communicating with the banks on the introduction of the differential premium, clarifying the policy rationale, explaining the benefits of such a system for the banks and giving a transition path including the lead time for preparing the banks to adopt the new system.(Recommendation19)

New Classes of Banks

3.30 Reserve Bank of India, as part of its policy to diversify the banking system and introduce banking classes with niche business models, has recently granted in principle approvals to certain entities and persons to set up 'payment banks'. The Bank is also scrutinising applications for licenses under 'small finance bank' category and it is possible that some entities may be authorised to set up banks under this class too. *The Corporation would need to revisit the proposed rating model for examining the format and applicability to these classes of banks as and when these banks start operating. (Recommendation 20)*

Periodic Review

3.31The financial landscape is constantly evolving. The changing international and domestic regulations, supervisory practices, balance sheet compositions and banking products, and new tools of risk assessment; all lead to the changes in the risk profiles of the banks. The Committee also appreciated that capital standards for State Cooperative and District Central Cooperative Banks are still evolving. A substantive work on development of regulatory framework in response to 2008 financial crisis is still in progress. Such changes would require the premium system to be reviewed and updated in tune with the

changing environment. Therefore, the Committee feels that as a good practice, the rating system be reviewed periodically, at a minimum of once in three years so that the rating system and methodology remain current and relevant. (Recommendation 21)

References

General Guidance for Developing Differential Premium System, IADI (2011)

² FSB Thematic Review on Deposit Insurance Systems (2012)