Moody’s investors service response to the consultative paper issued by the Basel Committee on Bank Supervision “A new capital adequacy framework”

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Abstract

Moody’s endorses the Basel Committee’s proposal to use banks’ internal risk assessments to refine the Basel Accord’s risk weights on bank assets and commitments. External risk assessments, such as Moody’s credit ratings, will likely play a supporting role as direct inputs into banks’ internal rating systems and as tools for benchmarking and validating those systems. However, the widespread use of ratings in regulation threatens to undermine the quality of credit over time by increasing rating shopping, decreasing rating agency independence, and reducing incentives to innovate and improve the quality of ratings. This paper discusses how bank regulators can use external ratings in ways that mitigate the adverse incentives created by the resulting regulatory demand for rating agency services. © 2001 Elsevier Science B.V. All rights reserved.

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1. Summary of comments

The Basel Committee’s new capital adequacy framework is another step forward in the development of an efficient and globally consistent approach to
bank supervision. The new framework recognizes that credit risk management practices are undergoing a technology-driven transformation and that each regulated bank has a unique pattern of risks and capabilities. Within this context, the Committee has proposed two methods to adjust the Basel Accord’s capital charges to better reflect risk differences across individual credit exposures. The internal ratings approach relies on banks’ internal risk assessments, while the external ratings approach relies on externally provided risk assessments, such as credit ratings.

Moody’s agrees with the Committee’s position that an internal ratings-based regime can provide a more accurate assessment of risk for sophisticated banks than the current Basel capital adequacy framework. We fully appreciate that, under such a regime, the supervisors’ responsibilities will be particularly challenging, given the Committee’s desire to achieve a consistent capital adequacy framework across a wide variety of banks, operating in numerous nations. In this regard, we expect that external risk assessments, such as Moody’s credit ratings and related risk management services from a growing array of service providers, will prove valuable as direct inputs into banks’ internal rating systems and as tools for benchmarking and validating those systems.

For banks and bank regulators that are not yet ready to put an internal ratings-based system into operation, it seems feasible to design an external ratings approach that, in transition to a fully internal system, would represent an improvement over the current regulatory capital framework. Yet, while the utility of credit ratings as indicators of relative credit risk cannot be denied, the external ratings approach has a number of shortcomings that need to be addressed, even if only in place for an interim period. At present, credit ratings cover only a small portion of most banks’ portfolios, and the external ratings approach is unresponsive to the unique needs of individual banks. Moreover, its implementation would introduce a number of adverse incentives into the credit risk services industry.

We therefore recommend that, if adopted, the external ratings approach should be seen as an interim measure, put in place while the banking and regulatory communities develop and fine tune the internal ratings-based framework. Moreover, in adopting the external ratings approach, even as a temporary measure, a number of steps should be taken to mitigate the adverse effects that flow from the use of ratings in regulation. In general, our suggestions are based on the belief that transparency, external scrutiny and validation will, in the long term, produce the best credit assessments for determining bank regulatory capital.

1.1. Specific recommendations

- Use of external credit ratings in regulation
  - To ensure their integrity and reliability, external ratings eligible for use in regulation should be made public and thus be subject to scrutiny. Regu-
lators should be cautious before extending substantial capital relief solely on the basis of private ratings or those produced in situations where limited public disclosure is available.

- Regardless of whether an issuer requested a rating, regulators should consider all ratings that have been assigned to a given issuer by recognized rating agencies.

**Rating agency eligibility determination**

- The most meaningful indicators of rating agency credibility are market acceptance by major investors, rating scales that are neither higher nor lower than those of established agencies and published track records that indicate a strong correlation between ratings and credit losses over several market cycles.

- The goal of broadening the range of potentially eligible credit rating institutions conflicts with the objective of limiting eligibility to credible ratings, because abstract “rules of operation” are inadequate substitutes for market acceptance and historical track records.

- There should be no attempt to impose consistency among rating agencies by “harmonizing” methodologies, as that would threaten ratings reliability, analytical innovation and rating agency independence.

**Internal model validation**

- Regulators should avoid giving mandates to, or endorsing, specific risk-management service providers. Rather, a broad range of providers of traditional credit ratings and other credit risk management services should be encouraged to assign ratings and to build or validate internal rating systems.

- The effectiveness of such ratings and credit risk models should be compared to standard industry benchmarks and should be subjected to public scrutiny.

- Academics, regulators and other interested parties should have access to information that will facilitate the testing of relative performance and model validation.

2. The rationale for the use of credit risk measurements in a capital adequacy framework

Since the principal way banks have historically lost money has been through credit losses, a bank’s capital requirements ought to be, at least in part, determined by the probability distribution of its potential credit losses. Moreover, for a given level of risk concentration and default correlation, a bank’s credit loss distribution is closely linked to the expected loss rates of its individual credit exposures. These linkages, therefore, provide the theoretical basis for a regulatory capital framework that varies exposure-specific capital charges that vary with their individual credit risk characteristics.
2.1. The role of bank capital

Capital provides the financial cushion for economic losses, protecting depositors, other creditors and official institutions, which are often forced to absorb bank losses in the interest of maintaining banking system stability. As traditionally measured, equity capital is the difference between assets and liabilities. However, broader measures of capital generally include reserves against loan losses – which, in theory, should equal the expected level of losses imbedded in the existing asset portfolio – and certain forms of long-term debt that may provide additional capital support to depositors and any deposit insurance program. However, because losses are normally incurred gradually over time, the creditors’ first line of defense comes from bank operating earnings. If it were practical, an ideal measure of capital would include a valuation of each bank’s risk-adjusted expected future profit stream, particularly an assessment of sustainable profits in the advent of a severe asset quality problem.

2.2. Credit loss distributions

Associated with every bank’s portfolio of assets and commitments is a hypothetical probability distribution of credit losses over the lifetime of those assets and commitments. The loss distribution is a function of the portfolio’s asset quality, asset volatility, risk concentrations and risk correlations. Abstracting from potential non-credit risks, a bank’s financial strength can be measured by comparing its portfolio credit loss distribution to its total capital (equity, loan loss reserves and risk-adjusted value for expected future earnings).

2.3. Capital charges based on credit risk measurements

Credit risk assessments or ratings may serve as a useful input into the measurement of portfolio risk. While knowledge of risk concentrations and risk correlations is also important, measures of asset quality and asset volatility are essential. Practitioners often conceive of two types of losses: expected losses (which equal the mean of the loss distribution) and unexpected losses (which are any losses different from the mean). To provide ample protection for depositors, other bank creditors and official institutions, banks need to maintain sufficient earnings and capital to cover both expected losses and (some portion of) unexpected losses.

Credit risk ratings are generally perceived as useful measures of relative asset quality and, indirectly, relative expected loss. However, if credit risk ratings only spoke to relative asset quality, or only expected loss, they might be of little utility in a capital adequacy model. Rather, the key to bank capital adequacy is capital sufficiency relative to unexpected losses. As it happens, default rate
uncertainty (and hence unexpected loss) tends to be greatest for rating categories that have the highest average default rates. Credit risk ratings are, in fact, indicators of both expected and unexpected losses.

Based on its findings of how well different rating agencies’ credit ratings act as indicators of unexpected losses, the Basel Committee must ultimately choose whether to employ the same or different risk weightings for similarly rated claims on different types of counterparties. Moody’s ratings are intended to have consistent meanings across all sectors and geographic boundaries. However, because of the multi-faceted nature of credit risk (discussed below), expected loss rates may differ for similarly rated instruments across different market segments.

3. The usefulness of agency credit ratings

3.1. The meaning of Moody’s credit ratings

A credit rating compresses a great deal of information into one symbol. Moody’s ratings provide global capital market participants with a single framework for comparing “credit quality”. The credit quality of a debt security is primarily determined by its expected loss (the product of its expected default rate and expected loss severity). Expected loss is, in turn, largely determined by the willingness and ability of the issuer to pay timely interest and principal. However, credit quality is a multi-dimensional concept, comprised of default probability, loss severity, financial strength and transition risk. Consequently, bonds with the same credit rating may be comparable with respect to overall credit quality, but may differ with respect to specific credit quality characteristics. 1

In response to persistent market feedback, Moody’s manages its ratings with an eye towards minimizing abrupt changes in rating levels. While a rated entity’s financial fundamentals typically vary with cyclical economic conditions, investors expect that ratings will have incorporated vulnerabilities and will remain stable over time. Moody’s analysts attempt to balance the market’s need for timely updates on issuer risk profiles, with its conflicting expectation for stable ratings. In part, this is accomplished by the relative nature of the rating system. It is also accomplished by adjusting ratings for those issuers who face above- or below-average rating transition risk due to the economic cycle or as a result of a particular issuer’s financial fundamentals. To support this “through the cycle” approach, a rating action is taken only when it is unlikely to be reversed within a relatively short period of time.

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1 For further discussion see Moody’s Special Comment (1999).
The historical evidence shows that issuer default rates have been highly correlated with Moody’s ratings. The year-to-year standard deviation in default rates has also been higher for lower rated issuers (see Fig. 1). As a result, the distribution of losses on a pool of lower rated securities should, all else being equal, have a higher mean loss rate and a higher standard deviation of losses around that mean. Thus, ratings contain information about the magnitude of unexpected losses, particularly in portfolios of lower rating quality.

3.2. The reliability of Moody’s ratings

As is true of all opinions about risk, debt ratings cannot be proved correct or incorrect simply by the occurrence or non-occurrence of the event upon whose risk they opine. Default on a bond rated Aaa upon issuance does not prove that the original rating was wrong, any more than punctual payment of a bond initially rated Caa proves that rating judgment wrong. Such evidence is anecdotal at best. The test of a rating system is the degree to which ratings as a whole correlate with actual investor loss experience across obligors and through several cycles.

Research has shown a strong correlation between Moody’s ratings and actual investor loss experience. Fig. 2 illustrates the results of Moody’s most recent corporate bond default study. It shows the frequency of defaults for corporate bonds in different rating categories over time horizons of up to 20 years. The study confirms that Moody’s has assigned ratings in a consistent manner, and ratifies the market’s confidence in the use of ratings as estimators of credit risk. Because of this correlation, Moody’s ratings have established credibility as a useful tool for investors worldwide, even though the ratings are not predictions of absolute outcomes in specific cases but only opinions about relative risk.

While the external ratings approach is based on the overall reliability of private credit ratings, the Basel Committee has expressed some reservations in
the area of sovereign risk assessment. According to the Consultative Document, "rating agencies currently have only a limited and mixed track record with regard to rating less than ultra-prime [sovereign] borrowers." In this sector, as in all others, we concede that the credit rating agencies’ records are imperfect. However, we submit that no one else has a better public track record than Moody’s. Moody’s currently rates over 100 sovereigns. Over the past four years, Moody’s credit commentary clearly anticipated the problems
of four of the five sovereigns that subsequently experienced payment difficulties. 4

4. Adverse consequences of the use of external ratings

“It has always been a desirable principle of supervision that it should not deter sound market practices and the Committee is well aware that it should take care to guard against perverse incentives in all areas of supervision.”

Planned Supplement to the Capital Accord to Incorporate Market Risks: Consultative Proposal by the Basel Committee on Banking Supervision, April 1995.

4.1. The meaning of ratings may vary across rating agencies

There is no single, universally accepted, quantitative standard for each credit rating category. As mentioned above, no expected loss benchmarks have been, or are likely to be, accepted by all rating agencies. Yet, by incorporating ratings in regulations, officials implicitly assume that the risk content of ratings is comparable within and across agencies and across time.

Most rating agencies have adopted versions of the rating symbol systems utilized by Moody’s or Standard & Poor’s. From a business perspective this is understandable. The symbol system has worked remarkably well for decades as a shorthand synopsis of the detailed process of credit analysis. For young rating agencies, it is also a means by which to encourage comparison with long-established competitors. But merely mimicking rating symbols (or mapping ratings so that they correlate highly with the present market risk spreads), and thereby giving the appearance of conforming to established ratings’ practices (or market opinion), does not automatically translate into ratings with equivalent meanings or established market validity.

Fig. 3 reveals average ratings’ differences among nine rating agencies at year-end 1990. 5 While academics and other researchers have generally observed a broad congruence in the rating scales of Moody’s and Standard & Poor’s, the same cannot be said of their other competitors. 6

In describing the use of ratings, the proposed capital adequacy framework offers advantages to higher-rated debt instruments. Such regulation assumes

4 Moody’s Special Comment (1998).
5 Drawn from data published by Beattie and Searle (1992).
6 In a more recent study, based on year-end 1993 data, DCR and Fitch were found to rate higher than Moody’s 50% and 59% and lower, only 11% and 6% of the time, respectively. For further information, see Cantor and Packer (1997). This article was completed while the authors were employed by the Federal Reserve Bank of New York; since 1997, Mr. Cantor has been employed by Moody’s Investors Service.
equivalent rating scales across agencies, equivalent definitions for each rating grade within each scale and an absolute performance measure of credit risk applicable to each rating grade. None of these assumptions hold.

4.2. Rating shopping undermines rating accuracy

The credit rating agency industry is subject to moral hazard. Every rating agency has a business incentive to assign high ratings to issuers, who are free to choose among the agencies. This incentive is offset by a rating agency’s need to maintain its reputation in the market with investors, who drive the issuers’ demand for credit ratings. Pressure on issuers to “shop” for the highest rating is increased by their use in regulation. Such practices could undermine the reliability of ratings over time.

By using ratings as a tool of regulation, regulators fundamentally change the nature of the rating agency product. Issuers pay rating fees, not to facilitate access to the capital market, but to purchase a privileged status for their securities from the regulator. As a result, licensed rating agencies will have a product to sell regardless of the analytic quality of their ratings and their credibility with the investor community. Flawed incentives promote aggressive rating practices that, in turn, will undermine a capital adequacy system based on such ratings.
4.3. Minimizing the impact of rating shopping

To ensure their integrity and reliability, ratings eligible for use in regulation should be made public and thus subject to market scrutiny. When using private ratings or ratings where limited public disclosure is available, regulators should be cautious about extending full capital relief. Regardless of whether an issuer requested a rating, regulators should consider all ratings that have been assigned to a given issuer by recognized rating agencies. While these measures will not guarantee credible ratings, they are more likely to allow market discipline to increase consistency among ratings.

5. Threats to rating agency independence

The role of the rating agency is inherently controversial. It is the rating agency’s task to make independent and sometimes controversial observations regarding powerful and prestigious issuers. It is in the nature of the business that such decisions, which affect an issuer’s reputation and borrowing costs, are at times neither welcomed nor applauded.

Moody’s is concerned that the expanded regulatory use of ratings, though driven by legitimate public policy interests, may nonetheless negatively influence the existing balance of agency independence. Indeed, at critical points, public policy and rating agency self interest are likely to combine such that it is difficult for a government-approved rating agency to downgrade a government agency, a major bank or the sovereign itself. There would be little need for overt interference in rating decisions; regulatory inquiry alone would have a restraining effect. Therefore, we make the following suggestions to preserve rating agency independence.

6. Criteria for rating agency recognition

In developing criteria for rating agency recognition, bank supervisors need to balance a concern about rating agency independence against their desire for minimum standards. Such criteria would depend on three basic principles. One, the authorities that determine the eligibility of rating agencies should be able to demonstrate that a rating agency’s ratings are valued by the major investors in the relevant markets. Two, the agency’s rating scale should be equivalent to – neither higher nor lower than – those of other generally recognized rating agencies. Three, the rating agency’s track record should indicate that its ratings are strongly correlated with investor loss experience over long periods of time, involving several market cycles. Demonstration of equivalence and correlation would require that the agency’s ratings eligible for regulatory use should be 
publicly available and sufficiently numerous to permit market participants to
conduct appropriate statistical testing. The focus of such analysis should be upon results – ratings and defaults – and not the inputs to the ratings process.

The specific criteria for rating agency recognition that are laid out in the Basel Committee’s proposal appear to be somewhat at odds with a number of these principles. The proposal makes no reference to a rating agency’s market acceptance, historical performance or scale equivalence. Rather, the proposal states that the rating methodology must be “rigorous, systematic, continuous…subject to validation.” While this requirement appears reasonable, attempts to translate such a requirement into practical criteria are likely to lead to the publication of rigorous methodologies that ultimately have little bearing on the independence and credibility of ratings. Such methodologies cannot incorporate the many nuances and changing factors that go into rating opinions. How well a rating agency distinguishes relative credit risks of issues and issuers can best be assessed by the markets’ acceptance of those ratings and the default and loss experience by rating level. Furthermore, supervisory review of rating methodologies places supervisors in the awkward position of overseeing the analysis itself, which we recognize is not an objective of the proposals.

The new capital adequacy framework proposes that recognized rating agencies should have “sufficient resources to allow substantial ongoing contact with senior and operational levels of assessed entities.” Regardless of whether a case can be made for some minimal resource requirement, rating agencies should not be required to have ongoing contact with representatives of the issuing entities. Public scrutiny is the only reliable safeguard of ratings quality and integrity. If management contact were required, then debt issuers would be able to screen out unwelcome opinions. As a result, the main drivers would become unbalanced towards the interests of the issuer, not those of the investors and bank regulators. 7

7 The credibility of ratings in many sectors does not depend upon the extent of contacts with the management of issuers. It is the quality analysis of the information obtained by a rating agency rather than its source that determines the credibility and reliability of the rating opinion expressed. A common misconception is that rating agencies, through privileged access to the senior management of an issuer, always gain insights that are not available through any other means. While Moody’s meets with the management of most issuers of securities it rates, it does not view this practice as indispensable to the formation of an accurate rating opinion.

Moody’s finds that meeting with senior management tends to accelerate the analytical process, because much of the information needed can be gathered quickly from one source and answers to certain questions easily obtained, but not to change the substance of such a process. If such a meeting is not available, the analyst usually has access to public filings, industry publications and information from the issuer’s competitors, suppliers and customers through its normal course of business. The analyst may have followed the company for many years as part of an ongoing analysis of the industry. In some countries, accounting and disclosure rules for public companies, and publicly available information about governmental issuers, are extremely useful in fulfilling the analytic needs of a rating agency analyst. In short, a meeting with senior management may facilitate an analyst’s understanding of information otherwise available, but such a meeting is typically supplementary to information gathered from other sources.
7. New credit risk management techniques

7.1. Internal ratings systems

Many of the goals of a new regulatory framework can be met by development of a capital adequacy standard that incorporates the use of banks’ own internal ratings systems. There has been, over the past several years, a significant increase in the number of banks that use some form of internal risk assessment as a tool to compare the relative risk of individual credits within portfolios and across portfolios of banks. The development of these internal ratings systems should help banks focus credit risk management and economic capital allocation. Perhaps, more importantly, these systems should help banks price credits more in line with their risk characteristics.

Broader coverage of bank borrowers is perhaps the most obvious advantage of a capital charge system based on internal, rather than external, ratings. Internal bank loan ratings can also be more easily adjusted to reflect differences in risk based on loan covenants and collateral.

Many of the most difficult issues raised by any ratings-based capital charges are better addressed in the context of internal rating systems than in the external ratings environment. Under an external rating system, banks and their regulators must use the existing (often inconsistent) rating definitions employed by different agencies. In contrast, the internal ratings approach allows banks and regulators to devise a consistent internal rating definition and monitor its application. Moreover, internal ratings can be defined in a way that appropriately trades off the desire for stability of ratings (and thus capital requirements) and the desire to tie capital requirements to expected loss levels. Furthermore, the relevant holding period for the assets can be tailored to each banks’ circumstances and, when sizing the “risk buckets,” the banks and their regulators can determine the appropriate degree of granularity.

In order to implement a credible internal ratings-based system, bank regulators need to be able to calibrate risk assessments within banks, across...

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8 Long-term banking relationships can generate reputational pressures on banks to roll over short-term lending commitments even in adverse circumstances. As a result, effective holding periods are typically much longer than the nominal maturity of a credit exposure.
banks within a country and among countries. While there is a wide variation in the expertise and resources of different countries’ bank supervisors in this regard, tools and processes exist that would allow regulators to make such comparisons. Quantitative scoring systems for consumer debt and small and mid-capitalized companies are available that could be used by regulators to systematically review general risk characteristics of banks. Ever-growing numbers of external credit ratings can be used to compare rated credits in the portfolios of banks. The independence of internal credit risk assessments can systematically be reviewed and compared to the best practices. Bank supervisors can monitor the conformity of predicted default rates to actual default rates. For larger banks, the intrinsic credit quality of banks and, by proxy, their credit portfolios can be monitored by reviewing the published opinions of commentators on credit, such as rating agencies or other research organizations.

7.2. Innovation and portfolio risk management systems

Continued emphasis on internal ratings will ultimately lead to other desirable outcomes. The last three years have seen a rapid expansion in the range of financial instruments for which credit ratings or alternative, quantitative risk assessments have been assigned, and an increase in the sophistication of credit risk management tools and the quality of credit risk analysis generally in use by practitioners. The new regulatory framework should continue to promote such innovation in the credit risk management services industry.

Moody’s has been a leader in many of these developments. The essence of our structured finance rating methodology is to review the potential loss distribution associated with a specific asset pool and assess the sufficiency of the capital base (or credit enhancement) that supports the promised liability stream funded by those assets. Several years ago, Moody’s developed a quantitative rating service, called RiskScore, which estimates the riskiness of bank loans extended to small private companies at a relatively low cost.

As written, the new Basel proposal endorses the development of new credit risk analytic practices. In order to stimulate innovation, we recommend that regulators minimize the extent to which mandates are given to specific risk management service providers. In particular, a broad range of traditional rating services and other credit risk management services should be given the opportunity to assign ratings or validate and build internal rating systems. Academics, regulators and other interested parties should have access to in-
formation that will facilitate the testing of relative performance and for model validation.

8. Conclusions

Moody’s endorses the Basel Committee’s proposal to use banks’ internal risk assessments to refine the Basel Accord’s risk weights on bank assets and commitments. Under such a capital adequacy framework, external risk assessments, such as Moody’s credit ratings, will likely play a supporting role as direct inputs into banks’ internal rating systems and as tools for benchmarking and validating those systems.

The Committee’s alternative, external ratings proposal is less attractive because it is not responsive to the unique needs of individual banks and because external ratings cover only a portion of most banks’ portfolios. Moreover, the widespread use of ratings in regulation threatens to undermine the quality of credit over time by increasing rating shopping, decreasing rating agency independence and reducing incentives to innovate and improve the quality of ratings.

If external providers of credit risk management services are used as tools of regulation, the adverse incentives created by the resulting regulatory demand for their services can be reduced if:

- greater weight is given to external ratings which are subject to public scrutiny and benefit from broad disclosure of underlying information;
- all public ratings assigned to a given issuer, whether requested by the issuer or not, are factored into the supervisory regime;
- the acceptance of rating agencies is based on their public track record and acceptance by major investors;
- regulatory mandates given to specific providers of risk management services are avoided.

Many banks and regulators, however, are not yet ready to implement an internal ratings approach to capital adequacy on a consistent basis across all regulated financial institutions. Consequently, as an interim measure, external risk assessments may have to be used to refine the Basel Accord’s risk weights. However, because the use of external ratings will be limited by a de facto “sunset provision,” there would be few benefits and large costs to an elaborate recognition process for external credit assessment institutions.

References