31.07.2003 15:20

Re: Comments on the Proposed New Basel Capital Accord

JP Morgan Chase & Co. is pleased to provide comments on the Basel Committee on Banking Supervision’s (Committee) third consultative document (CP 3) on the New Basel Capital Accord (Basel II). Through its consultative process, the Committee has created a unique opportunity for internationally active banks and supervisors to have a constructive dialogue about the appropriate evolution of regulatory capital requirements. We greatly appreciate the Committee’s receptivity to the banking industry’s comments on the previous consultative papers regarding a new capital adequacy framework. As a result, the proposed new capital regime is much more risk sensitive than the current regime and provides some important incentives for better risk management and measurement. We also greatly appreciate the continuing efforts supervisors have made since the release of the original proposal in January 2001 to explain various features and to seek input from the industry. A number of important changes to the proposal have been made as a result of this constructive engagement.

After the executive summary, we begin our comments by elaborating briefly on our support for the Committee’s overall direction. We then discuss issues related to the Pillar 1 capital requirements for credit risk. In the third section we address the operational risk component of CP 3. In the fourth and fifth sections we comment on implementation issues and the market discipline pillar of the proposal, respectively. We include recommendations in each section.

Executive Summary

- We strongly support the direction of Basel II and appreciate the Basel Committee’s constructive approach with the industry. Ultimately, the best way for the Committee
• to ensure that regulatory capital reflects the true dimensions of a bank’s risk profile is to allow the full use of internal models. In this regard, we welcome the Advanced Internal Ratings approach (AIRB), which allows banks to rely on their estimates of probability of default (PD), loss given default (LGD), and exposure at default (EAD) as well as the Advanced Measurement Approach (AMA) for operational risk.

• We remain concerned about the cumulative effect of conservative choices the Committee has made that move Basel II away from being “true minimum” capital standards. The Committee should consider modifying key parameters of the proposed regulatory model to ensure that Basel II rules do not become a binding constraint for well-run banks in the normal course of business.

• The inclusion of an Expected Loss (EL) component of the capital charge is inconsistent with industry practice and should be eliminated. The Committee should adopt a model based on Unexpected Loss (UL) and modify the definition of capital to focus on Tier 1 elements only.

• The calibration of capital requirements for certain retail products is too high relative to industry practice, the cause of which appears to be the combination of the specification of correlation parameters and the aforementioned EL issue. The Committee should modify its correlation assumptions to be more in line with industry practice.

• The treatment of credit hedging should be improved significantly by recognizing the lower risk of joint default and by modifying overly conservative rules on maturity mismatches.

• The rules applicable to the maturity adjustment for transactions with maturities below one year are too constricting and the calibration of the adjustment is too conservative. The maturity adjustment should apply to all transactions with an effective maturity below one year and should be based on an adjustment to PD.

• The link between stress test results and Pillar 1 capital requirements should be weakened and the specificity around stress test design should be treated as supervisory guidance and not as a Pillar 1 requirement.

• The risk weights for securitizations and the related capital floor, combined with the operational rules applicable to these transactions, result in capital requirements that are inconsistent with the associated retained risks, particularly for senior tranches for retail securitizations and liquidity facilities for asset-backed commercial paper conduits. The Committee should refine its methodology and adjust the floor and risk weights accordingly.

• We encourage the Committee to address the methodology applicable to counterparty credit exposures as soon as possible. In the meantime, the rules applicable to the use
• of own collateral haircuts should be modified to take account of industry practices with respect to foreign currency mismatches and confidence levels.

• We strongly support the inclusion of a Pillar 1 capital charge for operational risk and rigorous data capture requirements. Flexibility will be required in the implementation process regarding evolving operational risk classifications and the assessment of correlation effects and diversification benefits. An appropriate allocation technique is necessary to ensure that the AMA can be applied on a legal entity or regional basis. Risk mitigation techniques should be formally recognized in the final rules.

• The level of prescription in the qualifying requirements for the AIRB is burdensome and unnecessary. The Committee should scale back the requirements and produce strong practice guidance instead.

• We appreciate that the Pillar 3 disclosure requirements have been reduced. However, we remain concerned that certain credit risk disclosures will be burdensome to produce and will be subject to misinterpretation.

1. Support for the Direction of Basel II
We continue to strongly support the direction of Basel II. The three pillars of minimum capital requirements, supervisory review of capital adequacy, and market discipline provide a solid framework in which to address safety and soundness issues in an environment of continuous innovation in the financial markets. The Committee’s objectives with respect to Pillar 1 capital requirements – improving the way regulatory capital requirements reflect the underlying risks and incorporating advances in credit risk measurement techniques – will reduce inefficiencies related to the current regime and have the potential to promote stronger practices at internationally active banks. Our experience with the third Quantitative Impact Study (QIS 3) leads us to believe that with some further modification Basel II will result in a regulatory capital regime that is, on the whole, better calibrated and much more risk sensitive than the current regime.

We consider the Committee’s decision to allow banks to use their own risk inputs in both the credit risk and operational risk components of Basel II a highly positive development. Ultimately, the most effective and efficient way to reduce the divergence between regulatory rules and market practice is to allow banks to fully utilize their internal models in the process of measuring their regulatory capital requirements. For banks that demonstrate they have robust risk management and measurement processes, this would provide the best way for supervisors to ensure that regulatory capital reflects the true dimensions of a bank’s credit risk, including credit quality, maturity, correlations and concentrations. The Committee has recognized the value of leveraging banks’ modelling capabilities in developing the AMA for operational risk. The Committee previously recognized the value of leveraging banks’ internal models in adopting the Market Risk Amendment to the current Capital Accord (Basel I). A full internal models approach to credit risk is where the Committee should be headed. Recognizing that supervisors are not prepared at this stage to fully endorse the use of credit risk models, we welcome the AIRB as a significant step in that direction.
Some aspects of the proposals, however, are inconsistent with the Committee’s objectives, and we discuss those in the sections below.

2. Pillar 1 Capital Requirements for Credit Risk

2.1 Calibration of Overall Capital

Given the critical role banking organizations play in providing credit and liquidity to the financial system and the real economy, we fully appreciate and respect the setting of minimum capital rules by bank supervisors. Minimum regulatory capital rules -- set at a reasonable solvency standard -- promote safety and soundness, provide a basis for potential supervisory intervention, help protect insurance funds, and establish a foundation for peer analyses of financial strength. At the same time, we hope supervisors share our view that the optimization of capital allocation decisions must be left to bank management if we are to fully realize the benefits of our market-driven financial system. For well-run banking organizations, minimum regulatory capital rules should not be a binding constraint in the normal course of business.

With this framework in mind, we are concerned about the cumulative effect of conservative decisions that move Basel II away from being true “minimum standards”. Our sense is that this development largely reflects the Committee’s attempt to create a risk sensitive regulatory capital regime while at the same time holding the amount of regulatory capital in the banking system roughly constant.

Examples of such decisions include:

- The 99.9% confidence interval used for credit and operational risk is conservative in light of the Committee’s goal to set a minimum solvency standard consistent with an investment grade rating. It is closer to the interval a well-capitalized AA bank would typically use for internal economic capital (i.e. 99.97%).

- An expectation that LGD and EAD estimates will be more conservative than “through-the-cycle” estimates (i.e. by overweighting historical recession results).

- Asset value correlations (AVCs) for retail products remain above industry standards. In the case of residential mortgages, for example, the 0.15 value used is 1.5 times the industry median.

- A highly conservative maturity adjustment for transactions under one-year, including the requirement to use one-year PDs except in limited circumstances.

- As discussed below, there is insufficient recognition given to the benefits of credit hedging.

- There are sources of diversification such as across risk types or between wholesale and retail portfolios that are not captured by the AIRB formula.
• In the securitization framework, there is dollar-for-dollar deduction for lower quality tranches that are not externally rated.

• The current floor proposal requires that in 2007 AIRB cannot be less than 90% of current rules and in 2008 cannot be less than 80%.

We recognize that these choices apply to the setting of the Total Capital requirement and that only half of that must be met with Tier 1 Capital. We note, however, that in the United States banks are already subject to a minimum standard that is 50% above the Basel minimum (Basel 4% Tier 1 ratio vs. Well-Capitalized 6% Tier 1 ratio). As a result, there are knock-on effects if Basel II minimum requirements are set too high.

The QIS 3 results showed significant divergence regarding the impact of Basel II on banks’ risk weighted assets relative to Basel I. However, an equally important analysis relates to how Basel II compares to banks’ internal economic capital allocations. The experience of many large banking organizations with QIS 3 showed that Basel II Tier 1 capital requirements exceeded, or came very close to exceeding, internal economic capital allocations in certain wholesale and retail portfolio segments, even though the banks tended to target a higher solvency standard than the Committee’s. This strongly suggests that the sum total of the decisions the Committee has taken, in combination with its targeted solvency standard, result in regulatory rules that could become binding for well-run banks in the normal course of business.

**Recommendations**

In the sections below, we suggest modifications to CP3 that we believe move in the direction of addressing this general concern. With respect to the Committee’s targeted solvency standard, we understand that the Committee chose the 99.9% confidence level as the basis for a solvency standard that is consistent with a solid investment grade rating. We support the Committee’s attempt to set a minimum solvency standard that is investment grade. However, we observe that this confidence level implies a loss frequency that is considerably lower than that associated with a BBB/BBB+ rating and a true minimum standard. Accordingly, we recommend that the Committee review this critical parameter choice to target a solvency standard that is more consistent with this rating level, such as 99.5%.

We believe that the Committee should apply a similar principle throughout its decision-making process around the new capital rules. Parameter choices and operational requirements should be set to achieve a true minimum standard, not to solve back to an existing capital level. To be sure, the Committee should review any one choice in the context of the other decisions it has made with respect to the calculation of risk-weighted assets and eventually the definition of capital. Ultimately, banking organizations and bank supervisors must be comfortable that Basel II creates a regulatory standard that, on balance, is truly a minimum standard.

**2.2 Treatment of Expected Losses**

One of the reasons the Basel II risk-weight formula has moved away from being a true minimum standard is the inclusion of EL as a component of the capital requirement. As
the Committee is aware, banks typically do not include EL as a component of their internal economic capital models. Banks' internal economic capital models are constructed based on the view that capital is only needed to cover the UL portion of the loss distribution. Expected margins net of net-non-interest expense (essentially Future Margin Income as defined in CP 3) are generally intended to exceed the sum of EL plus a market rate of return on economic capital. The Committee has acknowledged this industry practice by allowing 75% of FMI to offset the EL component of the regulatory capital charge for revolving retail assets, provided the bank can demonstrate that FMI covers at least two standard deviations of EL. We do not believe it is fair or practical to address EL through FMI adjustments on a product-by-product basis. Especially in light of the concerns discussed above about overall calibration, such an approach could result in competitive equity issues across products and banking organizations. Moreover, as shown in the Risk Management Association's (RMA) February 2003 paper\(^1\) on retail products, banks' FMI routinely covers EL, making the qualifying test an unnecessary burden.

The Committee has further complicated the treatment of EL by refusing to address the issue of the definition of capital, which it intends to leave unchanged. Currently, up to 1.25% of risk-weighted assets are eligible to be included in Tier 2 Capital only, which itself must comprise no more than half of Total Capital. As currently designed, however, Basel II will incorporate an EL component into the calculation of risk-weighted assets for which a bank must hold Tier 1 Capital, yet the proposal does not allow general reserves to be considered in its Tier 1 coverage of this EL requirement.

**Recommendations**

We strongly recommend that the Committee align the Basel II formula with best industry practice and require capital to cover UL only at the chosen confidence level. In this way, the Committee will avoid the complication and potential inequities of FMI adjustments and will avoid issues related to the accounting of reserves. At the same time the Committee should modify its definition of capital in terms of Tier 1 elements only. We believe that this approach would be much more consistent with industry practice. In making this recommendation we recognize that the Committee would want to incorporate an appropriate treatment for the uncertainty around recovery of defaulted loans.

If the Committee is unable to move in this direction then we recommend that it remove the current limitations on the inclusion of general reserves in regulatory capital and broaden the application of FMI adjustments to all retail products. We believe that this approach is suboptimal, however, because it will complicate the regulatory capital calculation unnecessarily.

**2.3 Retail Exposures**

We appreciate the Committee's continuing efforts to refine the retail credit calculation. In particular, we believe the introduction of a third risk-weight curve for revolving credits was an important step in the development of a risk sensitive regulatory capital regime for

---

\(^1\)"Retail Credit Economic Capital Estimation – Best Practices", Risk Management Association, February 2003.
these products. Nevertheless, several concerns remain with the treatment of retail credit, including:

- Asset value correlations are set too high. The top end of the range for credit cards and “other” retail products at 0.11 and 0.17, respectively, are in excess of industry norms. As mentioned above, the mortgage AVC at 0.15 is 1.5 times the industry median.

- Certain portfolios are disadvantaged by the capital formula, which incorporates an inverse relationship between probability of default and correlation. For example, a high quality auto loan portfolio would have higher regulatory capital than justified from an economic perspective because the formula increases the AVC for higher quality assets.

- Only 75% of future margin income is allowed as an offset to the EL component of the capital charge for revolving portfolios, down from 90% in the QIS 3 Technical Guidance.

- The 10% LGD floor for mortgages seems arbitrary, particularly for low LTV accounts.

**Recommendations**

To better align the retail capital curves with the attendant risks we recommend that the Committee take the following steps, which are consistent with the recommendations in RMA’s February 2003 paper:

- As recommended above, remove the EL component of the charge. If that cannot be achieved then future margin income should be allowed to fully offset the EL portion of the capital charge and should not be limited to revolving portfolios.

- Lower AVCs in the lowest PD ranges (i.e. best quality customers) for all three major product categories (mortgage, revolving and “other”) offset perhaps by raising the AVCs somewhat in the higher PD ranges. This would have the effect of narrowing the differences between internally estimated AVCs and Basel AVCs, particularly in the low PD ranges. Moreover, it will reduce the potential distortion wherein high quality borrower segments attract disproportionately high capital, which is an undesirable signal to send to banks from a policy perspective.

- Lower the AVCs for mortgages from the current 0.15 level to the 0.06 - 0.10 level as reflected in the RMA survey.

- Lower the ceiling on the AVC for the “other” retail category from 0.17 to 0.10 consistent with industry best practice.

- We note that the paragraphs 371 and 372 discuss the criteria for the ratings of retail exposures. We wish to clarify that banks typically refer to their retail exposures by
client segmentation and related risk characteristics and do not necessarily assign ratings in the sense used throughout the rest of CP 3.

2.4 Credit Hedging
CP 3, like its predecessor consultative documents, treats credit hedging with credit derivatives and guarantees unduly harshly. As currently drafted, the only option available is the substitution approach wherein the PD of the protection provider replaces the PD of the borrower. The Committee’s proposals therefore do not recognize the lower risk of joint default when credit hedging. That is, a bank will lose money if it hedges the credit risk of an exposure only if reference obligor and the guarantor default simultaneously, a lower risk than the separate default of either party. Moreover, under a credit default swap contract, a bank will be able to receive the value associated with the credit protection as well as be able to pursue recovery from the obligor, essentially double recovery. Based on these highly desirable features of credit hedging, we believe that the Committee’s approach is inconsistent with its stated objective of promoting better risk management practices through revisions to the original Capital Accord. We are especially concerned that the Committee will send inappropriate signals to banks about the use of credit derivatives, financial instruments that have provided enormous value to banks seeking to actively manage the risk in their credit portfolios.

The harsh treatment due to the substitution approach is compounded by the proportional adjustment for maturity mismatches. Under this approach, for example, a three-year hedge of a five-year loan would receive only 60% of the benefit of a five-year hedge of the same loan. Even worse, in the following year the benefit would be reduced to 50% (a two-year hedge of a four-year loan). In addition, hedges of one-year or under are not recognized if the remaining maturity of the hedged asset is longer. This treatment is far more conservative than the maturity adjustment associated with the underlying loans of equal tenors.

As one illustration of the CP 3’s inadequacy, consider the case of hedging a AA rated entity with another AA entity. Using the substitution approach there would be no capital benefit. Moreover, the bank will have to add a capital charge for the counterparty exposure associated with the hedge provider. In effect the bank will be required to hold more capital than if it had not hedged at all.

The recent Federal Reserve research paper on double default\(^2\) and the joint comment letter of the Bond Market Association and International Swaps and Derivatives Association (ISDA) elaborate on these issues, and we commend them to your attention.

Recommendations
We strongly recommend that the Committee replace the substitution approach in order to recognize the lower risk associated with double default and double recovery. The most appropriate treatment in our view is for a bank to treat the hedge as a full capital offset for the underlying exposure and to hold capital only for the counterparty exposure.

associated with the hedge provider. Preferably, banks would be allowed to use their own estimates of double default and recovery for this calculation, subject to supervisory review. We do understand, however, that the Committee has resisted such a path to date with respect to credit risk modeling in general because of concerns about the ability to validate banks' assumptions around correlations. Failing the use of internal models in this regard, we support the approach recommended in the Federal Reserve research paper, which maps PDs and LGDs for obligors and guarantors into capital charges for hedged exposures using a risk weight formula similar to the existing formula for unhedged exposures. The research paper refers to this as the "ASRF approach" because it relies on asymptotic single risk factor assumptions. The research paper notes that it would be helpful for the industry to engage on issues related to the correlation assumptions that would have to be incorporated by the Committee in the ASRF approach, including on issues related to "wrong-way exposures". We have focused on these issues for some time in the evolution of our internal economic capital model and would be pleased to work with the Committee and its subgroups at their earliest convenience on these important parameters.

In addition, a maturity mismatch should be recognized as the difference between the capital for assets with the relevant tenors per the AIRB formula. The bank would then need to hold capital for the counterparty exposure associated with the hedge provider. The counterparty risk capital should be measured incorporating the benefits of double default and recovery, as noted above. Clearly, there is benefit to a hedge in its final year, and we strongly recommend that the Committee recognize this, even if it reduces the recognition proportionately over the course of the year.

We appreciate the flexibility incorporated in paragraph 162, which does not require restructuring to be included as a credit event in a credit derivative contract, provided the bank has control over the decision to restructure. At the same time, we acknowledge that a contract with restructuring can provide greater coverage than one without it. We understand the supervisors' desire to address this issue, as expressed in footnote 47, and would be pleased to work towards an appropriate differentiation between contracts with and without restructuring, assuming the other deficiencies with the treatment of credit hedges discussed above are simultaneously addressed.

Finally, we support the technical suggestions in ISDA's comment letter on CP 3 with respect to the operational requirements applicable to credit default swaps under Master Agreements.

2.5 Maturity Adjustment
We appreciate that the Committee has incorporated a maturity adjustment in the risk weight formula. However, the Committee has constrained the impact of the adjustment by bounding the effective maturity of transactions between one year and five years with limited exceptions. The exceptions are for financial market transactions and one-off transactions with original exposure of less than three months.

In principle, we believe that the regulatory capital requirement should reflect the effective remaining maturity of all transactions, including above five years and below one year.
The determination of effective maturity can be made on the basis of any of at least three factors: the contractual end date of the transaction, the remaining cash flows in the transaction, and the demonstrable existence of a substantive, actionable credit decision available to exit the credit. With respect to the last factor, the key consideration is that capital should not be required for credit decisions a bank has not yet made.

For those limited transactions with maturities below one year where the Committee has proposed a maturity adjustment, industry analysis indicates that the capital required is excessive relative to the economic risk. The slope of the capital curve for these transactions is very flat, reflecting the fact that the formula does not properly adjust for the lower probability of default associated with the shorter time horizons. As currently designed under the AIRB, for example, a one-month transaction where the borrower has a one-year PD of 0.03% would require 45% of the one-year capital. Our analysis, which extrapolates the PD down to reflect the likelihood of default over one month, indicates the capital for the one-month transaction should be only 13% of the one-year capital, meaning the CP 3 capital is too high by a factor of more than four. This problem is exacerbated as PD increases and remaining maturity decreases. For example, the CP 3 capital for an exposure of one day, assuming a one-year PD of 2.00%, is 88% of the one-year capital. Imposing a one-month floor on the maturity, our analysis shows that the capital would only be 17% of the one-year capital.

**Recommendations**

It is sensible for the maturity adjustment above one year to be based on the "b-factor" which is designed to capture changes in economic value due to migration risk. However, the maturity adjustment for transactions with effective maturities below one year should be based on an adjustment to PD to reflect lower default risk. The extrapolation of the PD down to the effective maturity would replace the "b-factor".

We appreciate supervisors’ concerns about potential arbitrage if banks were to continuously roll very short-term transactions simply to take advantage of lower capital requirements. However, we believe that if banks legitimately reassess their decision to extend credit on a frequent basis they should receive benefit in the capital rules. A bank's intent and practices can be adequately assessed through Pillar 2. Nevertheless, from a prudential standpoint it would seem reasonable for the Committee to subject the PD adjustment to a one-month floor, recognizing that supervisors would not be comfortable with much shorter horizons which could result effectively push the associated capital requirement to zero. Please see Appendix 1 for additional details on our PD adjustment proposal.

Finally, we wish to clarify with the Committee that settlement exposures for transactions such as foreign exchange are exempt from the capital rules, as is the case today.

**2.6 Stress Tests**

CP 3 includes requirements for the use of stress tests (paragraphs 396-399 and 724) as well as stress credit risk parameters (paragraphs 430 and 437) in the calculation of Pillar 1 capital. We understand and support the Committee’s desire to promote enhanced risk management through stress testing processes. Such tests can be extremely informative to
bank management and bank supervisors regarding the concentration risks in a bank’s portfolio, the sensitivities it might have to changes in credit spreads and other market risk factors, and the adequacy of its risk management capabilities and its financial resources. However, we find the detailed CP 3 requirements around a general stress test and the use of stress parameters in the Pillar 1 capital calculation onerous and unnecessary.

Paragraph 396 sets out a general requirement that banks have sound stress testing processes. The beginning of paragraph 397 goes on to say that such tests should be of the bank’s own design, subject to supervisory review. The remainder of the paragraph 397, however, as well as paragraphs 398 and 399 contradict the preceding text by laying out the conditions the stress tests should address and by encouraging supervisors at national level to issue guidance on how stress tests should be designed. Paragraph 724 then states that as part of their Pillar 1 capital requirement banks will have to hold capital above the minimum to cover the results of the stress tests if a shortfall is indicated.

Realistic stress tests are somewhat ad hoc by nature because only one set of conditions can be explored in any one test, and no set of tests can be expected to explore more than a small fraction of potential events. Nevertheless, it is reasonable to expect that a bank’s capital should cover the losses that might be incurred under a realistic stress scenario. However, this is not what seems to be required in CP3. It seems that the Committee is asking banks to hold enough capital to withstand a doubly stressed environment in order to create a buffer for potential changes in capital requirements. Standard capital measurement techniques use a confidence interval to establish the well-defined level of stress severity under which a bank’s capital must be sufficient. Stress testing that measurement imposes a set of further (ad hoc) stresses on this already well-defined stressed state, pushing capital sufficiency beyond the stated confidence interval to an even higher standard. This redefinition of the capital requirement is inconsistent with industry practice as well as a minimum regulatory capital standard.

Our concern holds equally for the requirements in paragraphs 430 and 437, which state that banks must use LGDs and EADs appropriate for an economic downturn not just the long-run average.

**Recommendations**
Well-run banks typically operate with capital levels significantly above the regulatory minimum. However, the intersection of the paragraphs discussed above suggests that the minimum itself is going to be systematically raised, causing banks to operate at even higher capital levels than the new stressed minimum. To alleviate this potential concern, we recommend that the Committee do the following:

- Retain the concept of a general stress test as expressed in paragraph 396, which would be designed by the bank subject to supervisory review.
- Move the description of the stress requirements out of Pillar 1 and to an appendix of best practice and supervisory guidance.
• Weaken the link between the stress test and Pillar 1 minimum requirements, stating only that stress tests will form the basis of a Pillar 2 discussion about the appropriate capitalization of the bank.

• Eliminate the requirement to use stressed LGDs and EADs, taking comfort in the fact that CP 3 requires these two estimates to be default weighted, which essentially captures adverse economic periods when losses typically increase.

2.7 Securitization
We have five main concerns with the securitization framework as specified in CP 3. First, the calibration of the risk weights in the Ratings Based Approach (RBA) applicable to senior tranches is overly conservative, particularly for retail securitizations. Correspondingly, the 56 basis-point capital floor\(^3\) in both the RBA and the Supervisory Formula (SFA) is high relative to the risk. We understand that the paper by Peretyatkin and Perraudin\(^4\), which we generally find thoughtful and well researched, was important in the development of the risk weights and the floor. If we understand correctly, their methodology applied the same EL assumption to all similarly rated tranches, regardless of the position in the capital structure. Our experience is that EL will vary considerably based on whether a tranche is senior or mezzanine in the capital structure, and therefore the relative capital for the tranches should differ as well. Industry calculations indicate that the required capital for senior positions in retail securitizations may be more than five times too high in certain cases and that even for senior positions in corporate CDOs the capital requirement could be two to three times too high. We are especially concerned that the conservatism of the proposal could adversely affect retail securitizations and, as discussed below, multi-seller conduits focused on retail pools.

In making the observation that the RBA risk weights for senior tranches of retail securitizations and the floor are unduly conservative, we note that on page 175 of CP 3 the Committee shows illustrative risk weights for three retail categories assuming the assets are held directly on balance sheet. All three categories show the risk weight for the lowest PD below the floor. We question why the Committee would impose a floor for senior retail securitizations that would be above the lowest risk weights for similar direct exposures.

Second, the proposed rules that banks must apply to certain positions further contribute to unduly conservative capital requirements. For example, originator banks must deduct from capital all positions below Kirb (i.e. the regulatory capital associated with the underlying pool) regardless of rating even though an investor bank that might hold the same position would be able to use a rating and obtain lower regulatory capital. We do not believe the regulatory capital for a given position should be determined primarily by which entity holds the position. Another example is the requirement that all interest only strips be deducted from capital. This requirement is far more onerous than in the case in the United States today where only credit-enhancing interest only strips require dollar-for-dollar capital and there is deduction from Tier 1 capital only if the amount exceeds

\(^3\) The 56 basis-point capital floor is obtained by multiplying 7%, the lowest permissible risk weight in the securitization framework, by the 8% minimum capital standard.

25% of Tier 1 capital. It is common for issuers of commercial mortgage-backed securities to sell IO strips for cash. This type of realized gain on sale should not be deducted from capital.

Third, the proposed treatment of liquidity and credit enhancements for multi-seller conduits also is a concern. We have had de minimus loss experience associated with the facilities provided to these conduits. This is in large measure due to dynamic risk management and the conservative features of the conduit structures. For example, credit enhancement levels can be changed in response to changes in pool quality, good asset tests are applied to potential draws, servicers can be replaced due to credit deterioration, and certain reserves are set established to address variability in pool composition such as dilution. Despite these features, the SFA floor would require more than twice as much capital as many leading banks require internally for conduit liquidity facilities.

Fourth, the unduly conservative capital floor discussed above, in combination with the substitution approach for hedging, contribute to exceptionally high regulatory capital charges for super senior tranches of synthetic securitizations.

Fifth, some of the detailed operational requirements for the securitization framework require clarification or modification. For example, we are unclear why the operational requirements for a “clean break” go beyond the requirements in accounting guidance today (e.g. FAS 140), which requires legal separation. Comment letters from the American Securitization Forum (ASF) and the European Securitization Forum (ESF) go into detail about the specific concerns in the CP 3 language, and we commend this analysis to you.

Recommendations
We recommend the following to address the issues raised above:

- Revisit the assumptions for calculating the capital floor based on the issues raised above. Our sense is that a revised set of assumptions might reasonably result in halving the current floor. Such a result could well satisfy the Committee’s desire to have a non-zero capital charge based on prudential grounds and at the same time address industry concerns that senior positions are overcapitalized in CP 3. In adopting a non-zero floor that is more than just a few basis points, however, the Committee should be mindful that it will be requiring more capital in the systems as a whole than would be required had the bank simply maintained the assets on balance sheet. We recognize that this also is the case today and is alleviated to a fair degree by the AIRB.

- Modify the RBA risk weights to reflect the lower risk of senior positions in retail securitizations based on the issues raised above. This could be accomplished by lowering the risk weights for investment grade positions in the existing RBA or by applying a conversion factor to investment grade senior positions where the risks are demonstrably lower than implied by the currently proposed RBA risk weights. Yet another alternative would be to introduce a new set of asset class risk weights to differentiate risk according to products, much like has been done for the retail area as...
a whole. We recognize that the latter approach would intro-duce more detail into the proposal, but it might be reasonable to do so if banks and supervisors could agree on a revised schedule of risk weights that reflected the risk in structures more appropriately.

- For originators, do not automatically require the deduction of positions below Kirb if a bank is able to obtain an external rating or is able to assign an internal rating that is based on rating agency criteria or another methodology that can be shown to be equally robust. The capital for the retained position should then be based on the risk of the position as evidenced by the rating. In making this recommendation we expect that the rating would be achieved through the use of credit enhancements that would absorb losses before the rated position. In general, we agree that originators should hold dollar for dollar capital for true first loss positions. In the United States we already have positive experience with such an approach for the credit enhancements provided to conduits. At a minimum, we believe that the Committee should adopt this proposed approach for this business. Such an option could alleviate some of the burden associated with calculating Kirb for the underlying asset pools under the SFA, which we expect to be burdensome to do on a quarterly basis for regulatory purposes.

- Ensure that the capital requirements for conduits are in line with best industry practice, reflect the benefits of dynamic risk management, and avoid any double counting between liquidity and credit enhancement. Lowering the floor and the risk weights for senior positions, factoring in reserves as appropriate, and allowing the use of internal ratings would go a long way towards addressing our concerns in this area. In addition, it would be useful for the Committee to clarify its intended treatment when a conduit sponsor has recourse to the seller for dilution risk. We do not believe CP 3 addresses this practical situation.

- Require that only credit enhancing interest only strips be deducted from Tier 1 capital.

- Ensure that the capital requirements for synthetics are fully consistent with the risk, especially for super senior positions. The Committee can move in the direction of addressing this concern by lowering the risk weight floor substantially and by addressing double default risk as discussed in the Credit Hedging section.

- Finally, we support the technical recommendations on the operational requirements in the securitization framework made by the ASF/ESF.

2.8 Counterparty Credit Risk
The method for calculating the capital charge for counterparty credit risk is left unchanged from today’s method (i.e. current mark to market plus notional times a factor reflecting instrument and tenor). This approximate approach is inconsistent with the best practice of leading banks. We recognize that the Committee is at the early stages of reassessing this approach.
We greatly appreciate the broadened recognition of collateral in CP 3. The revised treatment of collateral will better align industry and regulatory practice for this critical credit risk mitigation tool. Our interpretation of paragraph 125, however, is that non-investment grade or unrated corporate bonds would not be eligible collateral, even for banks that qualify for use of their own haircuts. We believe paragraph 129, which requires banks using their own haircuts to take into account the liquidity of lower quality assets, addresses the supervisory concern that banks might not be able to easily liquidate such collateral. The liquidity of collateral is a key consideration in the assignment of our internal haircuts. The exclusion of non-investment grade corporate debt altogether is unduly harsh in light of this practice, which is standard at well-managed firms.

Moreover, the proposal continues to require a separate assessment for foreign exchange risk even for banks under the AIRB that will be setting their own haircuts. The separate assessment of foreign exchange risk presents problems from an implementation standpoint given that we apply a portfolio view to collateral. It appears that the proposal essentially requires banks to look at each transaction to determine whether there is a currency mismatch. For our largest counterparties we may have thousands of transactions, which would make such an approach infeasible. Our practice is to agree with our counterparty on a schedule of eligible collateral assets and applicable haircuts. Eligible collateral can include US dollar cash and securities and certain non-US dollar cash and securities. Most non-US dollar collateral is in euros, yen, and pounds, where there is generally low volatility over the short period of the exposure. The counterparty can cover its collateral requirements for its net exposure by delivering any of the eligible assets. We do not separately try to identify a currency mismatch.

In addition, we note that banks are meant to use a 99% confidence level in setting their own collateral haircuts. While it is, of course, the prerogative of supervisors to set the prudential standard, the Committee should be aware that we do not typically use such a high confidence level in setting our internal haircuts at this time. We typically use a 97.5% confidence level for derivatives collateral and for securities lending.

Although we expect to apply the AIRB, we wish to call your attention to a potential unintended consequence of a set of collateral haircuts imposed by regulation for those banks that will be not using their own haircuts. There is some risk that the regulatory standard might become the basis on which certain market participants try to negotiate collateral arrangements. For example, in some cases banking organizations will want to impose more onerous haircuts than those in the proposal (e.g. for short-term sovereign debt) and would not like to see the regulatory practice used to inhibit its business practices or relationships.

We also note that paragraph 149 appears to restrict use of the VaR approach to repo-style transactions. It is not clear to us from a risk perspective why the Committee would impose such a restriction.

**Recommendations**

The ISDA paper recently submitted to the Committee provides a useful basis on which to discuss future changes to the treatment of counterparty credit exposures, and we are
committed to working with the Committee on this matter going forward. We believe that ISDA’s proposal on the use of expected exposure profiles is very promising and we encourage the Committee to actively consider it. In addition, as we have been saying for some time, wrong-way exposures should be treated directly in any revised approach.

With respect to collateral, we strongly recommend that the Committee make all securities eligible for use of own haircuts if a bank has qualified for the AIRB. No distinctions should be made as to whether the underlying exposures are in the banking book or trading book. In addition, we urge the Committee to review the foreign currency mismatch requirement and required confidence interval for own haircuts in light of market practice. It would be helpful if the Committee clarified whether its intent is to require banks to assess foreign currency mismatches on a transaction basis – we believe this is neither market practice nor feasible as a practical matter for the reasons described above. In addition, we recommend that any modifications to the current approach properly recognize the risk-reducing effects of collateral support agreements, which require the delivery of collateral upon the breach of pre-agreed thresholds, thereby reducing potential future exposure. It also would be helpful for the Committee to emphasize that the regulatory haircuts in the Standardized and Foundation approaches are for purposes of satisfying minimum regulatory capital requirements and are not meant to substitute for sound market practice.

Finally, we recommend that the Committee permit VaR modelling for transactions that are marked to market and remargined daily and meet high standards of legal enforceability (i.e. comply with paragraphs 88 and 89). We also would expect banks applying this approach to make appropriate adjustments for less liquid collateral.

3. Operational Risk

3.1 Pillar 1 / Pillar 2 Capital Charge
There has been considerable debate on the issue of the appropriateness of a Pillar I capital charge for operational risk as currently proposed. Critics have cited numerous issues in their opposition of such an approach ranging from the lack of proven quantification methodologies to anti-competitive factors.

Recommendations
We strongly support a Pillar I approach for operational risk as proposed. This is consistent with the overall framework of Basel II, provides a consistent and transparent methodology for capital calibration and establishes rigorous qualifying standards for banks using the AMA. We firmly believe this approach is sound and will provide a foundation for continued improvement in the industry’s measurement and management of operational risk. There is already considerable momentum by many proponents of a Pillar I charge that would appear to validate this approach.

It is important to note that some flexibility will be necessary regarding operational risk classifications and taxonomies. As the industry becomes more practiced in the analysis of operational losses and risk data, undoubtedly some enhancements or modifications to the current risk categories or definitions
will be beneficial. The regulatory framework should be flexible enough to able to incorporate these enhancements as appropriate.

3.2 Use of Caps, Floors, Add-ons or Other Regulatory Adjustments
There is ample regulatory precedent for ad hoc adjustments to capital requirements. In the presence of a specific deficiency or regulatory action, incremental capital requirements may be appropriate. However, the use of widely applied adjustments (e.g. add-ons, floors, multipliers etc.) is inconsistent with the principles of Basel II; and such practice would undermine the considerable advantages achieved under the proposed AMA framework.

Recommendations
We fully appreciate the validity and appropriateness of Pillar 2 reviews by supervisory authorities and we expect to engage in meaningful discussions of our operational risk framework as we move towards implementation of an AMA. We fully support the use of robust, yet attainable, qualifying criteria for AMA. However, once an institution meets the established qualifying criteria, capital charges should be determined by the calculations within AMA without arbitrary use of permanent floors, add-ons or other arbitrary regulatory adjustments.

3.3 Definition and Capture of Operational Loss Data
On occasion operational risk manifests itself as credit or market risk losses. By accounting convention and historical practice such have been captured and reported within the credit and market risk disciplines. CP3 proposes that such operational risk events now also be recorded in a loss database for operational risk. Some institutions oppose capturing such data in this manner this as costly and duplicative.

Recommendations
We fully support the requirements as proposed to track all operational risk events, including those that manifest themselves as credit or market risk losses. As long as reasonable thresholds are in place, duplicative data capture is not administratively burdensome or costly. A robust assessment of operational risk issues requires that such events and data be captured, reported and assessed to properly understand the nature and causes of operational risk no matter where they exist or occur. Without such an effort operational deficiencies within credit or market related activities would not be fully transparent. Discipline over calibration methodologies would be necessary to avoid inappropriate double counting of risk.

3.4 Calibration of Correlation Effects and Diversification Benefits
CP3 indicates that a bank can use internally determined correlations in its measurement of operational risk capital “... provided it can demonstrate to a high degree of confidence and to the satisfaction of the national supervisor that its systems for determining correlations are sound, implemented with integrity, and take into account the uncertainty surrounding any such correlation estimates (particularly in periods of stress). The bank must validate its correlation assumptions.” Although we agree with this principle, implementation of
AMA may be indefinitely delayed or inappropriately thwarted by overly rigorous and strict interpretation of this provision.

**Recommendations**
We recommend that CP3 be amended to acknowledge that validation of correlation assumptions will not be held to the same standard as market risk or other statistical modelling practices where substantially more data is readily available. Language to this effect would be consistent with the assurances already provided to the industry that a reasonability standard is intended.

### 3.5 Implementation of AMA Across Regulatory Jurisdictions.
The ability to calibrate operational risk capital under the AMA on a legal entity or regional basis is extremely limited. Yet we fully appreciate the needs of local supervisory authorities to assess the capital adequacy for operational and others risks of institutions within their local jurisdictions. Whereas home supervisors will be assessing a bank’s qualifications for the AMA on a consolidated basis, host supervisors will be assessing individual legal entities. Requiring individual entities to implement an AMA for operational risk is not technically possible given the lack of loss data and would be extremely burdensome from an administrative standpoint, even if data existed.

**Recommendations**
To facilitate the adoption and further development of the AMA, close coordination between home and host supervisors will be critical. Accordingly, a technique for allocating operational risk capital at the legal entity or regional level will be necessary. Collaboration should be encouraged so that the AMA approval process holds all institutions and their supervisors to accepted standards. Predefined allocation techniques based on readily available metrics can then be used to establish regulatory capital levels for various legal entities. Such allocations can be part of the AMA review and approval process.

### 3.6 Risk Mitigation
CP3 conditionally proposes that insurance can be used to reduce operational risk capital requirements provided certain requirements are met. Despite repeated oral assurances that risk mitigation for operational risk under Basel II would not be limited only to insurance products, there is no reference to the potential use of other techniques as and when these are developed.

**Recommendations**
It is fully anticipated that, over time, bona fide risk mitigation tools other than insurance will develop for operational risk. Regulatory capital rules should not serve to prejudice or limit such advances in operational risk management capabilities. We recommend that CP3 be specifically amended to include insurance and any other qualifying risk mitigation techniques as and when they are developed.
4. Implementation Issues
The level of prescriptiveness in Basel II remains excessive, despite apparent efforts to scale back the minimum operational requirements. In paragraph 351 the Committee emphasizes that it is 'not the Committee's intention to dictate the form or operational detail of banks' risk management policies and practices.' Paradoxically, the next 30 pages of CP 3 set out requirements for credit risk management that do just that to varying degrees. These requirements cover everything from the familiarity the Board of Directors should have with rating systems to the scenarios that must be included in stress tests, as noted above.

In particular, we would like to be assured that the Committee's expectations around validation of key credit risk inputs will be flexible at national level. Paragraphs 462-468 lay out the requirements around banks' validation processes. While we support high standards, it is important to note the challenges associated with validating credit risk model parameters. When validating market risk models daily time series data on many widely traded instruments are readily available and can be used for backtesting. In contrast, credit risk parameters such as PDs, LGDs, and EADs require long periods over which to assess their validity. Accordingly, we may be using input parameters for PDs that reflect a long-run average but may, in fact, be inconsistent with short-term experience.

We also are concerned that the qualifying process for the advanced approaches will be very burdensome unless there is close cooperation among supervisors. Home country supervisors must play the lead role to ensure that the process for qualifying for the advanced approaches is addressed at consolidated level and that banks do not have to go through separate approval processes in every country in which they have a presence. We understand that some local requirements might be different for subsidiaries and possibly branches, but we expect the home supervisor to help bridge the gaps where necessary.

The current floor proposal requires that in 2007 Advanced IRB cannot be less than 90% of current rules and in 2008 cannot be less than 80%. This requirement is costly, burdensome and unnecessary given the expectation that banks using the advanced approaches will be conducting shadow calculations in 2006.

Recommendation
Rather than review every prescription here, our strong recommendation is that the Committee establish some basic minimum requirements largely around the key input parameters and exposure calculations and publish as strong or emerging best practices many of the other requirements that are embedded in the document. For example, it is sensible to specify the periods for collecting loss histories to support PD, LGD and EAD estimates. In this way, the Committee could provide guidance to both banks and supervisors while avoiding the concern shared by many banks that slippage against any of the requirements as spelled out in CP 3 will disqualify them from the advanced approaches. This approach also would help banks avoid undue compliance costs.

In addition, it would be helpful for supervisors at national level to articulate their expectations around validation as soon as possible. We recommend that their approaches
focus on a bank’s logic and processes for concluding their AIRB inputs are robust. Hard and fast requirements for backtest results would be inconsistent with this view and would not accommodate the varying practices among banks.

It also would be helpful for supervisors at national level as well at the Committee’s Accord Implementation Group to advise banks regarding the processes they intend to adopt regarding qualifying for the advanced approaches.

The two-year capital floor requirement should be eliminated, provided banks successfully produce shadow calculations consistent with national guidance prior to the formal implementation of Basel II.

Finally, we note that the trading book section in CP 3 appears to be more prescriptive than the current Capital Accord with respect to the definition of trading book eligible assets. We wish to clarify that this does not signal any intent to exclude certain instruments that banks have been treating under the Market Risk Amendment since 1996.

5. Market Discipline (Pillar 3)
We appreciate that the Committee has attempted to scale back the amount of required detailed disclosures. We also appreciate that the Committee has shown flexibility as to where and how the disclosures should be made (e.g. on a web site and not necessarily in an annual or quarterly report.) Nevertheless, we remain concerned that some of the credit risk disclosures would be burdensome to produce and could be subject to misinterpretation that could be only surmounted by further detailed disclosures. The prime example is Table 6, item (g), which requires banks to disclose their loss estimates against actual outcomes over a long period such that a meaningful assessment of the performance of the internal ratings process for each portfolio could be made. Validation exercises of this sort require long data histories and are difficult to conduct and interpret.

The requirements in Pillar 3 continue to be too focused on Basel II portfolio breakdowns and language. For example, Table 6, item (c) requires descriptions of the internal ratings process for the three retail categories. However, segments of retail exposures generally do not receive ratings but rather are assigned PD and LGD profiles based on their performance characteristics.

Recommendation
We suggest that banks be asked to discuss why they are comfortable with their ratings system and LGD and EAD estimates in light of their historical experience and to provide relevant supporting analysis where available. Also, the Committee should allow banks the flexibility to disclose exposures according to risk characteristics that are meaningful to them.

Sincerely,

David B. Edelson
Appendix 1

Proposed Extrapolation of Risk Weights for Maturity < 1yr

Loss Given Default 45%

Proposal: PD Adjustment below 1-yr [using PDt = 1 - (1-PDi)^t], floored at 1 mo

<table>
<thead>
<tr>
<th>PD (1Y)</th>
<th>Rho</th>
<th>b(PD)</th>
<th>0.00</th>
<th>0.02</th>
<th>0.08</th>
<th>0.25</th>
<th>0.5</th>
<th>0.75</th>
<th>1</th>
<th>1.5</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.03%</td>
<td>23.82%</td>
<td>31.69%</td>
<td>0.08%</td>
<td>0.08%</td>
<td>0.08%</td>
<td>0.20%</td>
<td>0.35%</td>
<td>0.49%</td>
<td>0.62%</td>
<td>0.81%</td>
<td>0.99%</td>
</tr>
<tr>
<td>0.10%</td>
<td>23.41%</td>
<td>24.20%</td>
<td>0.21%</td>
<td>0.21%</td>
<td>0.21%</td>
<td>0.52%</td>
<td>0.91%</td>
<td>1.24%</td>
<td>1.54%</td>
<td>1.83%</td>
<td>2.12%</td>
</tr>
<tr>
<td>0.50%</td>
<td>21.35%</td>
<td>15.76%</td>
<td>0.70%</td>
<td>0.70%</td>
<td>0.70%</td>
<td>1.82%</td>
<td>2.70%</td>
<td>3.60%</td>
<td>4.40%</td>
<td>4.85%</td>
<td>5.31%</td>
</tr>
<tr>
<td>2.00%</td>
<td>16.41%</td>
<td>9.94%</td>
<td>1.49%</td>
<td>1.49%</td>
<td>1.49%</td>
<td>3.34%</td>
<td>5.42%</td>
<td>7.11%</td>
<td>8.56%</td>
<td>9.06%</td>
<td>9.56%</td>
</tr>
<tr>
<td>8.00%</td>
<td>12.22%</td>
<td>6.45%</td>
<td>3.16%</td>
<td>3.16%</td>
<td>3.16%</td>
<td>6.87%</td>
<td>10.81%</td>
<td>13.87%</td>
<td>16.40%</td>
<td>16.89%</td>
<td>17.37%</td>
</tr>
<tr>
<td>20.00%</td>
<td>12.00%</td>
<td>3.22%</td>
<td>6.26%</td>
<td>6.26%</td>
<td>6.26%</td>
<td>12.80%</td>
<td>19.08%</td>
<td>23.49%</td>
<td>26.84%</td>
<td>27.29%</td>
<td>27.75%</td>
</tr>
</tbody>
</table>

Current Regulatory Proposal:

<table>
<thead>
<tr>
<th>PD (1Y)</th>
<th>Rho</th>
<th>b(PD)</th>
<th>0.00</th>
<th>0.02</th>
<th>0.08</th>
<th>0.25</th>
<th>0.5</th>
<th>0.75</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.03%</td>
<td>23.82%</td>
<td>31.69%</td>
<td>0.26%</td>
<td>0.26%</td>
<td>0.28%</td>
<td>0.34%</td>
<td>0.62%</td>
<td>0.62%</td>
<td>0.62%</td>
</tr>
<tr>
<td>0.10%</td>
<td>23.41%</td>
<td>24.20%</td>
<td>0.96%</td>
<td>0.97%</td>
<td>1.00%</td>
<td>1.10%</td>
<td>1.54%</td>
<td>1.54%</td>
<td>1.54%</td>
</tr>
<tr>
<td>0.50%</td>
<td>21.35%</td>
<td>15.76%</td>
<td>3.49%</td>
<td>3.51%</td>
<td>3.57%</td>
<td>3.72%</td>
<td>4.40%</td>
<td>4.40%</td>
<td>4.40%</td>
</tr>
<tr>
<td>2.00%</td>
<td>16.41%</td>
<td>9.94%</td>
<td>7.57%</td>
<td>7.58%</td>
<td>7.65%</td>
<td>7.81%</td>
<td>8.56%</td>
<td>8.56%</td>
<td>8.56%</td>
</tr>
<tr>
<td>8.00%</td>
<td>12.22%</td>
<td>5.45%</td>
<td>15.43%</td>
<td>15.44%</td>
<td>15.51%</td>
<td>15.67%</td>
<td>16.40%</td>
<td>16.40%</td>
<td>16.40%</td>
</tr>
<tr>
<td>20.00%</td>
<td>12.00%</td>
<td>3.22%</td>
<td>25.93%</td>
<td>25.95%</td>
<td>26.01%</td>
<td>26.16%</td>
<td>26.84%</td>
<td>26.84%</td>
<td>28.84%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PD (1Y)</th>
<th>Rho</th>
<th>b(PD)</th>
<th>0.00</th>
<th>0.02</th>
<th>0.08</th>
<th>0.25</th>
<th>0.5</th>
<th>0.75</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.03%</td>
<td>40%</td>
<td>41%</td>
<td>45%</td>
<td>55%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>0.10%</td>
<td>62%</td>
<td>63%</td>
<td>65%</td>
<td>72%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>0.50%</td>
<td>79%</td>
<td>80%</td>
<td>81%</td>
<td>85%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>2.00%</td>
<td>88%</td>
<td>89%</td>
<td>89%</td>
<td>91%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>8.00%</td>
<td>94%</td>
<td>94%</td>
<td>95%</td>
<td>96%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>20.00%</td>
<td>97%</td>
<td>97%</td>
<td>97%</td>
<td>97%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>