

Implications of the New Capital Accord for Bank Behaviour

Chapter IV

(With special focus on credit rating)

Introduction

The Capital Adequacy framework of the Basle Committee on Banking Supervision (BCBS) which was adopted by the G 10 countries in 1990 and by the rest of the world thereafter, has been the single most successful attempt in the move towards convergence of international standards in banking, enabling cross-country assessments and comparisons of internationally active banks. The results of a 1996 survey conducted by the BCBS indicated that 92 percent of the 140 participating countries had put in place a risk-weighted framework along the lines of Basle approach (Musch, 1997). Yet, despite being acknowledged as a valuable framework for comparing risk associated with assets and allocating capital accordingly, it has been criticized for, among others, the broad-brush approach and its failure to provide disincentives for riskier exposures within the same broad asset class.

Under the framework, all corporate borrowers in the non-financial sector are risk weighted uniformly at 100 percent despite the widely differing perception of the associated risks and all banks were risk weighted at the same 20 percent despite there being wide variation in their financial strengths. Again, the framework placed a more favourable risk weight on a weak bank than on a very strong non-banking company. This lack of risk-differentiation in credit risk weights has been cited as a cause for banks to enter into transactions, specifically with a view to arbitrage such anomalies and was also seen as providing an incentive for banks to shift to lower quality and higher risk assets in the same asset class. Table 4.1 lists a few papers that deal with this issue.

Table 4.1 : Impact of New Capital Adequacy Accord

Author/Year	Country/ Period	Issue
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Dietrich and James(1983)	US banks 1971-75	Capital adequacy standards and banks' capital decision
Keeley (1988)	US banks 1981-86	Regulatory regime and capital ratios
Swindle (1995)	US banks 1984-86	Impact of CAMEL rating
Monfort and Mulder (2000)	20 Emerging Market Economies July 96-January 99	Impact of Sovereign rating

A recent paper released by the Basle Committee in January 2000 on the 'Range of Practices in Banks' Internal Ratings Systems' summarizes the practices followed by large, diversified international banks in this regardⁱ Though banks generally take into account the same set of issues in assigning internal ratings, the approaches followed by them can differ broadly. Ratings are seen as embodying an assessment of the risk of loss due to the default of the counter-party and are based on both quantitative and qualitative information. Exposures in each internal grade are treated as having specific and measurable loss characteristics which are (a) the borrowers probability of default (PD), (b) the facility's loss given default (LGD), (c) level of exposure at the time of default (EAD), (d) the credit's expected loss which is a function of (a), (b) and (c) above (PD, LG., EAD), and (e) the unexpected loss associated with the above.

The paper finds that the differing approaches are due to different degree of reliance on quantitative vs. qualitative factors, different judgements regarding the risks associated with each transaction etc. Also, data constraints remain a major challenge. The Models Task Force of the BCBS is engaged in developing the basic architecture of an Internal Rating Based (IRB) approach. To be eligible to use this approach, banks will be expected to demonstrate that their IR systems meet the minimum standards and sound practice guidelines that would be set out by the BCBS. The banks would provide to the supervisor exposure amounts and estimates of key loss statistics by IR grade and supervisors would, in turn, develop the risk weights so as to reflect the intrinsic risk of the asset or exposure.

Although Indian banks do use their own credit rating systems even at present, a lot more would have to be done to achieve the proposed standards for the IRB approach. The very first challenge would be to build data on default probabilities either by using internal data on default incidences or by customising public databases to local conditions. With external ratings not available for most borrowers, the focus area for future work will be development of models to facilitate internal ratings.

At another level, the preferential risk weights assigned to the OECD countries over non OECD countries was also seen as discriminatory towards emerging economies and as a possible impediment to capital flows to their institutions. At the same time, the more sophisticated banks had put in place more accurate models to evaluate economic risks and found a significant gap between regulatory capital and the economic risks associated with their asset portfolio.

IV.1 The New Capital Adequacy Framework

In order to refine the Accord to address these anomalies, the BCBS proposed a revised Capital Adequacy Framework in 1999 (Bank for International Settlements, 1999) which uses a three pillar approach - (i) a standardised approach based on External Credit Assessments (ECA) and / or Internal Ratings Based (IRB) Approach which seek to align more finely the risk weights with actual credit risks (ii) a supervisory review pillar to ensure that the bank's capital is aligned to its actual risk profile and (iii) a market discipline pillar to enhance the role of the other market participants in ensuring that appropriate capital is held by prescribing higher disclosure. The revised capital accord is still being discussed and is likely to be formalised sometime next year.

While the approach itself is certainly being viewed improvement over the simple standardised approach followed at present, it poses enormous practical difficulties in implementation for both the banks and their supervisors in the emerging economies, which lack both the sophistication and the skills required or even the

background data, which is an essential prerequisite. There is no evidence as yet as to whether the benefits of more efficiently allocating capital to risk will outweigh the costs of implementing the new Accord either for the banks or for the supervisors in developing economies. Further, the sophistication of the revised framework could well divert resources from supervision to capital regulation and monitoring, leading supervisors into a false sense of security that capital adequacy is an all-encompassing indicator of financial soundness, to the exclusion of other (and perhaps, even more significant) indicators.

At the heart of the revised framework is its explicit reliance on rating. Risk differentiation between counterparts, be they sovereigns, banks, corporates, public sector enterprises or securities firms, will be either on the basis of external or internal ratings. Risk dispersion is achieved by ranging the possible risk weights from 20 per cent to 150 per cent, depending upon the rating of the counter-party instead of the flat-rate 20 per cent (for banks) or an uniform 100 per cent (for others) as at present. The rating is to be either by an external rating agency or by the bank's own (reliable) internal rating process. For corporate borrowers, for example, only 3 buckets are proposed: 20 per cent for the triple A rated, 150 per cent for the very low quality and 100 per cent for all others, including un-rated ones. This reliance on external ratings agencies poses a problem given the low penetration of these agencies in most developing economies. Leaving aside the issue of penetration, it remains that banks in most emerging markets have already invested substantial resources in the credit management function, and are thus relatively better informed than external rating agencies to evaluate proposals. Abrogating this function to the rating agencies may not yield the desired results. In India, even the vast majority of corporate borrowers are unrated. Since unrated borrowers are given the benefit of a risk weight of 100 per cent, which is lower than that proposed for the lowest rated borrowers, there is no real incentive to move towards rating for this vast majority. For the banks, this would mean a status quo in risk weight at 100 per cent as applicable nowⁱⁱ. There is, however, an incentive for those borrowers who could get a premium rating from the agencies

as well as the banks who lend to them, as this would make claims on them entitled to a preferential risk weight of 20 per cent and hence an ability to negotiate a finer rate from the banks and for the banks to discharge capital held against them now. An additional capital requirement could however arise for Indian banks from the high NPA levels, for the unprovided portion of these assets could qualify for a risk weight of 150 per cent associated with the lowest quality credits, raising the Basle minima by an estimated 4 per cent on the capital to be allocated (Table 4.2).

Table 4.2 : Proposed Risk Weights based on External Risk Assessment

	Sovereigns	Banks		Corporates
		Option 1	Option 2	
AAA to AA-	0	20	20	20
A+ to A-	20	50	50*	100
BBB+ to BBB-	50	100	50*	100
BB+ to B-	100	100	100*	100
Below B+	150	150	150	150
Unrated	100	100	50*	100

* Claims on banks of short-term maturity, e.g., less than 6 months would receive a weighting that is one category more favourable than usual risk weight on the bank's claim.

Option 1: Based on risk weighting of sovereign where bank is incorporated

Option 2: Based on assessment of the individual bank.

As far as claims on banks go, two options have been offered, of which one links the bank's rating to that of the sovereign in which it is incorporated. This option is not likely to find favour since location cannot be a true indicator of financial strength, a point in case being the Japanese banks. The more acceptable proposal is the second option, which proposes to assign risk weights from 20 per cent to 150 per cent depending on the rating, with unrated banks being given the benefit of a lower weight of 50 per cent. Not all banks in India have gone in for rating, and only a few have had their short / long term borrowings rated by the agenciesⁱⁱⁱ. Even if the banks continue to be unrated, then the 50 per cent risk weight on claims on them (up from 20 per cent as at present) would more than double the capital allocation required by them on this account. And, if the banks do get

themselves rated, then it is very likely that several will receive ratings, which qualify them for even higher risk weights.

In view of the aforesaid discussion, the purpose of the present Chapter is to understand whether credit rating is expected to significantly impact the capital adequacy ratio of banks. Put alternately, if banks were to approach the rating agencies in the near future with a view to raising capital from the market, then would the ratings profile of these institutions have implications for their capital adequacy behaviour. Towards this end, within our existing framework, we examine whether the credit rating behaviour impinge upon bank's capital decisions. For this purpose, we have selected those banks that have been assigned both long-term and short-term ratings by domestic rating agencies^{ivv}. Since we cannot predict with certainty whether capital adequacy ratio would affect bank ratings, we estimate the probability that capital adequacy will impinge on ratings and hypothesize that this probability is a function of a vector of explanatory variables.

IV.2 Empirical Estimation

The econometric approach used is the logit model, which is designed to identify the conditions under which is designed to identify the conditions under which one observes one or another set of (n+1) discrete outcomes (Greene, 1990). Such frameworks have been widely used in understanding the determinants of banking crises (See, for example, Hardy and Pazarbasioglu, 1998, Demirgic-Kunt and Detragiache, 1998). Formally, the model's dependent variable is an indicator y that can take on values 0, 1,2,...,n that identifies n possible outcomes. The binomial model is a special case of this general formulation with n=1. The explanatory variables $\mathbf{x}$ determine the 'utility' of each outcome according to

$$U(\text{alternative}) = b_i' \mathbf{x} + y_i \quad (4.1)$$

These 'utilities' can be interpreted as the probabilities of observing the different outcomes, given the realization of the explanatory variables. Note that the model

allows the parameters β_i to differ across outcomes. For each observation, one obtains outcome i if it offers the maximum ‘utility’; in other words,

$$U(\text{alternative } i) > U(\text{alternative } j) \quad \forall j \neq i \quad (4.2)$$

One can interpret this approach as assuming that the realized outcome for each observation is that with the highest probability of occurrence under those conditions. A positive coefficient on a particular explanatory variable for some outcome i indicates that the greater is the realization of that variable, the more probable is the occurrence of i rather than one of the alternatives. As a normalisation, the parameters β_0 for alternative $i=0$ are set to zero, and the logistic functional form is assumed, such that,

$$U(\text{alternative } i) = \frac{\exp(b_i' \mathbf{x})}{\sum_{j=0}^n \exp(b_j' \mathbf{x})} \quad (4.3)$$

The model can then be estimated by Maximum Likelihood procedure. Once the parameters are estimated, it is possible to calculate the probabilities of occurrence of each possible outcome, both within-the-sample and out-of-sample. For each observation, the ‘predicted’ outcome is the one with the highest conditional probability.

Formally, let $P(i, t)$ be the dummy variable that takes a value of one when a bank’s rating indicates highest/high safety, and zero, otherwise. β is a vector of n unknown coefficients and $F(\beta'X(i,t))$ is the cumulative probability distribution function evaluated at $\beta'X(i, t)$. Then the log likelihood function of the model is:

$$\ln L = \sum_{t=1,2,\dots,T} \sum_{i=1,2,\dots,n} \{P(i,t) \ln [F(b' X(i,t))] + (1 - P(i,t)) \ln [1 - F(b' X(i,t))]\} \quad (4.4)$$

When interpreting the regression results, it is important to remember that the estimated coefficients do not indicate the increase in the probability of higher safety (indicated by better ratings), given a one-unit increase in the corresponding explanatory variables. Instead, in the above specification, the coefficients on the

RHS reflect the effect of a change in an explanatory variable on $\ln[P(i, t)/(1-P(i, t))]$. Therefore, the increase in the probability depends on the original probability and thus upon the initial values of the independent variables and their coefficients. While the sign of the coefficient does indicate the direction of change, the magnitude depends on the slope of the cumulative distribution function at $\beta'X(i, t)$. In other words, a change in the explanatory variable will have different effects on the probability of rating, depending on the bank's initial rating status. Under a logistic specification, if a bank has an extremely high (or low) initial probability of safe rating, a marginal change in the independent variable has little effect on its prospects, while the same marginal change has a greater effect if a bank's initial rating is in an intermediate range.

In the binomial case, it is possible to introduce 'fixed effects', which are meant to capture certain permanent, non-variable differences between individuals in a panel of data, using the conditional likelihood procedure introduced by Chamberlin in the early 'eighties. In particular, the methodology deals with data that has a group structure. The simple specification that is employed is as follows:

$$E(y_{it} | X, b, w) = b'X_{it} + w_i \quad (i = 1, 2, \dots, N; t = 1, 2, \dots, T) \quad (4.4)$$

where there are T observations within each of N group (banks). The w_i are incidental parameters which are intended to capture group effects whose omission would result in biased estimates of β , a parameter vector common to all groups. The joint maximum likelihood estimator in the fixed effects probability models is inconsistent; the solution proposed by Chamberlin is to maximise a conditional likelihood function that conditions on sufficient statistics for the group-specific parameters. It is important to note that only observations that enter the conditional likelihood function are those for which the examined event (rating, in this context) takes place in one and only period per group. In the context of this exercise, this implies that the fixed-effects model can be estimated only for banks for which rating are available.

Karacadag and Taylor (2000) have observed that, in spite of their several disadvantages, internal ratings have important advantages over external ratings. Firstly, internal ratings potentially incorporate proprietary information on bank clients that is unavailable to the public at large and to rating agencies, if the borrower is not rated. The informational advantage of internal systems could help generate more accurate credit risk assessments on the borrower. Accurate assessments, in turn, help to minimise the difference between regulatory and economic capital. In addition, the use of internal ratings places the responsibility of risk management squarely where it belongs: within each bank, a trend the New Capital Accord intends to accelerate.

The choice of explanatory variables is dictated by the CRAMEL (Capital Adequacy, Resources, Asset Quality, Management Evaluation, Earnings and Liquidity) approach. Therefore, the following variables have been used in understanding the determinants of ratings: non-performing assets, net interest income, fee income, bank deposits, off-balance sheet activity of the bank, profits, provisions and the hundred-per cent risk-weighted assets (all the variables are scaled by total assets). While GNPA can be taken to proxy asset quality, profits are a proxy for earnings. Bank deposits reflect a vulnerability of run on deposits and can be considered as a proxy for resources. While the off-balance sheet item indicates the degree of financial sophistication, the 100-per cent risk weighted assets reflects the riskiness of bank operations.

The independent variable used in the exercise is the rating (short-term/long-term) assigned to the bank by a domestic credit rating agency. Accordingly, depending on the rating assigned by the concerned agency, we assign a dummy variable defined as:

RATELO=1, if the rating reflects highest safety within the category; 0, otherwise.

As mentioned above, a similar exercise is carried out for banks which have received a short-term/medium-term rating from a domestic rating agency. This dummy variable is defined as:

RATESH=1, if the rating reflects highest safety within the category; 0, otherwise.^{viii}

It needs to be mentioned here that we have only selected those banks whose ratings are available for all the quarters under consideration. This provides us with 12 banks that have been assigned long-term rating^{viii} and 18 banks that have been provided short/medium-term rating^{ix}.

IV.3 Results and Discussion

The results of the panel data model for the long and short-term ratings case are presented in Table 4.3.

At the outset, it needs to be mentioned that it has not been the purpose of this exercise to assess the impact of the new Accord, especially since it is still in its early days. The treatment of ratings and how it is impacted upon by capital, among other variables, in this Chapter has been more based on 'back-of-the-envelope' calculations. However, what is intended is to raise some issues based on impending capital regulation which could point to future work which needs to be done in this direction. Secondly, the panel data set used in the methodology for determining long-term and short-term ratings is neither based on a uniform set of banks nor is the set of PSBs same in both cases. The results would therefore need to be interpreted with caution.

In both panels, high GNPA is clearly associated with higher probability of a low rating, confirming the fact that non-performing assets is a critical factor in determining a bank's rating. And importantly, higher the GNPA, the higher is the probability that a bank will receive a lower rating. The coefficient on the GNPA

in negative in both the long-term and the short-term cases, and is statistically significant in both cases. Also, a rise in the 100-per

Table 4.3 : Determinants of Bank Ratings-1997:Q1 to 1999:Q4

Variables	Long-term	Short-term
	Dependent Variable:RATELO	Dependent Variable:RATESH
Constant	16.17 (2.38)*	7.64 (1.07)
Capital (t-1)	-0.05 (-0.36)	0.66 (2.60)*
NIIRWA	-1.31 (-1.85)**	-3.14 (-3.25)*
FIRWA	1.69 (1.05)	10.71 (3.78)*
BDRWA	-0.17 (-1.73)**	-0.14 (-1.16)
OBSRWA	0.02 (0.94)	-0.03 (-1.25)
PFRWA	-0.55 (-1.49)	0.79 (1.64)\$
PVRWA	-0.54 (-1.29)	1.74 (2.62)*
HRRWA	-0.07 (-1.21)	-0.06 (-0.92)
GNPA	-0.24 (-2.88)*	-0.34 (-3.50)*
R ²	0.35	0.62
No. of observations	144	228
Fraction of Correct Predictions	0.88	0.92
Log-likelihood	-42.63	-36.62

Figures in brackets indicate t-ratios.

*significant at 1 per cent

** significant at 5 per cent

\$ significant at 10 per cent

cent risk-weighted assets appears to worsen bank rating, although it is statistically insignificant in both cases. On the other hand, profitability plays an important role in determining short-term rating and is statistically significant, while the sign on the profit variable in the long-term ratings case appears to be counter-intuitive. The provisions variable has the expected sign, with a negative sign in the long-

term and a positive sign in the short-term (and is statistically significant). Intuitively, higher the provisions in the short-run, the better is a bank equipped to deal with shocks in their balance sheets. In the long-run however, banks are expected to have fully provided for any contingency, so that, in an eventuality, higher provisions appear to lower the probability of a better rating. The bank deposit variable has the expected sign, being statistically significant in the long-run as opposed to the short-run. Economically, deposits suffer from a vulnerability to 'runs', so that deposits above a threshold often leads to a lower rating. Importantly, higher net interest income does not necessarily imply a higher rating, reflecting the perception that the bank is unable to diversify into non-fund based activities.

The primary focus of this exercise is to understand whether capital has a significant impact on rating. Our analysis reveals that, while the short-run impact of capital on ratings may be significant and higher capital increases the probability of a better rating, the reverse is the case in the long-run. However, while the short-run relationship is statistically significant, the long-term relationship is not. While the short-run relation conforms to intuition, the long-run result (although insignificant) appears contrary to established thinking. One might hazard a guess that, in the long-run, while capital might be playing an important role, the regulatory environment, the socio-political factors and the economic environment might be as much important as capital. Clearly, our results are only a pointer, and a much more detailed analysis is called for before one can predict with a reasonable degree of certainty what bank-specific and other economic factors play an important role in determining bank ratings.

Several caveats are in order at this juncture. The Reserve Bank, in clarifying its position on the Accord^x, has expressed skepticism of the role of the rating agencies in this process. While it has totally rejected their role in sovereign rating on the basis of their past track record, it has proposed that the banks and only the larger corporates approach the domestic rating agencies for this purpose in view

of their low penetration. For the rest of the borrowers, banks will be expected to strengthen their internal ratings systems. The new Accord, however, sees the more sophisticated banks as being the ones who would be using their internal ratings based systems to assign risk weights. Therefore, in the near future, one might expect the BCBS to come out with a graded system of IRB approaches to fit different levels of sophistication in banks.

Thus, it is expected that banks in India would eventually use a mixture of external ratings and internal ratings. This brings in the issue of the 'time horizon' over which the rating assigned to a borrower would be considered to be valid since a change in the rating would lead to a change in the risk weight. The existing capital regulation excludes this dimension to the extent that risk weights remain unchanged for loans to corporates irrespective of the change in their financial condition over time. Once risk weights are driven by ratings, then this aspect becomes important both from the point of view of assigning capital by the bank and monitoring by the supervisor. In this context, the Basle Committee paper points out that the ratings assigned by external agencies which are claimed to be 'through the cycle' may be hence more stable over time than the 'point in time' ratings derived from IRB approach, which could change more frequently over the business cycle and hence introduce a greater degree of volatility in the regulatory capital requirements. In either case, it can be expected that variability would be introduced into the capital regulation framework by the use of ratings for assigning risk weights and it will for the supervisors and banks to decide whether this should be pro or anti cyclical.

Yet another type of rating can be expected to play a significant role in capital regulation and that is the supervisory rating. The second pillar of the new Accord expects supervisors to specify bank-specific capital add-ons based on the risk profile of individual banks thus effectively raising the Basle minima for riskier banks. Although supervisors would use different methods to diagnose the risk profile of their banks, it can be expected that some would use the component or

composite ratings of supervisory rating models (such as CAMELS) which can provide useful indicators of risk profile. The BCBS is expected to come out with more detailed guidelines on the second pillar for the use of supervisors. Whatever be the manner of determining risk profile, what is evident is that several banks in the Indian context could be expected to have higher than system capital charge required of them, which again would raise the capital requirements for the system as a whole.

IV.4 Concluding Observations

With the Accord still in its early days and expected to be revised based on the comments received by the BCBS from the respondents to the June 1999 consultative paper, it is too early to gauge the full impact of the final Accord on our banks. Some simple conclusions however suggest themselves. Claims on banks would overall attract higher risk weights irrespective of whether they continue to remain unrated or obtain ratings, internal or external since the present ceiling of 20 per cent would now become a floor. With most corporates being unrated, there would be no major change in the overall risk weights on good quality assets, and there would even be lower risk weights for premium borrowers. However, net NPAs would attract the 150 per cent risk weight from the 100 per cent at present and hence require more capital to support them. And, if the second pillar is implemented, then an add-on can be expected for some banks, though some of this could be met by the existing system-wise add-on of 1 per cent prescribed from the year 2000-01. However, if the Reserve Bank's position of keeping the ceiling on risk weights at 100 per cent for corporates and 50 per cent on banks is accepted, then the strain on the system may be minimized. Yet, overall the conclusion is inescapable that the new Accord would require net additional capital for the system.

ⁱ Swindle (1995) attempted to separate the relative roles of the market and regulators using the latter's private capital adequacy ratios. His analysis suggests that banks with lower regulatory capital ratings have higher expected increases in their primary capital ratios.

ⁱⁱ This raises the possibility of a 'shadow' credit rating for banks. Since the sovereign rating acts as a ceiling in any rating exercise, for banks/corporates in sovereigns with ratings in the BB+ to B- category, for instance, obtaining a rating is the same as being unrated, since in both cases, the risk weight is 100 per cent.

ⁱⁱⁱ Some international rating agencies also assign financial strength ratings for banks which reflect the agency's opinion of the institution's intrinsic safety and soundness and, as such, exclude certain external credit risks and credit support elements that are addressed by traditional debt and deposit ratings. Moody's, for example, has financial strength rating which can be interpreted as a measure of the likelihood that a bank will require from third parties, such as its owners, its industry group, or official institutions.

^{iv} Long-term ratings are those assigned to Bonds/Debentures, medium-term ratings are those assigned to Fixed Deposits and short-term ratings are those assigned to Commercial Paper/CDs.

^v Kamin and von Kleist (1999) have employed a linear mapping of ratings to risk with Aaa (of Moody's) and AAA (of Standard and Poor's) being assigned a value of 1, and the lowest value being 16 for B3 (of Moody's) and B- (of Standard and Poor's). Their analysis reveals that in cases where ratings are assigned by both Moody's and Standard and Poor's, they were identical for 58 per cent of the issues and differed by one notch for 36 per cent of the issues. A similar methodology of linear mappings has been used by Karacadag and Taylor (2000). In the Indian situation, given the non-availability of quarterly data on external ratings for PSBs and the lack of dispersion across ratings of PSBs (with the rated PSBs being assigned a sovereign rating in most cases), it is not very meaningful to use external ratings for determining capital adequacy standards of these banks.

^{vi} The results with regard to foreign rating agencies are benchmarks, with the sovereign rating acting as the ceiling. As a result, there is a lack of dispersion of ratings across public sector banks. To that extent, the results need to be interpreted with caution.

^{vii} Long-term ratings are those assigned to debentures and bonds, while short-term ratings are those assigned to fixed deposits/commercial paper.

^{viii} These banks are Bank of Baroda, Bank of India, Dena Bank, Punjab National Bank, Central Bank of India, Corporation Bank, Punjab and Sind Bank (Nationalised Banks) and State Bank of India, State Bank of Hyderabad, State Bank of Patiala, State Bank of Saurashtra, State Bank of Travancore (SBI Group).

^{ix} These banks are Bank of Baroda, Bank of India, Canara Bank, Central Bank of India, Corporation Bank, Dena Bank, Oriental Bank of Commerce, Punjab National Bank, Punjab and Sind Bank, Indian Bank, Union Bank of India and Vijaya Bank (nationalised banks), State Bank of Bikaner and Jaipur, State Bank of India, State Bank of Hyderabad, State Bank of Indore, State Bank of Mysore, State Bank of Patiala and State Bank of Travancore (SBI Group).

^x Comments of the Reserve Bank on *A New Capital Adequacy Framework*, RBI, 2000.