

August 2006

Getting ready for Basel II

Gary Rice breaks down the latest US proposals on Basel II and explains why lawyers must be aware of them to advise clients adequately

On March 22 2006, the Board of Governors of the Federal Reserve System released the text of a proposed rule for implementing Basel II: the revised risk-based capital guidelines developed by the Basel Committee on Banking Regulations and Supervisory Practices. Only the largest (with total assets of \$250 billion or more) and most internationally active (with \$10 billion or more in foreign assets) US banking organizations will be required to comply with the proposed rule when it is finalized. There are 11 such US banking organisations, and it is expected that approximately 20 additional US banking organizations will voluntarily seek to qualify.

The proposed rule is 448 pages long and full of acronyms and mathematical formulas. A lawyer flipping through it might wonder what role lawyers could conceivably have in interpreting such a document. Certainly, much of the work of implementing the proposed rule at US banking organizations will fall to risk managers rather than to lawyers. Daunting as the proposed rule may be, however, lawyers that represent large US financial institutions will need to familiarize themselves with it because it will influence the way many types of transactions are structured, particularly derivatives and securitizations, and because banks will look to lawyers to assist them with complying with the extensive new public disclosures that the new rules will require.

The existing risk-based capital rules use a simple approach to assessing credit risk: assets are grouped into a few categories based on the type of obligor (or, in a few cases, the type of obligation) and assigned risk-weights ranging from 0% to 100%. Off-balance sheet liabilities that have credit risk are first multiplied by a credit conversion factor, ranging from 0% to 100%, and then risk weighted based on the type of obligor. The simplicity of the rules is best illustrated by the fact that virtually all claims on private sector companies are assigned the same 100% risk weight.

The proposed rule attempts to be much more risk sensitive. For the purposes of setting risk-based capital requirements, the proposed rule divides credit and equity exposures into four categories: wholesale, retail, securitizations and equity.

Wholesale

Wholesale exposures cover most exposures to companies and government entities that are managed on an individual basis and are not either securitizations or equity exposures. Banks would be required to estimate certain risk parameters, which are then inputted into a formula that is based on a value-at-risk methodology and is prescribed by the regulation. The proposed rule would require banks to have a "comprehensive risk parameter quantification system that produces accurate, timely, and reliable estimates of the risk parameters". It would also require the models used to estimate risk parameters to be "transparent, well supported and documented".

The first risk parameter is probability of default (PD), which is the likelihood (expressed as a percentage) that a wholesale obligor will default within one year. Each bank would develop a rating system that estimates the PD of each obligor based on data such as historic and projected financial performance, industry risk and non-financial contingencies such as labour problems. The risk rating system must have at least seven PD grades and each wholesale obligor will be assigned a PD based on the rating grade. The PD would apply to all of the obligor's obligations, without regard to the type of loan or the existence of collateral. In many areas of the proposed rule, the regulators have restricted outcomes to ensure that capital requirements do not fall too far. In this case, for non-government entities, the floor PD is 0.03.

The second risk parameter is the expected loss (expressed as a percentage of the expected exposure at the time of default) given a default (ELGD). Banks would either estimate the ELGD of each exposure or assign ELGDs to groups of exposures that have similar characteristics. The ELGD would reflect not only the net present value of the

cash flows that would be lost in the event of a default, but mitigation of that loss due to the existence of collateral and costs associated with the loan workout process.

The third risk parameter, loss given default (LGD) is the same as ELGD except that it is the expected loss, given a default, if the default occurs during an economic downturn. The proposed rule does not require banks to reflect geographical, industry, sector or other concentrations in calculating LDG. Banks are given the choice of estimating the LGD of individual or groups of exposures, or using a simple formula for converting ELGD to LGD. The regulators include a different correlative factor in the risk-based capital formula for high volatility commercial real estate exposures, requiring more capital for them on the theory that risk for such loans is more highly correlated with economic downturns.

The fourth risk parameter, known as EAD, is the estimated dollar exposure at the time of default and, except for derivatives and certain other types of assets, will generally be the carrying value of the asset. The final risk parameter is the number of years of remaining maturity.

Once a bank estimates all of the risk parameters for an exposure, it inputs them into the risk-based capital formula for wholesale exposures that is prescribed in table two of the proposed rule and multiplies the result by the EAD. This is done for each wholesale exposure and the sum of the results is the dollar risk-based capital requirement for those exposures.

Retail

Retail exposures are exposures to individuals and small businesses that a bank manages in segments rather than on an individual basis, as is the case with wholesale exposures.

Under the proposed rule, the bank would first divide its retail exposures into three groups: residential mortgage exposures, qualifying revolving exposures (such as credit card loans) and other. These three groups are assigned different correlative factors in the risk-based capital formula for retail exposures because their risk correlates differently with economic downturn conditions.

The bank would then divide the retail exposures into segments with similar risk characteristics (such as loan-to-value ratios, credit scores, collateral type, geography, loan terms and structure). For each segment, the bank would estimate the PD, ELGD, LGD and EAD, just as it would do for wholesale exposures. The PD, ELGD or LGD of a segment would be adjusted to reflect collateral, if any. The bank would then input the risk parameters for each exposure into the risk-based capital formula for retail exposures that is prescribed in table two of the proposed rule and multiply the result by the EAD.

The proposed rule acknowledges that the risk-based capital formulas for wholesale and retail exposures are less sophisticated than many banks currently use because they do not take into account the extent to which risks within the bank's portfolio are correlated with one another. This simplification was necessary in order to have formulas that could be applied across a range of banks with very different portfolios. The proposed rule assumes that each bank's portfolio is diversified. To the extent that a bank's portfolio has asset or geographic concentrations, an adjustment would be made to its capital requirement as part of the supervisory process.

The advanced notice of proposed rulemaking, which was issued in 2003, would have required banks to hold capital against both expected losses and unexpected losses. Many comments argued that expected losses are more appropriately covered by the allowance for loan loss reserves. The regulators accepted this point and in the proposed rule the capital requirements are based on unexpected losses. However, the proposed rule would also require each bank to compare its expected credit losses (the product of PD, ELGD and EAD for the exposure or segment) against its loan loss allowances and deduct any excess loss estimate 50% from tier one and 50% from tier two. Similarly, if loan loss allowances exceed expected credit losses, the bank would add the excess to tier two capital up to 0.6% of credit risk-weighted assets. The regulators regard this as equivalent to the limited extent to which credit reserves are included in tier two capital under the current risk-based capital guidelines.

The proposed rule also includes a scaling factor that is intended to ensure that the rule does not permit required capital to fall by more than 10%. The most recent quantitative impact study, which 26 banks participated in, showed that the new capital guidelines would result in a dollar-weighted average reduction of 15.5% in risk-based capital requirements at participating banks. Half of the participating banks reported reductions in tier one risk-based capital requirements of over 31%. It is unclear whether a similar reduction will occur under the final

rules, which will not be fully implemented at any bank until 2012.

The scaling factor in the proposed rule is 1.06. Total credit risk-weighted assets resulting from the application of the formulas will be multiplied by this factor for purposes of determining a bank's total credit risk-weighted asset amount. Operational risk-weighted assets (discussed below) would be added to this amount and the bank's qualifying capital would be divided by this total to arrive at a risk-based capital ratio. If in the course of implementation it appears that this scaling factor is insufficient to prevent the new guidelines from causing an unacceptable drop in capital requirements, then the regulators will increase the scaling factor or otherwise adjust the formulas.

Another way in which the proposed rule guards against a sudden drop in capital is to require a bank to maintain the capital required under both the current rules and the new rules for the first year in which it implements the new rules. For the next three years, the bank will be required to hold at least 95%, 90% and 80%, respectively, of the capital required under the current rules.

Securitization

The proposed rule defines securitizations as tranching exposures to a pool of underlying financial exposures. If the underlying exposure is not a financial exposure, as might be the case, for example, with a project finance deal, then it would be treated as wholesale exposure. Synthetic securitizations would generally be treated in the same manner as traditional securitizations. The proposed rule does not permit banks to estimate the risk parameters for securitizations. Instead risk weights for securitization exposures are based on ratings or on the risk-based capital requirement for the underlying exposures.

If the securitization exposure is rated, or is senior to a rated tranche, then the ratings-based approach must be used. The proposed rule includes tables that provide risk weights based on whether the securitization exposure is long or short term, its rating, its granularity (whether there are six or more underlying exposures) and its seniority (whether the exposure is senior to all other tranches). For example, a long-term exposure with the lowest investment grade rating with a negative designation (BBB-for example) is assigned a risk weight of 100%. A long-term exposure one category below investment grade is assigned a risk weight of 425%.

If the exposure is not rated, and if it is an eligible asset-backed commercial paper programme exposure, then the bank may use the internal assessment approach, in which case the bank maps its internal credit assessment of a securitization exposure to an equivalent external credit rating from a rating agency. This rating is then used to derive a risk weight from the tables for the ratings-based approach.

If neither of the above approaches is available, the bank may use the supervisory formula approach. However, that is available only if the bank is able to calculate seven inputs, one of which is the risk-based capital requirement and estimated credit loss for each of the underlying exposures. If this approach is not available because the inputs cannot be calculated, the bank must deduct the exposure from capital.

The risk-based capital requirement for a securitization cannot exceed the sum of the risk-based capital requirement for the underlying exposures and the expected credit loss for those exposures (the latter on the theory that if the exposures were on the balance sheet the bank would have to keep reserves or capital against them).

Equity

Under the proposed rule, banks would determine the risk-based capital requirement for equity exposures under one of two approaches. The internal models approach would allow banks to use their own models, once approved by the regulators, for estimating the risk of loss on equity exposures. The proposed rule would not require that any particular type of model be used. However, the risk weights resulting from an internal models approach would be subject to a floor of 200% for publicly-traded equity exposures and a floor of 300% for privately-traded equity exposures.

The second approach, called the simple risk-weight approach, would assign the adjusted carrying value of an equity exposure a risk weight of 300% for publicly-traded equity exposures, and 400% for privately-traded equity exposures. The adjusted carrying value, in the case of on-balance sheet equity exposures, would be calculated by removing unrealized gains that are excluded from capital (65% of the gain). For off-balance sheet items, the adjusted carrying value would be the amount of on-balance sheet exposure that would change in fair value to the

same extent as the off-balance sheet item for a given small change in the price of the underlying equity exposure, less the adjusted carrying value of the on-balance sheet component of the exposure.

Equity derivatives would generally meet the definition of both an equity exposure (because of the underlying asset) and a wholesale exposure (because of credit exposure to the counterparty). If a bank uses the internal models approach, the risk-based capital requirement generally would be the sum of the requirement for the two parts of the exposure. The proposed rule also provides for the adjustment of the capital requirement to account for hedged exposures.

The proposed rule offers three approaches to determining the capital requirements for equity exposure to investment funds. The full look-through approach calls for the risk-based capital requirement to be calculated by determining the requirement for each underlying exposure. The simple modified look-through approach calculates capital based on the highest risk weight that applies to any exposure in the fund. Finally, where fund documents indicate maximum percentages that may be invested in different types of exposures, a bank may use the alternative modified lookthrough approach, which assumes that the fund will invest the maximum amount permitted in the highest risk weight exposure, and works backward until 100% of the fund is accounted for.

Operational risk

In addition to the capital requirements for credit and equity exposures, the proposed rule would assign a specific risk-based capital requirement for operational risk, which is the risk of loss, exclusive of insurance and tax effects, from events "associated with internal fraud; external fraud; employment practices and workplace safety; clients, products, and business practices; damage to physical assets; business disruption and system failures; or execution, delivery and process management".

The proposed rule would require banks to "establish and document a process to identify, measure, monitor, and control operational risk in bank products, activities, processes, and systems". Banks must choose a value-at-risk methodology and produce an estimate of operational risk at the one-year 99.9th percentile confidence level. Also, the methodology must cover expected and unexpected operational loss, unless the bank can show that the former is covered by offsets, such as operational risk reserves.

Market discipline

The regulators included market discipline as the third pillar of the proposed rule on the theory that, if banks are required to publicly disclose substantial information regarding their risk management processes, then the potential effect of such disclosures on the market for their securities would encourage them to have strong risk management processes. In adopting the proposed rule, the regulators brushed aside complaints that such disclosure would be too burdensome, not comparable across banks, and likely to be misinterpreted by the public.

The required disclosures are contained in a series of 11 tables at the end of the proposed rule. The disclosures are both extensive and detailed. For example, with respect to a bank's assessment of credit risk for wholesale exposures, the bank is required to not only describe the definitions, method and data for estimation and validation of each of the risk parameters, it is required to provide, across a number of PD grades, total EAD, exposure weighted ELGD and LDG, and exposure-weighted capital requirements.

It is also required to provide a comparison of risk parameter estimates against actual outcomes for both the preceding period and a longer period. This comparison would at a minimum be shown for the wholesale category and each retail category and, where appropriate, the bank should further decompose this to provide analysis of each risk parameter outcomes against estimates.

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