November 3, 2003

Office of the Comptroller of the Currency
Board of the Governors of the Federal Reserve System
Federal Deposit Insurance Corporation
Office of Thrift Supervision

Sir/Madam:

Citigroup remains very supportive of the objectives of Basel II, and believes that the US Agencies have the potential to make the final version of the rules a significant improvement over Basel I. The list of questions in the ANPR generally covers the important unresolved issues. Furthermore, the recent October 12 announcement from the Basel Committee, which the US Agencies clearly contributed to, is also focused on the right issues.

The next stage is critical, however. The quality of the final Basel II rules—and whether they achieve Basel's noble objectives—will depend on how open the Agencies are to resolving the important remaining issues.

Our overall response to the ANPR and Supervisory Guidance is as follows:

- The single biggest improvement the US Agencies can make is allowing the use of validated Internal Models for credit, as is already done in market risk and planned for operational risk. Without this change, substantial work still needs to be done to 'tune' the many prescribed models so that they better reflect the underlying economics of the banking business. First, this means adjusting parameters, eliminating floors and ceilings, simplifying tables, and the like. Second, this means explicitly considering the benefits of credit diversification, at minimum in Pillar 2, given its importance to modern financial and risk mitigation practices.

- Introducing a true UL-only framework is now within reach, and should be a top priority. The questions in the ANPR and the October Basel announcement clearly demonstrate that the Agencies are considering alternative methods of addressing this issue. To resolve it correctly, however, requires that the definition of capital correspond to the underlying realities of the banking business. Thus, reserves should be explicitly counted as capital, and EL should play no part, not even as a deduction.

- The Supervisory Guidance is disturbingly prescriptive in many areas, making us concerned that the Agencies' rule writers are out of touch with the Agencies' own supervisory staff and industry best practices. For example, the Supervisory Guidance for Corporate Credit goes so far as to articulate required bank organizational structure, which is an unusually intrusive role for a supervisor. In another example, the Guidance recommends undue reliance on Rating Agency ratings – which are opaque, rarely validated by supervisors, and often slow to change – as opposed to sophisticated internal models.

The final phase is upon us, and we trust that the US Agencies are receptive to the well thought-out changes and improvements that are being suggested.

With Regards,

Todd S. Thomson
EVP Finance, Operations and Strategy and
Chief Financial Officer

cc: Roger Ferguson, Jerry Hawke, Don Powell

Attachments:
- Citigroup response to ANPR
- Citigroup response to Supervisory Guidance for Operational Risk
- Citigroup response to Supervisory Guidance for Corporate Credit July 19, 2003

Evans, Sandra E

From: Aboaf, Eric [aboafe@citigroup.com]
Sent: Wednesday, November 05, 2003 9:36 AM
To: 'regs.comments@occ.treas.gov'; 'regs.comments@federalreserve.gov'; 'comments@fdic.gov'; 'regs.comments@ots.treas.gov'
Cc: Lockett, Angela
Subject: Citigroup response to ANPR -- Risk-Based Capital Guidelines -- Ad ditional Document

Dear Sir/Madam

Here is one additional document that we would like to submit, in addition to the three previously submitted.

Thank you,

Eric W. Aboaf
Citigroup
Head of Capital Allocation and Deployment
399 Park Avenue, 3rd Floor, NY, NY 10022
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-----Original Message-----
From: Aboaf, Eric
Sent: Monday, November 03, 2003 6:25 PM
To: 'regs.comments@occ.treas.gov'; 'regs.comments@federalreserve.gov'; 'comments@fdic.gov'; 'regs.comments@ots.treas.gov'
Cc: Lockett, Angela
Subject: Citigroup response to ANPR -- Risk-Based Capital Guidelines

Dear Sir/Madam,

Attached are Citigroup's responses to the ANPR and the two Supervisory Documents.

Thank you,

Eric W. Aboaf
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Questions #1
Competitive Considerations

What are commenters' views on the relative pros and cons of a bifurcated regulatory framework versus a single regulatory framework? Would a bifurcated approach lead to an increase in industry consolidation? Why or why not? What are the competitive implications for community and mid-size regional banks? Would institutions outside of the core group be compelled for competitive reasons to opt-in to the advanced approaches? Under what circumstances might this occur and what are the implications? What are the competitive implications of continuing to operate under a regulatory ca ital framework that is not risk sensitive?

If regulatory minimum capital requirements declined under the advanced approaches, would the dollar amount of capital these banking organizations hold also be expected to decline? To the extent that advanced approach institutions have lower capital charges on certain assets, how probable and significant are concerns that those institutions would realize competitive benefits in terms of pricing credit, enhanced returns on equity, and potentially higher risk-based capital ratios? To what extent do similar effects already exist under the current general risk-based capital rules (e.g., through securitization or other techniques that lower relative capital charges on particular assets for only some institutions)? If they do exist now, what is the evidence of competitive harm?

Apart from the approaches described in this ANPR, are there other regulatory capital approaches that are capable of ameliorating competitive concerns while at the same time achieving the goal of better matching regulatory capital to economic risks? Are there specific modifications to the proposed approaches or to the general risk-based capital rules that the Agencies should consider?

- Historically, bank capital standards such as Basel I have not changed the competitive landscape. Specifically, when Basel I was introduced in 1988, no significant wave of industry consolidation followed. Instead, competitive position in banking is driven by a host of more important factors: underlying business economics, internal capital estimates, rating agency requirements, ability to compete with non-bank institutions and management capabilities.

- A bifurcated approach is unlikely to lead to industry consolidation for several reasons. First, small community banks have historically had an advantage of customer proximity that will not be impeded. Second, the cost of compliance for medium and large size banks is dropping rapidly with turnkey solutions making participation cost-effective; in fact, large banks that grew from acquisition may see diseconomies of scale when they need to assemble Basel II-compliant data from multiple technology systems and across international boundaries. Third, bank capital requirements are unlikely to change the competitive landscape, as other factors are more important (discussed above).

- Banks are unlikely to reduce their capital base for two reasons. First, if a bank currently believes it was over capitalized, it already has many tools to reduce its required capital base under Basel I (e.g. through securitizations, asset sales, off-balance sheet assets) to levels in line with their internal estimates of capital adequacy. Second, the rating agencies have informed us explicitly and publicly that they will downgrade any bank that attempts to reduce their capital base as a result of Basel II.

- The "$250B" threshold for mandatory banks is inadequate. Instead a ">$250B or >10% line-of-business market share" threshold is more appropriate. Competition in banking today is based on line-of-business scale, not on total institution size. If a new capital standard does not reflect such line-of-business competition, monoline banks will be encouraged to 'arbitrage' Basel I vs. Basel II, and effectively choose the most advantageous framework at the detriment of large mandatory multi-line banks.

- Internationally, monoline-banks above a minimum market share should also be required to operate on the Advanced Approach in Basel II. In particular, international credit card banks would see a 30-35% capital advantage if they stayed on the Standardized approach versus the Advanced models, unless the retail models are recalibrated to better match the underlying economics.

Question #2
US Banking Subsidiaries of Foreign Banking Organizations

The Agencies are interested in comment on the extent to which alternative approaches to regulatory capital are implemented across national boundaries might create burdensome implementation costs for the US. Subsidiaries of foreign banks.

- As worded, the question asks about potentially burdensome implementation costs to US subsidiaries of foreign banks. As such the question does not apply directly to Citigroup.

- We are concerned, however, with the potential consequence of US regulators applying Basel II to U.S. subsidiaries of foreign banks using standards that materially differ from the consensus document issued by the Basel Committee on Banking Supervision. One potential consequence could be that other countries might retaliate and implement their own standards for banking operations in their countries. Consequently, non-standard implementation of Basel II in the US could potentially cause Citigroup burdensome implementation in the more than 100 countries we operate in if countries implemented idiosyncratic rules.

- In general, we believe it is critical the national regulators develop a system of reciprocity to avoid a duplicative implementation burden. The duplication can take the form of calculating capital according to the judgment of different regulators, or being asked to calculate capital using separate data feeds for each and every geographic or legal entity, as opposed to ignoring the realities of a globally managed bank.

Question #3
Other Considerations - General Banks

The Agencies seek comment on whether changes should be made to the existing general risk-based capital rules to enhance the risk-sensitivity or to reflect changes in the business lines or activities of banking organizations without imposing undue regulatory burden or complication. In particular, the Agencies seek comment on whether any changes to the general risk-based capital rules are necessary or warranted to address any competitive equity concerns associated with the bifurcated framework.

- The ongoing amendments to Basel I during the last 15 years have generally been useful in addressing competitive equity and risk-sensitivity issues. We would encourage the continued refinement and enhancement of both Basel I and Basel II. In this context, we offer the following recommendation to enhance the current Basel I rules as they are applied to US banking organizations for balance sheet receivables resulting from securities fails to deliver ("FTDs").

  - Current US risk-based capital guidelines for banking organizations do not specifically address the treatment of FTDs. However, financial modernization and the resultant volume growth in securities transactions by banking organizations heighten the need for specific rules.

  - FTDs are unique Banking Book assets, which arise as a by-product of customer and proprietary trading and financing activities. FTDs are currently treated by most banking organizations under the existing credit risk rules assuming a standard 100% risk weight, adjusted for counterparty and collateral type as appropriate. This standardized assumption was created for other types of receivables, which are very different in nature and risk from FTDs. Unlike other receivables such as loans, receivables resulting from securities fails to deliver are not typically the result of an extension of credit or payment of cash to the trade counterparty and, unlike revaluation gains on OTC derivatives, FTD amounts do not represent income.

  - Most FTDs actually "clean up" (settle) within a few days after the contractual settlement date, and the remainder typically do not migrate to credit or operational losses. In recognition of this fact, a short aging period is permitted by securities firms' regulators in both the US and Europe before regulatory capital charges commence. US banking organizations are therefore subject to a competitive disadvantage due to the higher capital charges applied to FTDs under the current rules, and to the extent they wish to remain active in the public debt markets, little can be done to mitigate or prevent these capital charges.

  - For the reasons above, we strongly recommend that US banking organizations be allowed to assign a zero percent risk weighting to on-balance sheet assets in the form of receivables resulting from securities fails to deliver which have been outstanding, as of the reporting date, four business days or less after the

contractual settlement date and which are conducted on a delivery-versus-payment basis. Such a four-business- day rule would be in keeping with the capital regimes of the US securities industry and the European Union Capital Adequacy Directive Number 2 and therefore lessen the existing competitive inequities, as well as establish a conservative cut-off date after which FTDs could be assessed an appropriate credit risk capital charge.

- Such a four-business-day rule is also reflective of the view that FTDs should not be treated as operational risk elements subject to regulatory capital under Basel II. That is, the rapid resolution of these FTDs does not warrant the operational burden and high cost of tracking and measuring the entire portfolio of such receivables, which entail relatively nominal operational risk.

- CP3 indicated that the Basel Committee considers FTDs to be a "boundary issue" with no clear delineation as to the nature of the risks as between operational risk and credit risk. Paragraph 292 of CP3 indicates that the Basel Committee leaves the capital regime for short-term exposures such as securities fails to deliver ("exposures arising from settling securities purchases and sales") within the discretion of national bank supervisors. We interpret this to mean that the Agencies have been granted authority under Basel II to establish rules suitable for the US markets, and we urge the Agencies to do so, by adopting our recommendation above for both Basel I and Basel II purposes.

Question #4
Majority-Owned or Controlled Subsidiaries

The Federal Reserve specifically seeks comment on the appropriate regulatory capital treatment for investments by bank holding companies in insurance underwriting subsidiaries as well as other nonbank subsidiaries that are subject to minimum regulatory capital requirements.

- A consolidated regulatory capital approach should be the ultimate goal of Basel II. There are diversification benefits that exist between a bank holding company's traditional banking business and the insurance business. Deconsolidating insurance would ignore this benefit.

- Deconsolidation would also support a lack of consistent treatment of 'like assets' across different entities. As an example, investments of the same credit quality would have different capital charges depending on whether the investment were held in a banking entity or in an insurance company. Insurance company risk standards are currently established by regulatory authorities and external rating agencies. External rating agencies currently hold insurance companies to much greater capital requirements than regulatory authorities. This may encourage a bank holding company to arbitrage risk capital levels by funding this investment in the least restrictive entity –bank or Insurance Company - both from a regulatory authority and rating agency perspective. We believe that this by-product of a deconsolidation

decision does not produce a desired result from the company's perspective as well as from a regulatory oversight perspective.

- We believe that a consolidated approach promotes the consistency in treatment that is desired. To the extent that there are aspects of the insurance business that are not covered by current bank regulatory capital standards, such as mortality and morbidity risks, the use of a proxy amount derived from National Association of Insurance Commissioners (NAIC) risk based capital requirements would be prudent.

Questions #5
Transitional Arrangements

Given the general principle that the advanced approaches are expected to be implemented at the same time across all material portfolios, business lines, and geographic regions, to what degree should the Agencies be concerned that, for example, data may not be available for key portfolios, business lines, or regions? Is there a need for further transitional arrangements? Please be specific, including suggested durations for such transitions.

Do the projected dates provide an adequate timeframe for core banks to be ready to implement the advanced approaches? What other options should the Agencies consider?

The Agencies seek comment on appropriate thresholds for determining whether a portfolio, business line, or geographic exposure would be material. Considerations should include relative asset size, percentages of capital, and associated levels of risk for a given portfolio, business line, or geographic region.

- Corporate Credit Risk A-IRB
  We believe that the CP3 proposal gives us sufficient time to qualify for the A-IRB approach for corporate credit risk for most countries where we have material risk. However, for some portfolios, mainly within the Financial Institutions segments, we may not have sufficient default data to qualify, largely due to a lack of defaults in these segments. We believe in this context we should be allowed to use prudent proxies to estimate PDs, LGDs and EADs in a manner similar to what we and other firms do for VAR in calculating risk weighted assets for market risk.

  In calculating VAR for market risk, we and other firms are allowed to use prudent proxies or default values for the volatilities of those illiquid market factors for which we have insufficient time series. The assigned proxy or default volatilities are set at a prudent level, i.e. they err on the high side. We believe a similar "rule of reason" should apply to the statistical parameters used in the A-IRB approach.

  However, we are concerned that the prescriptiveness of the ANPR may cause us serious problems meeting the A_IRB requirements by implementation date. We believe the prescriptiveness of the ANPR will require material increases in our staff and resources. For example, the requirement to revise rating parameters annually for

all processes and models will not be possible without significant increases in staff, both on the analytics team and technology. It is our opinion that this annual update is unreasonable because we validate our statistical rating models using long time series of default data. Consequently, the marginal improvement of these statistical models by an annual update would be small and not worth the cost. Given that there are over 50 statistical models used to rate corporate obligors in Citigroup, the task or re-estimation, ignoring the added work of new model development, would require multiples of current staff levels.

- Retail Credit A-IRB

  For retail credit risk, there are serious implementation issues for Citigroup with the various definitions of default (legal and otherwise) in use around the world. This is further complicated by the home host issue. If this issue is not resolved soon, Citigroup will be unable to build a database and construct statistically valid PDs.

  There is also an issue as to what precisely should be counted as Economic Loss in determining LGD, and what discount rate should be used to estimate present value. Again, it is difficult to begin implementation without precise answers to these questions.

- Operational Risk AMA

  We believe that the proposal gives us sufficient time to implement and seek qualification for an AMA for operational risk in most of our major business segments. It is our intention to perform AMA calculations first of all at the entire group level and then down to the level of the individual business lines. This would mean performing such calculations for categories such as Credit Cards, Branch Banking and Consumer Finance within the Global Consumer Bank, for example. Capital requirements for levels below this will be determined using an allocation mechanism.

  We believe that we should perform AMA calculations for our managed business lines, not the Basel defined business lines. Furthermore, business lines do not map easily into legal vehicles, since a given legal vehicle may be used for many different lines of business.

  We are concerned that it will not be feasible or practical to implement a stand-alone AMA model, based on local data, in the vast majority of our legal vehicles in many countries in which we operate. We will need to use a larger, more robust data set at a higher level in the organization to obtain sound results. We will need to apply the Basic Indicator or the Standardized Approach for operational risk capital in most subsidiaries, unless a reasonable method of allocation of AMA results is accepted by our home and host supervisors. If each subsidiary is required by its host regulator to carry capital for a one in a thousand year event, then the total capital of all the subsidiaries will exceed the AMA group level capital by a substantial margin. Reasonable and practical approaches to the consolidation and deconsolidation of operational risk capital charges in a way that allows for the impact of diversification will need to be established to make implementation of AMA feasible. If Basel II is implemented without due care for this issue, there might be no benefit to performing

an AMA calculation of regulatory capital, as the diversified results will be overridden by the need to hold significantly more capital in each of the subsidiaries.

We consider it extremely impractical to assume that all of our business lines across all regions will be ready for AMA at the time the Accord is first implemented. (See additional comments under our response to question number 45.) For those segments that cannot implement AMA initially, we urge that we be allowed to apply the Basic Indicator Approach or Standardized Approach.

We continue to have significant concerns about the way in which the qualifying standards will be applied. We do not yet have any high degree of confidence that our AMA model when implemented would be approved by our regulators. At the same time, the ANPR indicates that if it were not, all of Citigroup would remain on Basel I. We very strongly oppose this. Two planned elements of our AMA model can be used to illustrate our concerns about achieving approval of the AMA model, they are diversification and confidence level. With regard to confidence level, the rules establish a target confidence level of 99.9%. Although we will certainly plan to estimate our risk at this level, we will not be able to validate, in a strict mathematical sense, using only three to five years of loss data, that we have achieved precisely this confidence level. Similarly, we consider diversification to be a critical element in our AMA model. We consider it extremely intuitive that the operational risk of separate businesses and entities should be summed assuming less than perfect correlation. While we are confident that summation assuming perfect correlation would be wrong, we do not expect to be able to prove the exactness in a strict mathematical sense, of our correlation assumptions. In both of these cases we will instead endeavor to persuade our regulators that our approach is quite reasonable, and perhaps even conservative.

- Implementation and Acquisitions
  In the future Citigroup might acquire a smaller US bank or an emerging market bank that was not required to comply with Basel II at the time of the acquisition. If that occurred, it would obviously take time to build the infrastructure and to collect sufficient data to qualify to apply the Advanced approaches to the acquired bank's corporate credit risk, retail credit risk and operational risk. In such a case Citigroup should be permitted to use the Standard approach for the acquired bank's risks at least until we were able to integrate its various risks into our risk infrastructure. Even after its risks were integrated into our risk infrastructure, depending on the similarity of the acquired firm's customer base to our existing customer base, we might initially have to use default or proxy estimates of PDs, LGDs and EADs until we had acquired sufficient long time series of data to estimate these parameters for the acquired firm's obligors.

- Implementation and Additional Home/Host Issues
  Both foreign branches and subsidiaries of a bank should be treated in the same way as head office in terms of home/host implementation; otherwise an arbitrage will be created.

- Thresholds and Implementation
  We believe a threshold of materiality can be defined as 5% of total assets. An exception to this rule would have to be made in the case of the acquisition of a bank that had not be required to comply with Basel II (as proposed above), if the acquired bank's assets were more than 5% of the assets of the combined banks.

Question #6

Expected Losses vs. Unexpected Losses

The Agencies seek comment on the conceptual basis of the A-IRB approach, including all of the aspects just described. What are the advantages and disadvantages of the A-IRB approach relative to alternatives, including those that would allow greater flexibility to use internal models and those that would be more cautious in incorporating statistical techniques (such as greater use of credit ratings by external rating agencies)? The Agencies also encourage comment on the extent to which the model's necessary conditions of the conceptual justification for the A-IRB approach are reasonably met, and if not, what adjustments or alternative approach would be warranted.

Should the A-IRB capital regime be based on a framework that allocates capital to EL plus UL, or to UL only? Which approach would more closely align the regulatory framework to the internal capital allocation techniques currently used by large institutions? If the framework were recalibrated solely to UL, modifications to the rest of the A-IRB framework would be required. The Agencies seek commenters' views on issues that would arise as a result of such recalibration.

- Basel II should quickly move to an Internal Models approach for credit risk. The evidence is strong, and would make for a safer banking system. First, advances in modeling techniques have been well understood and implemented in practice, with a combination of institution-specific and off-the-shelf models available. Second, advanced internal models would better reflect the degree of portfolio diversification, and create a natural incentive for banks to prudently diversify their risks.
  - While the agencies point to the oversight challenge, they fail to mention that full internal models for market risks have already been permitted for several years. They also fail to justify why internal models are acceptable for operational risk, but not for credit risk. Furthermore, since the Agencies already need to review a bank's internal economic capital models under Pillar 2, it would actually reduce the Agencies' burden to focus exclusively on these Internal Models.
  - At a minimum, the agencies should take two interim steps to address the Internal Models issue. First, explicit recognition of credit risk diversification should be part of Pillar 2 for the reasons described above. Second, a firm date for a transition to Internal Models for credit risk is necessary to begin the work needed to create an amendment to Basel II.
- We welcome the direction of the recent October 12 announcement that the Basel Committee will move towards a UL-only framework. As we consider the October 12

UL-only announcement, we believe that several elements of the proposal can be enhanced further.

- First, reserves should count fully as capital, since in economic terms EL is covered by future margin income. These reserves should count strictly as Tier 1 capital since they are the first line of defense against losses, even ahead of shareholder capital.

- Second, the accountant's definition of reserves needs to be harmonized with that of the banking regulators to avoid an unsafe banking system and the under-reserving practices common in other countries.

- Third, this UL-only framework must in no way result in a 'recalibration' of the credit models, as those are already tied to a fixed 99.9% confidence, and to the underlying economics of the banking business.

Question #7
Wholesale Exposures: Definitions and Inputs

The Agencies seek comment on the proposed definition of wholesale exposures and on the proposed inputs to the wholesale A-IRB capital formulas. What are views on the proposed definitions of default, PD, LGD, EAD, and M2 Are there specific issues with the standards for the quantification of PD, LGD, EAD, or M on which the Agencies should focus?

- Citigroup believes that the proposed definition of wholesale exposures is reasonable as are the definitions of default, PD, LGD, EAD, and M except as noted below.

- PD – Use of a single PD for sovereign exposure does not adequately reflect the significant observed differences between PD of obligations denominated in foreign currency and PD for obligations denominated in local currency which tend to occur les than 20% as frequently. Citigroup believes that the use of different PD's depending on currency of obligation for sovereign exposure, including obligations of central governments, central banks and certain public sector entities, should be allowed.

- PD - When, as we believe is necessary, "double default" effects are allowed to be incorporated in the rating process, Citigroup believes that exposures hedged by credit derivatives where the credit being hedged and the provider of the hedge both have very low PD's that these transactions should be exempt from the three basis point floor on PD.

- LGD – For credit derivative transactions, where the reference asset is a bond of equal or lesser seniority than that of the loan asset being hedged, the use of a higher expected LGD for calculating the beneficial impact of the credit derivative transaction should be permitted.

- EAD - The definition of EAD, for term loans as no less than the current drawn amount and for variable exposures such as loan commitments or lines of credit as limited to no less than the current drawn amount plus an estimate of additional drawings up to the time of default, is too prescriptive since it doesn't allow for the potential effects of contractual increases or decreases in commitments or outstandings. Citigroup would recommend adopting an approach similar to that used to calculate the "weighted average remaining maturity" for M for transactions subject to contractual changes in commitments or outstandings.

- CEA – Although no specific comment was requested in this section on Credit Equivalent Amount ("CEA") we believes that it is a comparable calculation input to EAD and of equal importance to the discussion and comment on it here.

  The treatment of counterparty credit risk for OTC derivatives has not changed in any fundamental way since the 1988 Accord, other than recognition of master netting agreements for current exposures and a partial recognition of the effect of netting on the add-ons for the potential increase in exposure. Thus, the fundamental approach for calculating the CEA of counterparty risk has not changed.

  The CEA continues to be defined in terms of the current market value of each transaction plus an add-on for each transaction's potential increase in exposure. This method is very crude from several perspectives. There are only fifteen add-ons currently defined, for the combination of five very broad categories of underlying market rates (e.g. FX, Interest Rates) and three broad tenor buckets. The add-ons as currently defined are completely insensitive to the volatility of the particular underlying market rates (e.g. exchange rate X vs. exchange rate Y).

  More fundamentally, the add-ons do not capture portfolio effects. In 1990, almost thirteen years ago, Citibank developed a method of employing Monte Carlo simulation to calculate the potential exposure profile of counterparty over the remaining life of the transactions with the counterparty. Since then, other firms have developed similar methods for measuring a counterparty's potential exposure profile over time. A counterparty's exposure profile can be measured over a wide range of confidence levels, depending on the purpose of the calculation.

  We very strongly support ISDA's recent recommendation that the CEA for each counterparty should be defined in terms of the counterparty's Expected Positive Exposure Profile, scaled by a factor . For a large bank the factor will be close to 1.10.

- Definition of Default – We agree with the definition of default provided here but note that it differs from the more extensive set of definitions provided in the "Internal Ratings-Based Systems for Corporate Credit and Operational Risk Advanced Measurement Approaches for Regulatory Capital" dated August 4, 2003 (page 45954 of the Federal Register).

  We object to the inclusion of

"The bank sells the credit obligation at a material credit-related economic loss"

As a definition of default

While the modifying term "credit related" removes the impact of non-credit related changes in market value there are a wide range of down grade scenarios where there could be a significant economic loss but no default or near default.

For example, a decline in rating from AAA to BBB on a long dated obligation would result in a significant value reduction but would leave the firm with an obligation that was still far from a default state.

While we understand the desire to limit the ability of Firms to manipulate the system through targeted distressed asset sales this open-ended approach is flawed and, at a minimum, a definition of "material" is required.

- M – Citigroup feels that the current restriction limiting M to a minimum of one year in most cases is overly restrictive and that the application of a square root of time function to adjust M for maturities less than one year should be adopted.

  M - We disagree with the CP3 proposal that the effective maturity of derivatives or security finance transactions (e.g. repos) under a netting agreement should equal the notional weighted average tenor of the transactions.

  Advanced banks have the ability to directly calculate the exposure profile of a counterparty under a netting agreement. There is almost no relation between the shape of the counterparty's exposure profile over time and the notional weighted average tenor of the transactions under the netting agreement.

  For example, the shape of the exposure profile will be affected by the volatility of the underlying market rates and by the sensitivities over time of the forward and derivative transactions to changes in the underlying rates. A portfolio of five-year interest rate swaps for a low volatility yield curve will have a very different exposure profile over time than a portfolio of five-year forward equity transactions, even if the notional weighted average tenors of the two portfolios were identical.

  More generally, we agree with ISDA's proposal that the effective tenor of the CEA for counterparty risk under a netting agreement can be defined as one year.

Question #8
Wholesale Exposures: SME Adjustment

If the Agencies include a SME adjustment, are the $50 million threshold and the proposed approach to measurement of borrower size appropriate? What standards should be applied to the borrower size measurement (for example, frequency of measurement, use of

size buckets rather than precise measurements)?

Does the proposed borrower size adjustment add a meaningful element of risk sensitivity sufficient to balance the costs associated with its computation? The Agencies are interested in comments on whether it is necessary to include an SME adjustment in the A-IRB approach. Data supporting views is encouraged.

- Citigroup agrees that an SME adjustment is necessary. This is supported by external research such as "The Empirical Relationship between Average Asset Correlation, Firm Probability of Default and Asset Size", by Jose Lopez.

- Citigroup is concerned that the SME adjustment based exclusively on sales size, rather than exposure size will distort the assessment of risk capital. For example, leasing a photocopier to a firm with sales under $5 million will attract very different capital than if the same photocopier were leased to another company with the exactly the same probability of default, but sales between $5 and $50 million. We find no supporting data to justify this differential.

- Citigroup is also concerned that leases with maturity less than a year to will be penalized in capital assessments. For leases between 90 days and 1 year, the Basle formula sets a lower bound of 1 year on the maturity adjustment, which translates into a too high capital requirement. Citigroup supports the RMA position (as laid out in the RMA response to CP3) in that the capital adjustment should be made not through the maturity factor, but rather through an adjustment to PD to reflect the effective reduction in the likelihood of default.

- Internal calculations show that Citigroup would be disadvantaged relative to competitors in capital requirements for SME business. Very few of Citigroup's competitors would fall under the Basle II framework and would likely experience a capital advantage of the order of 20% in middle markets business. Over time, this would mean that riskier SME deals would migrate onto the books of leasing companies and small regional banks and away from institutions with sophisticated internal risk management capabilities.

Question #9
Wholesale Exposures: Specialized Lending

The Agencies invite comment on ways to deal with cyclicality in LGDs. How can risk sensitivity be achieved without creating undue burden?

- Citigroup feels that the perceived positive correlation between PD and LGD in specialized lending generally, and non-recourse specialized lending in particular, is difficult to estimate on a uniform basis since it is driven by the volatility of very specific asset values.

- In practice, we feel that this is best addressed through conservative estimates of loan to value at origination using some form of scenario analysis to develop a range of potential asset values and adjustments to LGD, particularly for non-recourse obligations, designed to reflect the higher variability of LGD associated with these activities with periodic adjustments of the LGD over the life of the transaction to reflect changes in underlying value.

Question #10
Wholesale Exposures: Specialized Lending

The Agencies invite comment on the merits of the SSC approach in the United States. The Agencies also invite comment on the specific slotting criteria and associated risk weights that should be used by organizations to map their internal risk rating grades to supervisory rating grades if the SSC approach were to be adopted in the United States.

- Citigroup expects to have reliable estimates of PD, LGD and M for specialized lending products and, as such, would not expect to use the Supervisory Slotting Criteria approach. To the extent that reliable estimates were not available in certain cases Citigroup would prefer to use a conservative estimate for the loan-level risk parameter in question to allow for greater consistency of approach and comparability with other exposures.

Question #11
Wholesale Exposures: HVCRE

The Agencies invite the submission of empirical evidence regarding the (relative or absolute) asset correlations characterizing portfolios of land ADC loans, as well as comments regarding the circumstances under which such loans would appropriately be categorized as HVCRE.

The Agencies also invite comment on the appropriateness of exempting from the high asset correlation category ADC loans with substantial equity or that are presold or sufficiently pre-leased. The Agencies invite comment on what standard should be used in determining whether a property is sufficiently pre-leased when prevailing occupancy rates are unusually low.

The Agencies invite comment on whether high asset correlation treatment for one-to four-family residential construction loans is appropriate, or whether they should be included in the low asset correlation category. In cases where loans finance the construction of a subdivision or other group of houses, some of which are pre-sold while others are not, the Agencies invite comment regarding how the "pre-sold" exception should be interpreted.

The Agencies invite comment on the competitive impact of treating defined classes of CRE differently. What are commenters' views on an alternative approach where there is only

one risk weight function for all CRE? If a single asset correlation treatment were considered, what would be the appropriate asset correlations to employ within a single risk-weight function applied to all CRE exposures?

- Citigroup endorses the views expressed in the March 2003 RMA paper "Measuring Credit Risk and Economic Capital in Specialized Lending Activities":
    a. Basle II capital requirements for HVCRE are significantly higher than capital attributions generated by best-practice internal models.
    b. Key features of the real estate environment have changed recently, which makes the HVCRE business less risky than past experience might otherwise indicate: Highly leveraged REITs have dwindled as tax incentives have disappeared, and risk rating procedures have improved.

Question #12
Wholesale Exposures: Lease Financings

The Agencies are seeking comment on the wholesale A-IRB capital formulas and the resulting capital requirements. Would this approach provide a meaningful and appropriate increase in risk sensitivity in the sense that the results are consistent with alternative assessments of the credit risks associated with such exposures or the capital needed to support them? If not, where are there material inconsistencies?

Does the proposed A-IRB maturity adjustment appropriately address the risk differences between loans with differing maturities?

- Citigroup agrees with the overall A-IRB approach to lease financings (provided EL be deducted from capital requirements). However, the proposed maturity adjustment is limited and will penalize transactions with less than a year to maturity. That such transactions are proportionately less risky needs explicit recognition in the capital calculation.

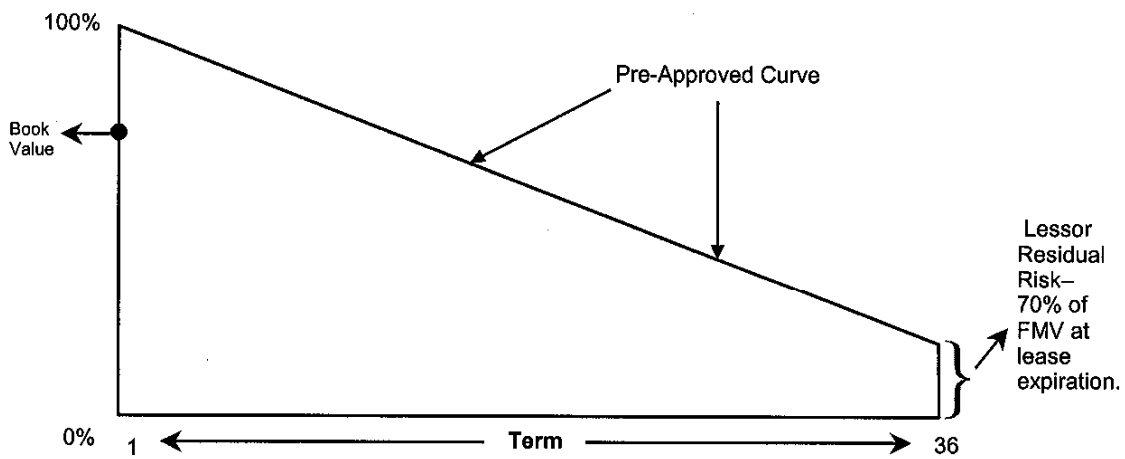
- Citigroup is concerned that riskier large ticket credits will migrate onto the books of small regional banks and leasing companies, as capital requirements for this business are significantly less under Basle I; internal calculations show this relative disadvantage to be of the order of 35%. As emphasized throughout this response, this means that riskier credits will be managed by institutions with less sophisticated internal risk management capabilities.

- **Treatment of Residual Value in leases – Observations:**

    - A BASLE II advanced IRB approach with a market risk mitigation factor that considers lease residual value management, a core competency of a lessor in a lease transaction, would provide appropriate matching of the inseparable interrelationship between the price and credit risk exposure in the pricing of the total lease transaction. The proposed asset risk weighting of lease residuals at

100%, without allowing any mitigating factor to be applied, unfairly penalizes the sophisticated advanced IRB lessor business that conservatively calculates their assessment of the price risk component in a total lease at the end of a lease term. Well-established historical price records on secondary markets, transaction pricing that reflects end of lease options, stringent "good return and maintenance conditions" and more than adequate lessee notice periods on returns enable the lessor to obtain the maximum market value for leased equipment at expiry through renewal, re-lease or an asset sale. Residual risk policy takes the most conservative view looking to avoid losses and targeting to realize gains, historically, CitiCapital realizes 130% of the booked residual amount after lease expiry. BASLE II will fail to serve the equipment leasing industry well if the total lease transaction is not considered and is a disaster for the bank as a profitable and experienced lessor. Without a relative capital risk weight treatment calculation for both the asset price risk component comparable to the receivable credit risk component in the same transaction, the bank as a lessor will avoid entering into future transactions and downsize their lease portfolios.

Residual Risk Policy: Schematic



- Citigroups' general policy on new equipment is to analyze the asset and estimate its future fair market value (assuming normal sale within 120 days) and distress value (if sold within 90 days to a dealer). Citibank assumes an amount equal to the lower of the distress value or 70% of the fair market value. Actuarial portfolios (i.e.: portfolio basis, 12 month ramp up having 100 or more transactions) assume a 75% end of lease expected value (weighted average proceeds from all termination types) but not more than 60% of equipment cost, on deal terms of 24 months or less and not more than 50% of equipment cost on deal terms of 25 to 36 months and not more than 40% for greater deal terms.

- Staff setting residual value amounts use their extensive experience, market knowledge, published market data available from independent sources and third party experts, such as, appraisers and dealers/auctioneers and knowledge of the lessee's business, credit quality and expected use of the asset. Citigroup and its predecessor companies have been remarketing assets since the mid 1960's when the first commercial aircraft leases were done. Citigroup also has substantial experience with negotiating with customers both on early terminations and end of lease options.

- **Treatment of Residual Value – Recommendations:**

  - In the paper, the Committee recognizes exceptional circumstances for well-developed and long-established markets to receive a preferential risk market risk weight where losses stemming from the transaction do not exceed certain parameters. Residual value policy in Citigroup lease transactions establishes parameters for taking residual value market risk in context of the total lease transaction in the pricing models. These parameters have proven and updated historical data capturing all material risks and economic loss, therefore Citigroup can support a weighting scheme to leased residual asset value component in its lease transaction.

  - Citigroup suggests a formula as follows:

  - *Category 1:* Using lower of distress sale value or 70% of the fair market value as residual value parameter.

  - Risk weight suggested is 80%. Conservatively, a 10% cushion on the potential gain target of fair value at lease inception pricing. A credit (relief) given for high LTV (lease termination value).

  - *Category 2:* Actuarial portfolios use lower of a 75% end of lease expected value (weighted average proceeds from all termination types) or 60% of equipment cost, on deal terms of 24 months or less or 50% of equipment cost on deal terms of 25 to 36 or 40% of equipment cost for greater deal terms.

  - Risk weight suggested is 85%. Conservatively, a 10% cushion on the potential gain target of expected value at lease inception pricing. A credit (relief) given for high LTV.

  - This treatment under advanced IRB approach considers:

    - Good track record on setting book residual values supported by a history of realization of 130% on residual value and negotiated end-of-lease options in the total lease transaction pricing. Real risk of any loss is very small. CitiCapital never takes a residual equal to FMV. The lessee

provides adequate notice period on returns to attain maximum market value.

- Experience of keeping up-to-date with market values, knowing the equipment and what affects its value. A residual with no obligation (lessee) behind it, for example, would have a lower price. Another example is non-investment grade lessees have a history of buying or renewing at the end of the lease.
- Setting appropriate return and maintenance condition with the lessee.

Question #13
Retail Exposures: Definitions and Inputs

The Agencies are interested in comment on whether the proposed $1 million threshold provides the appropriate dividing line between those SME exposures that banking organizations should be allowed to treat on a pooled basis under the retail A-IRB framework and those SME exposures that should be rated individually and treated under the wholesale A-IRB framework.

- Citigroup agrees with the $1 million threshold for pooled exposures.
- However, Citigroup is concerned that an SME adjustment based purely on sales size might distort the assessment of risk (see the response to Q8)

Question #14
Retail Exposures: Undrawn Lines

The Agencies are interested in comments and specific proposals concerning methods for incorporating undrawn credit card lines that are consistent with the risk characteristics and loss and default histories of this line of business.

The Agencies are interested in further information on market practices in this regard, in particular the extent to which banking organizations remain exposed to risks associated with such accounts. More broadly, the Agencies recognize that undrawn credit card lines are significant in both of the contexts discussed above, and are particularly interested in views on the appropriate retail IRB treatment of such exposures.

- For Qualifying Revolving Exposures, the Advanced IRB is miss-calibrated relative to the Standardized Approach. Based on an IIF Survey, the Advanced IRB approach generates Risk Weighted Assets that are 25-40% higher than the Standard method. The resulting unleveled playing field will materially disadvantage Citigroup and other global banks when we compete against banks that focus on credit cards but remain on the Standard method (which they will have the incentive to do). We recommend substantial recalibration of the Advanced IRB Approach to better reflect the true economics of the credit card business.

- Citigroup argues that a high percentage of inactive accounts should be excluded from the capital calculation. An internal Citigroup analysis conducted during the recent stressed credit period has revealed that:
    - On average, less than 10% of all inactive accounts will activate within a 12-month period.
    - While inactives make up 27% of all accounts and 20% of the accompanying liability, they represent less than 2% of bad accounts and less than 1% of bad balances.
    - Inactive accounts exhibit almost 1/3 lower charge-off utilization than the revolving segment.

- Citigroup argues that the current AVC ceiling of 15% should be lowered to based on the following facts:
    - Analysis of FICO cohorts over the past 36 months shows clearly that the Asset Value Correlation peaks at around .5%. For higher PDs, the Asset Value Correlation falls sharply, which runs counter to the Basle AVC calibration.
    - Since the industry is currently in recession and the data is from a stressed period, we can conclude that the AVC should be substantially lower than 15%. The analysis suggests that an AVC of 11% would be more appropriate if we were to use the Basel functional relationship between PD and AVC. On the other hand, a maximum AVC of 4% is consistent with the median industry AVC for cards products (see the RMA paper "Retail Credit Economic Capital Estimation-Best Practices"

- Lowering the AVC (and hence the capital requirements) for unused lines (concentrated in top quality credits) is consistent with Citigroup's internal risk management practices, which reduce Open-To-Buy lines by some $200 million monthly:
    - Inactive accounts: Managed by proactive closures each billing cycle, and by reactive strategies (including exit) with daily frequency. All actions are based on risk indicators derived from utilization behavior and continuous updating of Bureau/FICO information.
    - Active accounts: Management strategies focus on payment pattern account closure and line decrease, score triggered line decrease and identification of delinquent accounts with high probability of charge-off. Again all actions are based on risk indicators derived from utilization behavior and continuous updating of Bureau/FICO information.

Question #15
Retail Exposures: Future Margin Income

For the QRE sub-category of retail exposures only, the Agencies are seeking comment on whether or not to allow banking organizations to offset a portion of the A-IRB capital requirement relating to expected losses by demonstrating that their anticipated FMI for

this sub-category is likely to more than sufficiently cover expected losses over the next year.

The Agencies are seeking comment on the proposed definitions of the retail A-IRB exposure category and sub-categories. Do the proposed categories provide a reasonable balance between the need for differential treatment to achieve risk-sensitivity and the desire to avoid excessive complexity in the retail A-IRB framework? What are views on the proposed approach to inclusion of small-bus mess exposures in the other retail category?

The Agencies are also seeking views on the proposed approach to defining the risk inputs for the retail A-IRB framework. Is the proposed degree of flexibility in their calculation, including the application of specific floors, appropriate? What are views on the issues associated with undrawn retail lines of credit described here and on the proposed incorporation of FMI in the QRE capital determination process?

The Agencies are seeking comment on the minimum time requirements for data history and experience with segmentation and risk management systems: Are these time requirements appropriate during the transition period? Describe any reasons for not being able to meet the time requirements.

- Citigroup agrees with the views expressed in the RMA February 2003 paper "Retail Credit Risk Economic Capital Estimation", in which the median industry ratio of FMI/EL was found to be 1.6 for cards (a number close to Citigroup's actual ratio). This would indicate that for the QRE segment, FMI would more than sufficiently cover Expected Losses over the next year, and so capital and reserves should not be required to cover EL.

- Citigroup would expand the Basle II retail categories beyond the current three to five by adding HELOCs, and non-real estate secured. The argument here is that these two extra categories have sufficiently different risk characteristics to merit a different AVC calibration, a view consistent with the RMA February 2003 paper "Retail Credit Risk Economic Capital Estimation."

- On principle, Citigroup is against the use of floors and ceilings, as they are superfluous in an agency-validated PD/LGD/EAD measurement process.

Question #16
Retail Exposures: Private Mortgage Insurance

The Agencies also seek comment on the competitive implications of allowing PMI recognition for banking organizations using the A-IRB approach but not allowing such recognition for general banks. In addition, the Agencies are interested in data on the relationship between PMJ and LGD to help assess whether it may be appropriate to exclude residential mortgages covered by PMI from the proposed 10 percent LGD floor.

The Agencies request comment on whether or the extent to which it might be appropriate to recognize PMI in LGD estimates.

More broadly, the Agencies are interested in information regarding the risks of each major type of residential mortgage exposure, including prime first mortgages, sub-prime mortgages, home equity term loans, and home equity lines of credit. The Agencies are aware of various views on the resulting capital requirements for several of these product areas, and wish to ensure that all appropriate evidence and views are considered in evaluating the A-IRB treatment of these important exposures.

The risk-based capital requirements for credit risk of prime mortgages could well be less than one percent of their face value under this proposal. The Agencies are interested in evidence on the capital required by private market participants to hold mortgages outside of the federally insured institution and GSE environment. The Agencies also are interested in views on whether the reductions in mortgage capital requirements contemplated here would unduly extend the federal safety net and risk contributing to a credit-induced bubble in housing prices. In addition, the Agencies are also interested in views on whether there has been any shortage of mortgage credit under general risk-based capital rules that would be alleviated by the proposed changes.

- Citigroup believes that in principle the LGD floor of 10% should not be applied to pools of mortgages covered by PMI. Indeed all mortgage insurance providers utilized by Citigroup have a credit rating of AA or better. The application of a floor in such cases would violate the principle of risk sensitivity and discourage legitimate risk mitigation strategies.

- Citigroup agrees with the industry consensus that the AVC for prime mortgages appears to be somewhere in the 10% range, rather than the 15% AVC currently proposed. Internal simulation models suggest a value of 8% would be more appropriate.

- Citigroup further believes that the mortgage model is mis-calibrated in the high PD/non-prime segments: the flat 15% AVC appears far too high for such segments. An AVC in the range <5% seems more realistic. These conclusions are based on analysis of the ABS database going back to 1996 and follow from 3 key facts detailed elsewhere in the public domain and shared with the US regulators:
    - The expected cumulative survival rate for non-conforming mortgages is approximately 60% of that of prime mortgages. Incorporating this into the Basle II mortgage model would lower the AVC for non-prime mortgages to between 2 and 4%
    - Delinquency rates exhibit lower sensitivity to changes in house prices in the higher risk segments. Indeed a cross-sectional analysis shows that there is a 2.67 multiplier between delinquency rates comparing periods of high appreciation and low appreciation in the prime world versus a multiplier of 2 in the non-prime world.
    - Non-prime mortgage losses appear relatively less sensitive to recession. Indeed a stress test of the ABS portfolio shows a 10-fold increase in NCLs for

prime mortgages across a deep recession path versus a 3-4-fold increase for non-prime.

- The excessively high AVC for the non-prime/high PD mortgage segments may lead to important unintended consequences if the current model prevails:
  - Competitors not subject to Basle II will be advantaged by having relatively lower capital charges
  - Citigroup will have difficulty competing against such (less sophisticated) firms and may pull back from these segments.
  - The smaller (less sophisticated) firms will increase market share of higher risk mortgages at the expense of the very banks able to manage such risks.
  - The cumulative impact may well be procyclical and there will be an excessive contraction of mortgage lending to marginal credits during recessions.

- Finally we note that the constant 15% AVC used in the mortgage model contradicts the industry consensus that AVC declines as probability of default increases (see Lopez; The Empirical Relationship between Asset Value Correlation, Firm Probability of Default, and Asset Size). Indeed this declining AVC is a key feature of the other Basle II product models

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Question #17
Retail Exposures: Future Margin Income Adjustment

The Agencies are interested in views on whether partial recognition of FMI should be permitted in cases where the amount of eligible FMI fails to meet the required minimum. The Agencies are also interested in views on the level of portfolio segmentation at which it would be appropriate to perform the FMJ calculation. Would a requirement that FMI eligibility calculations be performed separately for each portfolio segment effectively allow FMI to offset EL capital requirements for QRE exposures?

- Under the current Basle II definition of capital as UL + EL, Citigroup believes that for all products FMI should cover some portion of the capital requirements for EL. Of course the proportion would vary by product.

Question #18
Retail Exposures Formula: Other Retail

The Agencies are seeking comment on the retail A-IRB capital formulas and the resulting capital requirements, including the specific issues mentioned. Are there particular retail product lines or retail activities for which the resulting A-IRB capital requirements would not be appropriate, either because of a misalignment with underlying risks or because of other potential consequences?

- HELOCS and non-real estate secured products (e.g. Auto) are sufficiently different in risk characteristics to deserve their own AVC calibration, so Citigroup would

recommend expanding the current 3 categories to include these. There appears to be an industry consensus on the need for a different AVC calibration in these categories (see the RMA February 2003 paper "Retail Credit Risk Economic Capital Estimation").

Question #19
A-IRB: Other Considerations: Loan Loss Reserves

The Agencies recognize the existence of various issues in regard to the proposed treatment of ALLL amounts in excess of the 1.25 percent limit and are interested in views on these subjects, as well as related issues concerning the incorporation of expected losses in the A-IRB framework and the treatment of the ALLL generally. Specifically, the Agencies invite comment on the domestic competitive impact of the potential difference in the treatment of reserves described.

The Agencies seek views on this issue, including whether the proposed US. treatment has significant competitive implications. Feedback also is sought on whether there is an inconsistency in the treatment of general specific provisions (all of which may be used as an offset against the EL portion of the A-IRB capital requirement) in comparison to the treatment of the ALLL (for which only those amounts of general reserves exceeding the 1.25 percent limit may be used to offset the EL capital charge).

- We welcome the recent October 12 announcement that the Basel Committee will move towards an UL-only framework. Please see our responses in Question 6. In the event that a EL+UL framework is retained, there is no economic basis for this 1.25 percent limit on credit earned for reserves; reserves is the first line of defense against losses, and should be included in the definition of capital from an economic perspective.

Question #20
A-IRB Other: Treatment of undrawn receivables purchase commitments

The Agencies seek comment on the proposed methods for calculating credit risk capital charges for purchased exposures. Are the proposals reasonable and practicable?

For committed revolving purchase facilities, is the assumption of a fixed 75 percent conversion factor for undrawn advances reasonable? Do banks have the ability (including relevant data) to develop their own estimate of EADs for such facilities? Should banks be permitted to employ their own estimated EADs, subject to supervisory approval?

- No specific comments

Question #21& 22
A-IRB Other: Capital Charge for Dilution Risk - Minimum Requirements

The Agencies seek comment on the proposed methods for calculating dilution risk capital requirements. Does this methodology produce capital charges for dilution risk that seem reasonable in light of available historical evidence? Is the corporate A-IRB capital formula appropriate for computing capital charges for dilution risk?

In particular, is it reasonable to attribute the same asset correlations to dilution risk as are used in quantifying the credit risks of corporate exposures within the A-IRB framework? Are there alternative method(s) for determining capital charges for dilution risk that would be superior to that set forth above?

The Agencies seek comment on the appropriate eligibility requirements for using the top-down method. Are the proposed eligibility requirements, including the $1 million limit for any single obligor, reasonable and sufficient?

The Agencies seek comment on the appropriate requirements for estimating expected dilution losses. Is the guidance set forth in the New Accord reasonable and sufficient?

- "The U.S. Proposal treats dilution risk extremely conservatively. The current proposal does not give any credit to contractual recourse to the seller for dilution in asset types such as trade not give any credit to contractual recourse to the seller for dilution in asset types such as trade receivables and credit card receivables where dilution risk is relevant. This is contrary to rating agency and industry practice that acknowledges that contractual recourse for dilution is the risk equivalent of an unsecured loan to the seller of the receivables. The U.S. Proposal dictates that when calculating capital for asset pools that have dilution risk, there is a requirement to use the expected loss from dilution as the PD and 100% for LGD, which results a grossly overstated Kirb."
  -ASF letter.

- "The 100% LGD assumed in the U.S. Proposal for calculating dilution risk under the SFA is inappropriate. First, dilution risk, unlike most forms of credit risk, is not only mitigated by the presence of recourse to the seller of receivables to cover dilution losses but also, in many cases, by reserves sized as a multiple of expected losses to cover both EL and UL. This seller recourse is a meaningful and material risk mitigation tool and should be acknowledged as equivalent risk of an unsecured loan."
  -ASF letter.

- "We believe that a more appropriate (albeit slightly more complex) approach to accounting for dilution risk would be to bifurcate the risk into its two separate components. First, to the extent that these risks are covered by reserves, the LGD should reflect that these are secured exposures (10% LGD (or less, if a funded reserve)). Second, since dilution risk is full recourse to the seller of the receivables for all dilution loss exposures that exceed the level of reserves, any remaining risk of loss (in excess of the reserves) should be treated as the equivalent of an unsecured corporate exposure (50% LGD)."

-ASF letter. We agree with these recommendations.

Question #23
Credit Risk Mitigation Techniques

The Agencies seek comments on the methods set forth above for determining EAD, as well as on the proposed back-testing regime and possible alternatives banking organizations might find more consistent with their internal risk management processes for these transactions. The Agencies also request comment on whether banking organizations should be permitted to use the standard supervisory haircuts or own estimates haircuts methodologies that are proposed in the New Accord.

- Citigroup endorses the views expressed by ISDA on this matter and feels that the proposed multipliers for use in back-testing are both punitive and conceptually unsound and at odds with the methodology set out in the 1996 Market Risk Amendment which would suggest that a material reduction of the proposed level of the multipliers was required.

- For Counterparty Risk of Repos and Security Financing the New Accord appropriately encourages VAR-like calculations of the CEA, but assesses penalties for failing back-tests that are excessive and inconsistent with the Market Risk Amendment to the Current Accord. These penalties will discourage use of the more precise VAR-like measurement. We recommend lower penalty factors that are consistent with Market Risk Amendment as per the ISDA/Bond Market Association recommendation.

- In addition, as proposed, applying the current level of multipliers to an institution's VaR model during a market crisis might significantly increase their risk-based capital requirements increasing systemic risk by limiting the ability of the firm to transact in the marketplace thereby reducing liquidity.

- Citigroup feels that the VaR back-testing approach should allow substantial flexibility and believe that the ANPR and the New Accord should allow firms the flexibility to utilize either a "clean" or "dirty" back-testing approach (i.e. taking into account intraday movements of P/L) consistent with the 1996 Market Risk Amendment and that that financial institutions should have the flexibility of utilizing an actual or hypothetical portfolio when back-testing.

Question #24
Guarantees and credit derivatives

Industry comment is sought on whether a more uniform method of adjusting PD or LGD estimates should be adopted for various types of guarantees to minimize inconsistencies in treatment across institutions and, if so, views on what methods would best reflect industry practices. In this regard, the Agencies would be particularly interested in information on

how banking organizations are currently treating various forms of guarantees within their economic capital allocation systems and the methods used to adjust PD, LGD, EAD, and any combination thereof.

The Agencies are seeking comment on the proposed non-recognition of double default effects, that is, neither the banking organization's criteria nor rating process for guaranteed/hedged exposures would be allowed to take into account the joint probability of default of the borrower and guarantor.

The Agencies are also interested in obtaining commenters' views on alternative methods for giving recognition to double default effects in a manner that is operationally feasible (e.g., reflecting the concerns outlined in the double default white paper) and consistent with safety and soundness. This may include how banking organizations consider this in their economic capital calculations. "

- The substitution approach should be eliminated. There is no recognition in CP3 of the lower risk of the joint default probability ("double default") when credit mitigants are used. The New Accord should allow banks to use internal models to assess the joint default probability arising from credit mitigants, subject to regulatory validation, perhaps with the methodology described in the recent research memo on this topic from the Federal Reserve Board. If this is not allowed, then discounts to the substitution approach should be adopted as per ISDA's proposal.

- In the past there was reluctance at Citigroup, in interest of "conservatism", to recognize in our internal risk systems that joint default probabilities are normally substantially lower than the default risk of either party. However, as we have increased reliance on PD based obligor ratings, EL-based facility ratings, and quantitative credit modelling in risk assessment and decision making, we have found it necessary to recognize joint default risk to avoid distortions in our internal systems, including reserve-related expected loss models and risk/return related economic capital models.

- We are gradually introducing a set of joint default grids into our risk rating processes based off of assessments of the default correlation as High (.50), Medium (.20) or Low (.02). These will be applied to cases of "two way out risk", such as guarantees, certain LCs, etc. The use of the grids can dramatically affect the ratings outcome. We set the correlations after internal risk analysis based on reasonableness.

- The treatment of counterparty credit risk for OTC derivatives has not changed in any fundamental way since the 1988 Accord, other than recognition of master netting agreements for current exposures and a partial recognition of the effect of netting on the add-ons for the potential increase in exposure. However the fundamental approach for calculating the Credit Equivalent Amount (CEA) of counterparty risk has not changed. The CEA continues to be defined in terms of the current market value of each transaction plus an add-on for each transaction's potential increase in exposure. This method is very crude from several perspectives. There are only fifteen add-ons currently defined, for the combination of five very broad categories of

underlying market rates (e.g. FX, Interest Rates) and three broad tenor buckets. The add-ons as currently defined are completely insensitive to the volatility of the particular underlying market rates (e.g. exchange rate X vs. exchange rate Y).

More fundamentally, the add-ons do not capture portfolio effects. In 1990, almost thirteen years ago, Citibank developed a method of employing Monte Carlo simulation to calculate the potential exposure profile of a counterparty over the remaining life of the transactions with the counterparty. Since then, other firms have developed similar methods for measuring a counterparty's potential exposure profile over time. A counterparty's exposure profile can be measured over a wide range of confidence levels, depending on the purpose of the calculation.

We very strongly support ISDA's recent recommendation that the CEA for each counterparty should be defined in terms of the counterparty's Expected Positive Exposure Profile, scaled by a factor . For a large bank will be close to 1.10.

- We disagree with the CP3 proposal that the effective maturity of derivatives or security finance transactions (e.g. repos) under a netting agreement should equal the notional weighted average tenor of the transactions.

  In the first place, sophisticated banks have the ability to directly calculate the exposure profile of a counterparty under a netting agreement. There is almost no relation between the shape of the counterparty's exposure profile over time and the notional weighted average tenor of the transactions under the netting agreement. For example, the shape of the exposure profile will be effected by the volatility of the underlying market rates and by the sensitivities over time of the forward and derivative transactions to changes in the underlying rates. A portfolio of five-year interest rate swaps for a low volatility yield curve will have a very different exposure profile over time than a portfolio of five-year forward equity transactions, even if the notional weighted average tenors of the two portfolios were identical.

  More generally, we agree with ISDA's proposal that the effective tenor of the CEA for counterparty risk under a netting agreement can be defined as one year.

- For Counterparty Risk of Repos and Security Financing the New Accord appropriately encourages VAR-like calculations of the CEA, but assesses penalties for failing backtests that are excessive and inconsistent with the Market Risk Amendment to the Current Accord. These penalties will discourage use of the more precise VAR-like measurement. We recommend lower penalty factors that are consistent with Market Risk Amendment as per the ISDA/Bond Market Association recommendation.

Question #25
Additional requirements for recognized credit derivatives

The Agencies invite comment on this issue, as well as consideration of an alternative

approach whereby the notional amount of a credit derivative that does not include restructuring as a credit event would be discounted. Comment is sought on the appropriate level of discount and whether the level of discount should vary on the basis of for example, whether the underlying obligor has publicly outstanding rated debt or whether the underlying is an entity whose obligations have a relatively high likelihood of restructuring relative to default (for example, a sovereign or PSE). Another alternative that commenters may wish to discuss is elimination of the restructuring requirement for credit derivatives with a maturity that is considerably longer --for example, two years -- than that of the hedged obligation.

- Citigroup feels that the discount approach is better aligned with the risk associated with lack of restructuring language and endorses the views expressed by ISDA in its letter to the BIS of July 31, 2003. In addition, Citigroup feel that the current substitution method must be replaced for this risk to be correctly addressed. If the substitution approach is not replaced, applying a discount factor will significantly reduce, and possibly eliminate, the benefits of hedging with a credit default swap

- Citigroup believes that the discount factor should not be applied to credit protection in which the protection buyer has control over restructuring, but only to contracts in which control does not exist. Clearly, if it is in the economic best interest for the protection buyer not to initiate a restructuring having restructuring language in a contract will not change the business decision made or provide any further protection. The discount in such cases should be a function of the relative incidence of restructuring events vis-à-vis other forms of default events, as well as of any discrepancy between loss given restructuring and loss given default.

- ISDA has suggested a possible calculation methodology and recommended a discount factor of 35% under the Foundation IRB foundation approach calculated in terms of probability of a restructuring event and the loss given a restructuring event. Citigroup feels that firms should calculate discount factor with internal parameters under Advanced IRB.

Question #26
Additional requirements for recognized credit derivatives con't.

Comment is sought on this matter, as well as on the possible alternative treatment of recognizing the hedge in these two cases for regulatory capital purposes but requiring that mark-to-market gains on the credit derivative that have been taken into income be deducted from Tier 1 capital.

- Citigroup feels that the recent request by the agencies to FASB to reconsider the distorting elements of the current accounting approach extremely constructive and shows clear recognition that the issue in question is not a risk management issue but an accounting issue.

- Citigroup feels that both the non-recognition proposal and the alternative proposal of deducting mark-to-market gains should be deferred pending further discussion with FASB on a resolving the underlying problem. Active publics consideration of cumbersome, partially effective solutions to structural problems, such as these, are likely, in our view, to hinder discussions with FASB by suggesting that acceptable regulatory solutions are available.

Question #27
Treatment of maturity mismatch

The Agencies have concerns that the proposed formulation does not appropriately reflect distinctions between bullet and amortizing underlying obligations. Comment is sought on the best way of making such a distinction, as well as more generally on alternative methods for dealing with the reduced credit risk coverage that results from maturity mismatch.

- The definition of EAD for term loans as no less than the current drawn amount and for variable exposures such as loan commitments or lines of credit as limited to no less than the current drawn amount plus an estimate of additional drawings up to the time of default is too prescriptive since it doesn't allow for the potential effects of contractual increases or decreases in commitments or outstandings. Citigroup would recommend adopting an approach similar to that used to calculate the "weighted average remaining maturity" for M for transactions subject to contractual changes in commitments or outstandings.

- Citigroup feels that capital adjustments required to capture forward credit risk arising from a maturity mismatch should be determined using the maturity adjustment of the A-IRB approach. To the extent empirical data supporting the use of different EAD factors for loans with variable exposures is available it use should be encouraged.

Question #28
Treatment of counterparty risk for credit derivative contracts

The Agencies are seeking industry views on the PFE add-ons proposed above and their applicability. Comment is also sought on whether different add-ons should apply for different remaining maturity buckets for credit derivatives and, if so, views on the appropriate percentage amounts for the add-ons in each bucket.

- See responses above to questions #23-27.

Question #29
Equity Exposures - Positions covered

The Agencies encourage comment on whether the definition of an equity exposure is sufficiently clear to allow banking organizations to make an appropriate determination as to the characterization of their assets.

- We strongly support the initiative to embed differentiation as a foundation within the Basel II initiative; however, with respect to the proposed equity components we have the following observations.
    - It is unclear why there is a need to move from a 100% risk weighting to 300% on all publicly traded investments and 400% for non-public investments for non-approved internal models. This would appear to avoid any consideration of the scale of diversification within a portfolio across markets, geographic regions, etc.
    - There is also an explicit assumption that all non-exchange traded equities have an inherently higher risk than holding equity investments traded on a recognized exchange. It is unclear what the premise for this is. As an example, a large percentage of private equity investments have historical track records that would highlight the opposite. This may be because of the historical valuation processes but will often be a fundamental aspect of the type of equity investment. Further, there is no recognition that holdings in private equity funds offer material benefits vs. single holdings and, as with direct investments in certain private equity classes, have lower valuation volatilities than exchange traded securities. We believe that there is confusion over price volatility resulting from published results vs. volatility of valuations based on multiples.
    - We therefore object strongly to the increase in risk weightings from 100% to 400% based on what would appear to be arbitrary prejudice that there is lack of transparency and potential illiquidity. This proposal seems geared at addressing the perceived risks in Venture Capital to the exclusion of the much broader universe of non-exchange traded equity investments. Furthermore, for organizations transitioning to the internal models approach, these risk weights would appear excessive compared to the current capital requirements when the case for such an increase has not been made adequately.
- The definition of equity exposures is clear from the description and we welcome the feature that allows a facts and circumstances analysis whereby the banking organization's primary Federal supervisor may characterize equity holdings as debt or securitization exposures for regulatory capital purposes.

Question #30
Equity Exposures - Zero and low risk investments

Comment is sought on whether other types of equity investments in PSEs should be exempted from the capital charge on equity exposures, and if so, the appropriate criteria for determining which PSEs would be exempted.

- No specific comments. Please see our CRA-related comments on Question #32.

Question #31
Equity Exposures: Nationally legislated programs

The Agencies seek comment on what conditions might be appropriate for this partial exclusion from the A-IRB equity capital charge. Such conditions could include limitations on the size and types of businesses in which the banking organization invests, geographical limitations, or maximum limitations on the size of individual investments.

- No specific comments.

Question #32
Equity Exposures: Nationally legislated programs Con't.

The Agencies seek comment on whether any conditions relating to the exclusion of CEDE investments from the A-IRB equity capital charge would be appropriate. These conditions could serve to limit the exclusion to investments in CEDEs that meet specific public welfare goals or to limit the amount of CEDE investments that would qualify for the exclusion from the A-IRB equity capital charge. The Agencies also seek comment on whether any other classes of legislated program equity exposures should be excluded from the A-IRB equity capital charge.

- The Community Reinvestment Act (CRA) encourages insured depository institutions to make equity investments that promote public welfare. The proposed capital rules demonstrate only partial recognition of the positive impact of these investments on underserved communities. In response to the Agencies' questions, we suggest modifications that would strengthen the consistency of Basel II with the goals of CRA:

  - All CRA-eligible investments should be excluded from the materiality calculation. Including these investments may deter some insured depository institutions from maximizing their commitments to this asset class.

  - The proposal specifies that investments that receive favorable tax treatment or investment subsidies be excluded from the A-IRB equity capital charge. There are CRA-eligible investments that do not benefit from favorable tax treatment or subsidies. An example is a real estate fund that invests in inner city commercial real estate and revitalizes low-income neighborhoods. Another example is a community development venture capital fund that makes investments that result in job creation for low-income individuals. These funds may not have subsidies in their capital structure. Citigroup strongly recommends that all CRA-eligible investments be excluded from the A-IRB equity capital charge.

Question #33
Equity Exposures: Grandfathered Investments - Description of quantitative principles

Comment is specifically sought on whether the measure of an equity exposure under AFS accounting continues to be appropriate or whether a different rule for the inclusion of revaluation gains should be adopted.

- We urge the Agencies to further consider the anomalies that are alluded to that will potentially arise from adoption of the A-IRB framework for equity exposures and the inclusion in Tier 2 capital of 45 percent of revaluation gains on available for sale equity securities. Prevention of anomalies may entail changes in the definition of Tier 2 capital, which is currently not within the scope of CP3. Therefore, the Agencies should publish illustrative examples for consideration by respondents prior to the notice of proposed rulemaking in order to fully address this issue on a timely basis.

- Additionally, we have the following comments on the proposed grandfathering rules and quantitative principles:

  - While equity investments being grandfathered for a finite time is a good idea, the requirements should always be the greater of 10 years or the original investment guidelines.

  - For investments with finite life spans, the reference date for cut-off should be the final date as declared at the inception of the investment with a cut-off date based on implementation of the rules to avoid institutions "back-dating" investment life spans. An example would be private equity fund investments where there is a definite life to the fund. These investments would move from 100% risk weighting to 300% at the end of their life cycle.

  - The concept of differentiating between stock dividends and additional purchases and their respective proposed capital charges will create anomalies in practice. We assume that the concept of "increase in proportional ownership" includes the idea of rights issues and avoiding dilution by share purchases. However, if a company underwrites and increases through having to purchase additional shares when the rights are not exercised by additional holders these would require additional capital and a logistical challenge to track separately.

  - With respect to banking organizations using non-VaR internal models based on stress or scenario analyses, we think that the highly subjective concept of "worst case" will be open to materially divergent interpretations. Furthermore, the idea of assuming that the scenarios should generate capital charges "at least as large as those that would be required to be held against a representative market index under a VaR approach" fails to differentiate between the natures of equity investments. In addition, there is a failure to recognize that there are few universally agreed market indices for certain classes of equity and that a portfolio of equity exposures will often have material tracking risks to indices. Therefore,

while we believe that the concept is understandable, the language needs significant modification to avoid abuse.

Question #34
Supervisory Assessment of A-IRB Framework: US Supervisory Review

The Agencies seek comment on the extent to which an appropriate balance has been struck between flexibility and comparability for the A-IRB requirements. If this balance is not appropriate, what are the specific areas of imbalance, and what is the potential impact of the identified imbalance? Are there alternatives that would provide greater flexibility, while meeting the overall objective of producing accurate and consistent ratings?

The Agencies also seek comment on the supervisory standards contained in the draft guidance. Do the standards cover all of the key elements of an A-IRB framework? Are there specific practices that appear to meet the objectives of accurate and consistent ratings but that would be ruled out by the supervisory standards related to controls and oversight? Are there particular elements from the corporate guidance that should be modified or reconsidered as the Agencies draft guidance for other types of credit?

In addition, the Agencies seek comment on the extent to which these proposed requirements are consistent with the ongoing improvements banking organizations are making in credit-risk management processes.

- The supervisory guidance is inappropriate and/or overreaching in a number of areas. Please see our attached comments regarding the A-IRB Supervisory Guidance.

Question #35
Securitization - Operational Criteria

The Agencies seek comment on the proposed operational requirements for securitizations. Are the proposed criteria for risk transference and clean-up calls consistent with existing market practices?

- It is Citigroup's view that the proposed criteria for risk transference and clean-up calls are consistent with existing market practices.

Question #36
Securitization - Maximum Capital requirement

Comments are invited on the circumstances under which the retention of the treatment in the general risk-based capital rules for residual interests for banking organizations using the A-IRB approach to securitization would be appropriate.

Should the Agencies require originators to hold dollar-for-dollar capital against all retained securitization exposures, even if this treatment would result in an aggregate amount of capital required of the originator that exceeded KIRB plus any applicable deductions? Please provide the underlying rationale.

- Citigroup would argue that total capital requirements across all pieces should not exceed KIRB. There are alternative models, which could accomplish this, which are similar in spirit to the A-IRB approach (see the paper "Credit Risk in Asset Securitizations: an Analytical Approach" by Pykhtin and Dev).

Question #37
Securitization - Positions below KIRB

The Agencies seek comment on the proposed treatment of securitization exposures held by originators. In particular, the Agencies seek comment on whether originating banking organizations should be permitted to calculate A-IRB capital charges for securitizations exposures below the KIRB threshold based on an external or inferred rating, when available.

- It is Citigroup's position that capital calculation based on external or inferred rating should be allowed for exposures below KIRB.

- "We do not believe that it is appropriate to require a deduction from capital below BB-levels for investors and for all positions within Kirb for originators. While we concede that it is appropriate to conservatively treat true first loss positions, we believe that both originators and investors should be able to use a risk weight based on the RBA approach for any rated position that is not such a true first loss position. We believe that credit must be given for positions that have the benefit of credit enhancement, whether through the subordination of another position or through the existence of excess spread or other credit enhancement not currently recognized under the SFA."

  -ASF letter.

- The fact that it is an originator who holds such a position does not make the ratings for that position unreliable; there is no difference in the risk associated with a particular position simply because it is retained rather than acquired. Provided the final RBA risk weights will be correctly calibrated, application of the RBA to a rated position that is not a true first loss position should result in the appropriate amount of regulatory capital being held, regardless of who is taking the position or at wheat level such position is rated.[1] To address concerns that a bank might "cherry pick" between the RBA and the SFA by choosing to have a position rated or not, we would also propose that banks be required to have a position rated or not.

  -ASF letter. We agree with these recommendations.

Question #38
Securitization - Positions above KIRB

The Agencies seek comment on whether deduction should be required for all non-rated positions above KIRB. What are the advantages and disadvantages of the SFA approach versus the deduction approach?

- See response to question #39.

Question #39
Securitization - Ratings Based Approach (RBA)

The Agencies seek comment on the proposed treatment of securitization exposures under the RBA. For rated securitization exposures, is it appropriate to differentiate risk weights based on tranche thickness and pool granularity?

For non-retail securitizations, will investors generally have sufficient information to calculate the effective number of underlying exposures (N)?

What are views on the thresholds, based on N and Q, for determining when the different risk weights apply in the RBA?

Are there concerns regarding the reliability of external ratings and their use in determining regulatory capital? How might the Agencies address any such potential concerns?

Unlike the A-IRB framework for wholesale exposures, there is no maturity adjustment within the proposed RBA. Is this reasonable in light of the criteria to assign external ratings?

- "We believe that the risk weights applied to most securitization positions under the RBA are too high based on the evidence we and others have reviewed showing the risks of these positions. We feel that there are a number of reasons leading to the risk weights that have been proposed, which we will address below. First, we understand that the risk weights under the RBA were mainly based on an analysis of CDO and corporate exposures, which we believe results in too much capital for other asset exposures. We also note that capital is most excessive for senior tranches of securitizations, including senior tranches of CDO and corporate exposures. Second, while we understand Agencies' intended use of appropriately conservative assumptions to deal with uncertainty for regulatory purposes, we believe that several assumptions are unreasonably conservative, the cumulative effect of which has led to unjustifiable and punitive capital requirements for securitizations."

  -ASF letter.

- "As a result of the assumption of a constant EL in the Perraudin paper, the model assumes and LGD of 50% for senior positions and a PD that is consistent with the PD

for a like-rated corporate asset. We do not believe that an assumption of 50% loss in a senior securitization tranche is supportable. In the world of non-CDO securitizations, the EL (and LGD) of a position will vary dramatically based on whether it is senior or subordinated in the structure of the transaction as well as the credit enhancement attachment points. Our data suggests that the expected LGD for senior tranches is significantly less than 50%, indicating a lower capital requirement from that proposed by the Agencies."

-ASF letter.

- "Again, while the ideal would be different assumptions for different asset classes, we believe and appropriate LGD assumption that is workable across the board for these thick, granular positions is one between 5% and 10%."

-ASF letter.

- "We understand that the Perraudin and Peretyatkin model discussed above was just one of many factors used by the Agencies in determining the calibration of the RBA. We have focused on this factor primarily because we are not privy to other factors and assumptions used in setting forth this proposal. While we have primarily focused on column 1 in this letter, we believe that we should have the same opportunity to review the assumptions and modeling done to derive the risk weights in the other columns under the RBA so as to comment on the validity of the risk weights proposed in those columns as well. We firmly believe that all assumptions and factors used to calibrate the risk levels for each column of the RBA table should be published and debated in an open public forum to allow for the input from a broad range of experts in this area. We do not believe that revisions to the regulatory capital requirements without this level of transparency in process will lead to valid results."

-ASF letter. We agree with these recommendations.

Question #40
Securitization - Supervisory formula approach (SFA)

The Agencies seek comment on the proposed SFA. How might it be simplified without sacrificing significant risk sensitivity? How useful are the alternative simplified computation methodologies for N and LGD?

- Citigroup supports any attempts to simplify the capital calculation for securitizations.

- "Our principal concern relating to the application of the U.S. Proposal to asset-backed commercial paper programs is that we do not believe that it provides a viable method for effectively measuring required capital for ABCP positions, particularly liquidity and program wide credit enhancement positions, under the A-IRB. In order to use the RBA, banks would have to have liquidity and credit enhancement facilities rated in order to avoid the over conservative and burdensome calculation of Kirb under the SFA approach. The ratings process would be time-consuming and add costs for each

transaction while providing relatively little benefit given the relatively low risk of a liquidity facility. Infrequency of draws and very low losses under these facilities historically. Alternatively, a bank could use the SFA, a complicated, burdensome and unworkable approach that results in an overstatement of the minimum levels of capital for exposures to ABCP conduit facilities in its current form."

-ASF letter. We agree with this recommendation.

- "Our concern with the top down approach is the implication that deals cannot be structured properly, nor monitored adequately, without access to prescribed information. Industry performance bears witness to the fact that deals have been successfully structured for years without such prescribed information."

-ASF letter.

- "We believe that the regulatory concern over the validation of internal systems in this area is unwarranted. Banks' internal systems have been developed over many years and are subject to rigorous independent third party validation as well as subject to periodic regulatory review. The validation now in place provides for reviews of the reliability of the inputs that go into a bank's internal model, the accuracy of the operation and calibration of that model, the bank's policies regarding the frequency of testing of a portfolio and a number of other critical areas of the operation of a bank's internal system. In contrast to the top down approach, there is a strong validation system currently in place that would be at the disposal of regulators."

-ASF letter.

- "Because of the problems inherent in the proposed top down approach and for the reasons discussed below, we believe that banks should be permitted to produce their own internal ratings and systems, and internal bank rating approach, to determine required capital for liquidity and credit enhancement positions supporting ABCP conduit transactions. We believe this approach allows for a more robust validation process based on the long history over which the internal ratings methodologies have been used."

-ASF letter.

- "Internal ratings systems relating to ABCP conduit transactions are currently designed to be consistent with, and in many instances more conservative than, rating agency methodology. This publicly available rating agency methodology is well established for the primary asset classes and securitization structures. Furthermore, the methodology is not complicated – it is based on structuring transactions to cover various multiples of historical loss and, in relevant cases, dilution levels. Whether a bank's system is consistent with rating agency methodology is easily verifiable by internal auditors, third party auditors and regulators. This validation can be done directly by comparing the publicly available methodology with that used in an internal system. Indirect validation can also be done by comparing the internal rating assigned to a position with that assigned by a rating agency in the same position or to a similar transaction of the same asset type in the term market. Consistency between an internal system's rating and an external rating of that or a comparable transaction, which we believe you will find to be the case, further supports the validity of an

internal bank system."

-ASF letter.

- "We propose that if a bank were to adopt a system-wide or transaction level standard that is less conservative in any portion of its analysis than rating agency methodology,[3] such variances would be subject to internal review. Ultimately, the internal system, including its procedures for exceptions to rating agency methodology, will remain subject to regulatory review...Finally, these internal systems are those with which regulators have the most familiarity – they have been in place and subject to review for over two decades."

-ASF letter. We agree with these recommendations.

Question #41

Securitization - The look-through approach for eligible liquidity facilities

The Agencies seek comment on the proposed treatment of eligible liquidity facilities, including the qualifying criteria for such facilities. Does the proposed Look-Through Approach -- to be available as a temporary measure --satisfactorily address concerns that, in some cases, it may be impractical for providers of liquidity facilities to apply either the "bottom-up" or "top-down" approach for calculating KIRB? It would be helpful to understand the degree to which any potential obstacles are likely to persist.

Feedback also is sought on whether liquidity providers should be permitted to calculate A-IRB capital charges based on their internal risk ratings for such facilities in combination with the appropriate RBA risk weight. What are the advantages and disadvantages of such an approach, and how might the Agencies address concerns that the supervisory validation of such internal ratings would be difficult and burdensome? Under such an approach, would the lack of any maturity adjustment with the RBA be problematic for assigning reasonable risk weights to liquidity facilities backed by relatively short-term receivables, such as trade credit?

- "Under the A-IRB if a liquidity position is not rated, we believe that a bank should have the option to look-through to the risk weight assigned to the underlying tranche that the liquidity supports if that underlying transaction has been externally rated, whether publicly or privately by one eligible rating agency (or, if our internal approach is adopted, the rating applicable using this approach). Given that the underlying tranche reflects the ultimate risk of a liquidity position, we see no reason not to permit the reliance on that rating if a liquidity position itself is not rated. We propose the U.S. Proposal allow regulators the flexibility to maintain a list of "eligible" rating agencies that are well established, of sufficiently high caliber, and have demonstrated expertise in securitization to warrant recognition of their private letter ratings in this context."

-ASF letter.

- "We note that when looking to the underlying rating of a tranche (whether public, private or derived under our internal approach), we believe that the short term

equivalent of that rating is the appropriate proxy for determining the risk weight for a related liquidity position that is for one year or less. Because of the short-term nature of the risk to a bank under a one-year commitment, were a bank to have a rating assigned to a liquidity position directly, it would appropriately request a short-term rating to be assigned to such a position."

-ASF letter.

- "While we believe that such a look-through approach might still result in capital greater than that necessitated by the risk of a liquidity position, in that it does not give credit for the structural protection provided by a dynamic asset quality test in the liquidity position itself, we feel that it is a viable alternative that should be available to banks to avoid the burdens of the application of the SFA approach and the resulting negative impact on the multi-seller conduit ABCP market while still providing regulators with reassurance that a rating agency has reviewed the underlying risk exposure of a position."

  -ASF letter. We agree with these recommendations.

Question #42
Securitization - Other Considerations - Capital treatment absent an A-IRBA Approach - the Alternative RBA

Should the A-IRB capital treatment for securitization exposures that do not have a specific A-IRB treatment be the same for investors and originators? If so, which treatment should be applied — that used for investors (the RBA) or originators (the Alternative RBA)? The rationale for the response would be helpful.

- See responses to questions #37-41

Question #43
Securitization - Determination of CCFs for non-controlled early amortization structures

The Agencies seek comment on the proposed treatment of securitization of revolving credit facilities containing early amortization mechanisms. Does the proposal satisfactorily address the potential risks such transactions pose to originators?

Comments are invited on the interplay between the A-IRB capital charge for securitization structures containing early amortization features and that for undrawn lines that have not been securitized. Are there common elements that the Agencies should consider? Specific examples would be helpful.

Are proposed differences in CCFs for controlled and non-controlled amortization mechanisms appropriate? Are there other factors that the Agencies should consider?

- Citigroup sees the potential for double count in this capital calculation. As excess spread falls and dollar for dollar capital must be held against the amount put into the

spread account, the additional charge for the CCF in such circumstances would be a double count if the sum of both fell below KIRB.

Question #44
Securitization - Servicer cash advances

When providing servicer cash advances, are banking organizations obligated to advance funds up to a specified recoverable amount? If so, does the practice differ by asset type? Please provide a rationale for the response given.

- Citigroup supports the position that banking organizations are obligated to advance funds up to a specified recoverable amount.

Question #45
AMA Framework for Operational Risk

The Agencies are proposing the AMA to address operational risk for regulatory cap ital purposes. The Agencies are interested, however, in possible alternatives. Are there alternative concepts or approaches that might be equally or more effective in addressing operational risk? If so, please provide some discussion on possible alternatives.

- We strongly support Basel II's principle of establishing a more risk-sensitive framework, as we believe that this is the best way of overcoming the shortcomings of Basel I. Therefore, we wish to see an approach to calculating operational risk regulatory capital requirements in Pillar I in a way that reflects our internal models for operational risk and recognizes the risk reducing benefits of diversification and efficiencies of scale (non-linearity). We support the Advanced Measurement Approaches (AMA) framework because we anticipate that it will recognize these benefits. However, we also anticipate that some parts of our diverse set of businesses may not qualify for AMA. So we believe that less advanced methodologies, such as the basic indicator or standardized approach, will be necessary for those businesses and that a mechanism to permit some recognition of the benefits of diversification and efficiencies of scale should be available for these non-qualifying businesses. This will be necessary for an institution of our breadth and scale to prevent significant distortions in the degree of risk sensitivity reflected in the capital calculations.

- The section on Supervisory Considerations specifies that institutions would have to use the advanced approaches across all material elements of their businesses. Segments that are not material would be exempted and would revert to the general risk-based capital rules (we read this as the current Basel Accord ("Basel I"). It is extremely impractical to assume that all of our business lines across all regions will be ready for AMA at the same time and by the date upon which the Accord is implemented. We urge the agencies to allow partial use of the AMA as approved and to allow other segments to use the basic or the standardized approaches under Basel

II, until such time as they are able to advance to AMA. We strongly oppose the reversion to Basel I as an unnecessary step away from a more risk sensitive framework and, more specifically, as the least risk-sensitive approach.

- We see significant issues related to implementing AMA in multiple regulatory jurisdictions and even across legal vehicles within a single jurisdiction, and we seek clarification regarding how the AMA will be implemented in these circumstances. We believe that our AMA models will need to be run for a broader set of activities than those that reside within any single legal vehicle or regulatory jurisdiction. We believe that the results of the model run at the group level, perhaps according to managed line of business, and should be allocated to the individual legal vehicles using an acceptable formula that allows for recognition of diversification benefits. We suggest that, in most cases, the regulator of the foreign subsidiary should accept the methodology approved by the home country regulator of the consolidated parent who should monitor and approve the overall implementation of AMA for the consolidated group. We realize that this will place an increased burden on the home regulator to interface with all host regulators for internationally active banks and to establish appropriate working conventions. In particular, the solution to the home-host issue should not legitimize access by host regulators to home information, as this may make available to hosts a lot of sensitive information about matters well outside their jurisdiction and interests, as historically defined. We are particularly concerned that the unique requirements of local regulators will create a significant burden for Citigroup and other global banks of unnecessary and duplicative incremental costs.

Question #46
AMA Capital Calculation

Does the broad structure that the Agencies have outlined incorporate all the key elements that should be factored into the operational risk framework for regulatory capital? If not, what other issues should be addressed? Are any elements included not directly relevant for operational risk measurement or management? The Agencies have not included indirect losses (for example, opportunity costs) in the definition of operational risk against which institutions would have to hold capital; because such losses can be substantial, should they be included in the definition of operational risk?

- Citigroup welcomes the general approach outlined in this section, though there are a number of points about which we have concerns that will be raised elsewhere in this response to the ANPR and in our companion comments on the Supervisory Guidance on Operational Risk Advanced Measurement Approaches for Operational Risk (AMA guidance).

- We agree that indirect losses could be substantial, but agree with the definition put forth because the operational risk charge in Pillar 1 should be based only on direct losses. Indirect losses such as opportunity costs are not only difficult to measure, but also generally not relevant to the current period's solvency. Opportunity costs will materialize in the future, and will in most cases be partially or fully offset by

management actions including for example steps to reduce costs as future revenues are not generated. If an event were to damage our franchise, and our future revenues, we likely would be unable to assess the net cost of the foregone revenue with a degree of accuracy that would merit capturing that element of the effect in our historical loss database. Consequently, we believe that the more intangible risks, such as reputational and franchise risk, should be regarded as part of the operational risk to be managed. We do not believe that an operational risk capital requirement should be levied against them.

Question #47
AMA - Overview of Supervisory Criteria

The Agencies seek comment on the extent to which an appropriate balance has been struck between flexibility and comparability for the operational risk requirement. If this balance is not appropriate, what are the specific areas of imbalance and what is the potential impact of the identified imbalance?

The Agencies are considering additional measures to facilitate consistency in both the supervisory assessment of AMA frameworks and the enforcement of AIVL4 standards across institutions. Specifically, the Agencies are considering enhancements to existing interagency operational and managerial standards to directly address operational risk and to articulate supervisory expectations for AMA frameworks. The Agencies seek comment on the need for and effectiveness of these additional measures.

The Agencies also seek comment on the supervisory standards. Do the standards cover the key elements of an operational risk framework?

- We are in agreement that the standards should cover both quantitative and qualitative components, though we also seek clarification of some elements of the rules. Given the judgment that will need to be applied in approving an AMA model, we urge quite strongly the regulatory community to provide clear guidance about the qualifying criteria and standards.

- We welcome the revised language that states that it is the analytical framework that incorporates internal operational loss event data, relevant external loss event data, assessments of the business environment and internal control factors and scenario analysis. The relative weight placed on these four elements will vary from institution to institution, thereby requiring a considerable degree of flexibility in approach. At a more fundamental level, the calculation of capital may well be done by the institution's line of business, which does not necessarily map one to one to the Basel line of business.

- Further detailed comments may be found in the second part of this response, which addresses the AMA Guidance.

Question #48
AMA-Corporate Governance

The Agencies are introducing the concept of an operational risk management function, while emphasizing the importance of the roles played by the board, management, lines of business, and audit. Are the responsibilities delineated for each of these functions sufficiently clear and would they result in a satisfactory process for managing the operational risk framework?

- We are in general agreement with the concept that there should be an independent firm-wide operational risk management function, and an independent review by Audit and Risk Review. However, we believe that the business units themselves are responsible for managing their own operational risk.

Question #49
Elements of an AMA Framework

The Agencies seek comment on the reasonableness of the criteria for recognition of risk mitigants in reducing an institution ~ operational risk exposure. In particular, do the criteria allow for recognition of common insurance policies? If not, what criteria is most binding against current insurance products? Other than insurance, are there additional risk mitigation products that should be considered for operational risk?

- The main problem with the recognition of current insurance policies is the requirement to have a maturity of one year in order to obtain full recognition. Clearly this dramatically reduces the effectiveness of annual policies renewed annually.

- We understand that the insurance industry is trying to develop other products that may perform a similar function - for example, a product that addresses the balance sheet rather than the profit & loss statement. We foresee the development of new derivative instruments. Catastrophe bonds are an example. In addition, risk can be mitigated by the outsourcing of certain functions to firms with substantially more expertise in the relevant area. The wording should be such that these products and approaches could be incorporated at some future date.

- Although this question is aimed at insurance, there are other elements of the AMA framework discussed in this section that we feel are worthy of comment. In particular, we are very supportive of the suggestion that an expected loss offset could be recognized. However, the paper then proceeds to largely nullify that component on practical grounds. Clearly there should be recognition of any reserves that are permitted by current accounting standards, but this is by no means sufficient. In some instances, we do rely on budgeting for future losses, which could be shown to be reliably covered by future margin income.

- We request clarification in the rules that the terms "measure and account for its EL exposure" will include standard business practices, such as pricing, and not be limited to accounting "reserves". Significant flexibility to demonstrate that expected losses are covered by business practices should be available for operational risk.

- Direct calculation of specific risk results at a 99.9% confidence level, with a high degree of accuracy, will not be possible for most business lines, given the available data. We request clarification that the regulatory standards will reflect the practical necessity to generate results at lower confidence levels which can then be scaled to a higher target confidence level using an estimated scaling variable.

Question #50
Disclosure Requirements

The Agencies seek comment on the feasibility of such an approach to the disclosure of pertinent information and also whether commenters have any other suggestions regarding how best to present the required disclosures.

- As we stated in our response letter to the Basel Committee regarding CP3, we are encouraged by the fact that the Committee has reflected many of the comments provided by Citigroup and other banking organizations in the CP3 round of proposed mandatory disclosures ("the Pillar 3 disclosures"). As a result, the Pillar 3 disclosures are significantly improved, more streamlined, and (compared to the prior versions) more feasible from a cost/benefit perspective (for example, by allowing management's methods for measuring the interest rate risk in the Banking Book). Nevertheless, the remaining disclosures represent a significant increase in reporting burden on banking organizations -- even for those organizations that currently provide much of this data -- which should not be underestimated and which we urge the Agencies and the Basel Committee to address by means of the following positive steps.

- In particular, we urge the Agencies to convince the Committee to withdraw from the final rule the proposals in Table 6, item (g) for quantitative disclosures of estimated versus actual credit risk statistics and, if later deemed necessary, to put them out for public comment as part of a post-implementation review process. We strongly believe that it is premature and inappropriate at this time to include in final rules these requirements in item (g), even though the Agencies / Committee have correctly perceived the difficulty of complying with the proposed disclosures and allowed an extended phase-in period until Year End 2008. We believe there is no valid reason to formulate these requirements until banks and supervisors have learned from actual implementation experience whether this data is meaningful in the context and format of public disclosure. (For further discussion of this and other specific concerns with Pillar 3 Disclosures, see end of this section.)

- Separately, we applaud the decision to only require Pillar 3 disclosures at the top consolidated level and we furthermore urge the Agencies to adopt a policy that would forego requirement of the full set of data at a subsidiary bank level (other than certain

key information such as capital ratios, or other data currently reported in banking Agency filings). Absent this approach, the conflict of home country / host country supervision will be exacerbated.

- We are disappointed that the Agencies propose quarterly reporting of the full set of Pillar 3 Disclosures. This would place U.S. banks at a competitive disadvantage to their international counterparts, as the Basel Committee would only require semi-annual reporting of disclosure data. We believe that annual, not semi-annual or quarterly, disclosure for most of this information is adequate unless there is a material change that makes year-end data misleading. In that case, the bank would have an obligation to provide an update at the next interim period, e.g. calendar quarter-end reporting dates for U.S. banking organizations, for the particular subset of data. If the Agencies nevertheless pursue a more frequent reporting basis, the related reporting deadlines for supplemental data should be extended at least 10 business days after the filing date of the FR Y-9C.

- Citigroup opposes the Pillar 3 disclosure of the operational risk charge before and after any reduction in capital resulting from insurance. The disclosures would be misleading in those cases where the cap on recognition of insurance benefits is in effect. Such disclosure could be harmful to our economic interests when negotiating premiums with our insurance providers. Additionally, we note that similar disclosure requirements for Credit Risk Mitigation and Securitizations were eliminated in CP3.

- Additionally, we are disappointed that the Basel Committee did not significantly rollback its highly specific proposals in favor of internal economic capital disclosures, which could help to dispel the burden and excessive detail of the Pillar 3 disclosures. As stated in our letter of February 14, 2003 to the Basel Committee and forwarded to the Agencies, we believe that, ultimately, investors and other interested parties should focus on the internal assessment of the banking organization's economic risk (i.e., economic capital), the assumptions and methods underlying the assessment of economic risk, the ways in which assumptions and methods are validated and the overall level of the banking organization's economic capital compared with its total capital. Public disclosure of economic capital methodologies and requirements will provide more value to investors and other interested parties. Therefore, a more meaningful disclosure would be the level of economic capital that a banking organization's own internal assessments require for credit risk, market risk, operational risk, interest rate risk in the banking book and other risks that are relevant to that organization. Such disclosure may include a general description of modeling assumptions for each significant business activity, as well as the amount of economic capital utilization of each significant business.

- Finally, the Agencies and the Committee should adopt the general principal that Pillar 3 disclosures should be subject to an iterative, flexible modification process that will acknowledge evolving best practices over time, rather than "hard wire" all data requirements upfront. The logical extension of this principal could be the scaling back of the proposed CP3 disclosures to a subset of key disclosures, or the establishment of general principals with voluntary adoption of a revised set of CP3

disclosures. The Agencies and the Committee should consider that the current Pillar 3 disclosures are aimed at sophisticated, expert users of financial data and will likely overwhelm, and potentially mislead, ordinary investors.

Comments are requested on whether the Agencies' description of the required formal disclosure policy is adequate, or whether additional guidance would be useful.

- No specific comments.

Comments are requested regarding whether any of the information sought by the Agencies to be disclosed raises any particular concerns regarding the disclosure of proprietary or confidential information. If a commenter believes certain of the required information would be proprietary or confidential, the Agencies seek comment on why that is so and alternatives that would meet the objectives of the required disclosure.

- We re-iterate our long-held concern that the proposed disclosures could result in presentation of proprietary information that is not in the best interests of banking organizations to divulge. Therefore, we support the inclusion of the statement on proprietary and confidential information in paragraph 7 of CP3; however, we are concerned that the proposed standard may be too high insofar as it anticipates "exceptional cases" only. For the sake of international consistency, indicative criteria should be developed.

- As discussed in our comment on Paragraph 774 below, we are concerned that a detailed breakdown of allowances by industry type could result in the disclosure of sensitive and/or confidential information that could impact banking organization's negotiations with debtors or others. However, it is difficult to predict in advance all data that would trigger confidentiality issues. Nevertheless, our experience leads us to believe that the proposed increase in "granularity" alone is likely to cause specific business strategies to be revealed to competitors at certain key points in time. Therefore, we believe it is reasonable and fair to expect to use the proprietary and confidential exemption for information that is supplemental to current U.S. regulatory disclosures.

The Agencies also seek comment regarding the most efficient means for institutions to meet the disclosure requirements. Specifically, the Agencies are interested in comments about the feasibility of requiring institutions to provide all requested information in one location and also whether commenters have other suggestions on how to ensure that the requested information is readily available to market participants.

- Placement of the required disclosures should not be mandated. For example, the suggestion in the ANPR that all data be in one location is burdensome and not practicable. Rather, a flexible evolution by practitioners should be allowed. We believe that only a minimum requirement should be established calling for a single location on the banking organization's public internet website that would provide data not elsewhere provided by the banking organization, along with a cross reference to the location of other required disclosures as found in the SEC filings (10-Ks, 10-Qs,

etc.) and U.S. bank regulatory filings (FR Y-9C reports). To address issues of access, a notice similar to that for the bank Call Reports could be posted at all bank branches open to the public with contact information for obtaining copies of the supplemental reports for interested parties without Internet access.

Additional Specific Concerns with Pillar 3 Disclosures

- **Paragraph 774, Table 4 - Credit risk: general disclosures for all banks**

- Item (b): The requirement for "gross" credit risk exposures, which footnote 118 states may be after "accounting offsets" but without taking into account the effects of credit risk mitigation techniques (e.g., collateral and netting), should be clarified to allow for accounting offsets under the particular national jurisdiction's accounting regime. For example, in the U.S. the "gross" amount would reflect offsets in accordance with FASB Interpretation Nos. 39 and 41 and such other rules as issued from time to time.

- Items (f) and (g): The requirements for breakouts of specific and general allowances by major industry or counterparty type, and for the amounts of impaired loans and past due loans broken down by significant geographic areas including the related specific and general allowances (if practical) are not clear and could prove to be more complex than the Committee anticipates, as well as non-comparable among banking organizations given the differences in methods used across national jurisdictions. Additionally, we are concerned that a detailed breakdown of allowances by industry type could result in the disclosure of sensitive and/or confidential information that could impact banking organization's negotiations with debtors or others. For all of these reasons, the Committee should consider eliminating this requirement. Failing that, the Committee should provide clarifying guidance and/or examples.

- **Paragraph 775, Table 6, item (g) - Banks' estimates against actual outcomes of credit risk**

- This proposal should be eliminated from the final rule, as discussed above in our general comments. An independent assessment of the validity of inputs to the Pillar 1 calculations should be part of Pillar 2 (Supervisory Review) and not placed upon investors. Investors do not demand this data. Yet this would cause an immense reporting burden, including the related explanations to non-expert readers of financial reports. As explained in detail in our letter of February 14, 2003 to the Basel Committee and forwarded to the Agencies, there are fundamental technical problems imbedded in these disclosures (e.g., the fact that annual rates may reasonably differ from long term rates and there is likely to be significant non-comparability among banks).

- Furthermore, if the Basel Committee decides not to follow our recommendation to prohibit national supervisors from requiring Pillar 3 Disclosures at the subsidiary bank level, there would be a significant reporting burden associated with this disclosure, particularly if the basis required by the host supervisor of the subsidiary

bank were different from the basis required by the home country supervisor at the top consolidated level.

- Finally, banking organizations are rightly concerned about the pro-cyclical impact on their own organizations if such data were misinterpreted, leading to the wrong conclusion about the bank by users of the financial reports, depositors and investors.

- **Paragraph 775, Footnote 138 – Risk assessment of retail portfolios**

- The bias stated in footnote 138 that banks would normally be expected to follow the disclosures provided for the non-retail portfolios should be withdrawn from the final rule. It is customary to use other methods for retail portfolios therefore the Agencies and the Committee should not inhibit experimentation or evolution by promoting the PD/LGD approach through disclosure rules.

Document 2: Draft supervisory guidance on Operational Risk Advanced Measurement Approaches for Regulatory Capital

The comments to this paper are indexed to the numbering of the standards in the document.

S 1. The institution's operational risk framework must include an independent firm wide operational risk management function, line of business management oversight, and independent testing and verification functions.

Clarification of the role of the independent testing and verification functions is required. Our Operational risk framework is reviewed by our independent Audit and Risk Review (ARR) organization. However, testing of controls within each business, as prescribed by our Risk and Control Self-Assessment standards, is performed by individuals within the business. We consider this to be appropriate because the businesses are ultimately responsible for managing and controlling their operational risks.

S 2. The board of directors must oversee the development of the firm-wide operational risk framework, as well as major changes to the framework. Management roles and accountability must be clearly established.

S 3. The board of directors and management must ensure that appropriate resources are allocated to support the operational risk framework.

The Board of Directors does have an important role in reviewing Citigroup's Operational Risk, however, roles such as resource allocation are more appropriately executed by senior management, rather than the Board.

S 4. The institution must have an independent operational risk management function that is responsible for overseeing the operational risk framework at the firm level to ensure the development and consistent application of operational risk policies, processes, and procedures throughout the institution.

S 5. The firm-wide operational risk management function must ensure appropriate reporting of operational risk exposures and loss data to the board of directors and senior management.

The wording of these standards has been improved substantially and now represents an appropriate division of responsibilities – in particular, the term "framework" describes the role as we have implemented it. With this change, we now feel that this is one area in which we are already well positioned.

S 6. Line of business management is responsible for the day-to-day management of operational risk within each business unit.

S 7. Line of business management must ensure that internal controls and practices within their line of business are consistent with firm-wide policies and procedures to support the management and measurement of the institution's operational risk.

Again, we support the division of responsibilities as being a suitable basis on which to organise the operational risk management function.

S 8. The institution must have policies and procedures that clearly describe the major elements of the operational risk management framework, including identifying, measuring, monitoring, and controlling operational risk.

We have no fundamental disagreement with any of the aspects of the operational risk management framework that is listed under this standard. We would only comment that if the external data comes from a consortium comprising a fairly small number of banks, it is quite probable that this external loss data may well not include any large potential events. Useful coverage of large events is more likely if the external data comes from a database of large public loss events. The two types of external data have rather different uses.

S 9. Operational risk management reports must address both firm wide and line of business results. These reports must summarize operational risk exposure, loss experience, relevant business environment and internal control assessments, and must be produced no less often than quarterly.

S 10. Operational risk reports must also be provided periodically to senior management and the board of directors, summarizing relevant firm-wide operational risk information.

This is work in progress. We are confident that the result will be that we meet the required standards for reporting.

S 11. An institution's internal control structure must meet or exceed minimum regulatory standards established by the Agencies.

S 12. The institution must demonstrate that it has appropriate internal loss event data, relevant external loss event data, assessments of business environment and internal controls factors, and results from scenario analysis to support its operational risk management and measurement framework.

S 13. The institution must include the regulatory definition of operational risk as the baseline for capturing the elements of the AMA framework and determining its operational risk exposure.

S 14. The institution must have clear standards for the collection and modification of the elements of the operational risk AMA framework.

The four elements of the AMA framework will play a significant role in both the management and measurement of operational. We object to the requirement that any risk measurement system must include the use of all four elements - internal data, relevant external data, scenario analysis and factors reflecting the business environment and internal control systems. Certainly, each of these elements is well worth considering as part of the management framework, but a requirement to include all of them in the quantitative measurement may be excessively burdensome. Consider a business that has an internal data set that is sufficient for modeling the risk using an allowable AMA methodology. Such a business should be permitted to proceed without using external data. Similarly, scenario analysis might be an appropriate way to evaluate the results of an AMA model for some business lines, but should not be a required element in every AMA calculation.

To reiterate, only some of these elements may be appropriate for the measurement of the operational risk of a given business unit, though all the elements should be considered in the management of that operational risk.

The significant use of overrides for internal loss data should not be required, other than to correct input errors. However, if external data is used, then there may be many events in the external database that are simply not relevant. Since only relevant external events are required, this could lead to a significant workload to decide and document exactly which events are relevant and which are not.

S 15. The institution must have at least five years of internal operational risk loss data captured across all material business lines, events, product types, and geographic locations.

Initially, less than five years worth of data will be available at the time that the accord is scheduled to become effective. The flexibility described in footnote 12 is essential.

S 16. The institution must be able to map internal operational risk losses to the seven loss-event type categories.

S 17. The institution must have a policy that identifies when an operational risk loss becomes a loss event and must be added to the loss event database. The policy must provide for consistent treatment across the institution.

S 18. The institution must establish appropriate operational risk data thresholds.

S 19. Losses that have any characteristics of credit risk, including fraud-related credit losses, must be treated as credit risk for regulatory capital purposes. The institution must have a clear policy that allows for the consistent treatment of loss event classifications (e.g., credit, market, or operational risk) across the organization.

We opposed the specification in CP3 of a loss data collection threshold because we believed that the threshold should be established by line of business at a level that would be appropriate for the quantification methodology being use there. Thus we particularly welcome the flexibility that the Agencies have incorporated in that we will have the ability to use different data thresholds in different businesses. However, we are concerned that this flexibility will not benefit our card business, for example, which can be typified as having a large number of small losses, all similar in nature, but which in total do represent a significant proportion of the total operational risk losses. Although the number of losses and the size of the losses are already captured with precision, we do not feel that there is a need to capture the detailed information on each individual loss event.

The implication is that the quantification of operational risk will require modeling of individual events, whereas in fact other models may be more suitable for certain businesses, such as the credit card business. We request clarification that the allowable models will not be limited to those that can be considered to model individual events.

We do not see that the cost of capturing comprehensive data on "near misses" in a central database will be warranted, although it is certainly important that the business line management to be aware of significant occurrences of this type.

We do not see adequate benefit, relative to the costs, to justify capturing, in our operational loss database, information data that is already being captured and capitalized as credit or market risk. The cost of the effort to collect this data would be a burden, yet the data would not be used to calculate economic capital or regulatory capital requirements. The implementation of such a process would require resources but not produce a clear benefit where these events are already well managed, e.g., as credit risk. The definition of the regulatory boundary between operational risk and credit risk is a welcome clarification.

S 20. The institution must have policies and procedures that provide for the use of external loss data in the operational risk framework.

S 21. Management must systematically review external data to ensure an understanding of industry experience.

We particularly welcome the fact that external data no longer has to be used as an explicit input into our loss data set. In some instances, we expect to use external data only as a benchmark or perhaps as a form of scenario analysis.

S 22. The institution must have a system to identify and assess business environment and internal control factors.

S 23. Management must periodically compare the results of their business environment and internal control factor assessments against actual operational risk loss experience.

S 24. Management must have policies and procedures that identify how scenario analysis will be incorporated into the operational risk framework.

Again, we do not believe that there is always a necessity to incorporate scenario analysis into the measurement of operational risk regulatory capital. In some instances, scenario analysis is more appropriately used in the management of operational risk, for example to investigate whether the response to certain scenarios would be appropriate. We understand that, by using the term "framework" in this standard, such a use would be acceptable to ensure compliance with this standard.

S 25. The institution must have a comprehensive operational risk analytical framework that provides an estimate of the institution's operational risk exposure, which is the aggregate operational loss that it faces over a one-year period at a soundness standard consistent with a 99.9 per cent confidence level.

S 26. Management must document the rationale for all assumptions underpinning its chosen analytical framework, including the choice of inputs, distributional assumptions, and the weighting across qualitative and quantitative elements. Management must also document and justify any subsequent changes to these assumptions.

S 27. The institution's operational risk analytical framework must use a combination of internal operational loss event data, relevant external operational loss event data, business environment and internal control factor assessments, and scenario analysis. The institution must combine these elements in a manner that most effectively enables it to quantify its operational risk exposure. The institution can choose the analytical framework that is most appropriate to its business model.

S 28. The institution's capital requirement for operational risk will be the sum of expected and unexpected losses unless the institution can demonstrate, consistent with supervisory standards, the expected loss offset.

It should be recognized that direct calculation of specific risk results at a 99.9% confidence level will not be possible for most business lines, given the available data. Any such calculation will be subject to significant errors. We request clarification that the regulatory standards will reflect the practical necessity to generate results at lower confidence levels which can then be scaled to a higher target confidence level using an estimated scaling variable.

We very much doubt that the comparison of the exposure estimate with actual loss experience will enable us to prove that that the outputs are reasonable. The model is intended to produce a figure that could occur once every thousand years. Statistically speaking, it is unlikely that a few years or even a few decades will be sufficient time to make such a validation, so judgment will need to be employed in the process for approval of the AMA model.

The inclusion of Expected Losses in the capital requirements will result in punitive capital requirements in higher Expected Loss businesses such as credit cards and some consumer lending, without taking into account the fact that such businesses have fairly stable losses and therefore are less volatile. The same fundamental issues apply to a broader set of businesses in the context of Operational Risk where Expected Losses are routinely built into pricing. The document states that an institution will not be permitted to recognize EL offsets on budgeted loss contingencies that fall below the established data thresholds, and that this is relevant as many institutions currently budget for low severity, high frequency events that are more likely to fall below most institutions' thresholds. Indeed, this is exactly the case for some of our consumer businesses, where individual losses are small and below the threshold, yet gross losses are high and fairly stable and covered by future margin income. We strongly oppose this guidance. We regard it as critically important that such expected losses be recognized, and that we are not required to cover such losses twice, once through reserves or pricing, and once through capital and that we are not required to capture details individually about these small losses.

S 29. Management must document how its chosen analytical framework accounts for dependence (e.g., correlations) among operational losses across and within business lines. The institution must demonstrate that its explicit and embedded dependence assumptions are appropriate, and where dependence assumptions are uncertain, the institution must use conservative estimates.

Diversification does reduce overall risk levels and Citigroup believes that the AMA must include the opportunity to capture the risk-reducing benefits of diversification and efficiencies of scale. Although correlation of operational risks is certainly less than perfect, empirical data to demonstrate this mathematically will always remain scarce. Therefore, we welcome the new language in this standard and trust that we can demonstrate appropriateness without having to demonstrate validity.

However, this does raise the difficult issue of diversification. If we have a number of legal entities, each of which has to have sufficient capital to cover losses at the 99.9 % confidence level, then the total corporation will be carrying capital sufficient to cover losses at an excessively high confidence level. We see that this could be a sufficiently large problem to impede the use of the AMA altogether. Subsidiary legal vehicles might not warrant the complexity of an AMA, and there might be no point in having an AMA at the group level if the capital requirement at that level is simply the sum of the capital requirements at the lowest level. A solution that addresses the issue of diversification is required.

S 30. Institutions may reduce their operational risk exposure results by no more than 20% to reflect the impact of risk mitigants. Institutions must demonstrate that mitigation products are sufficiently capital-like to warrant inclusion in the adjustment to the operational risk exposure.

In principle, we object to floors and caps and welcome their elimination over time, including the 20% limit on insurance-related capital benefits. The recognition of risk mitigation is welcome, but should be expanded beyond insurance in due course, as we believe is implied in this ANPR. However, we favor an initial increase in the amount of the cap above 20%, followed by its eventual elimination.

It is not sound from an economic perspective to deny both the benefits of using a captive insurance company and the consolidation of their capital. If the risk has to be passed through the captive insurer, then the capital of that insurer should be recognized. The approach should be changed so that the capital in the captive is recognized as available to cover firm risks. The current draft denies most of the benefits of using a captive insurer, while on the other hand it restricts the recognition of the capital held in that insurer.

S 31. Institutions using the AMA approach for regulatory capital purposes must use advanced data management practices to produce credible and reliable operational risk estimates.

S 32. The institution must test and verify the accuracy and appropriateness of the operational risk framework and results.

S 33. Testing and verification must be done independently of the firm-wide operational risk management function and the institution's lines of business.

This again raises the question of exactly what is meant by independence, which was discussed earlier.

Document 3: Draft supervisory guidance on Internal Ratings –Based Systems for Corporate Credit

In general, we find the Draft Guidance to be highly prescriptive for the corporate credit rating systems of Advanced Banks. These prescriptions could lead to "less-than-best practice" rating systems, multiple ratings systems, onerous processes and in some cases, may introduce systemic risk into the banking system. At times, the Draft Guidance appeared to be written with extreme focus on each section but with minimal appreciation of how all of the sections would work together. In addition, some of the key points appear to be drawn from evidence based on bond defaults, which can vary significantly from outcomes in the loan segment. There are other indications that the guidelines are meant to apply mainly to banks that operate only within North America and/or Europe, where rating agency data is more relevant, where external benchmarks are available and where single business cycles can be applied. These conditions do not apply to a global bank such as Citigroup, which operates in over 100 countries.

- **Best Practice vs. Conservatism:** Although one of the stated requirements is that the "(r)atings used for regulatory capital must be the same ratings used to guide day-to-day credit risk management activities", the Guidance simultaneously states "Parameter estimates must incorporate a degree of conservatism that is appropriate for the overall robustness of the quantification process" and "the bank must adjust estimates conservatively in the presence of uncertainty or potential error". We could not find any delineation of how a bank is to square the standard of adhering to internal credit risk management with the proscriptive rules on "conservatism". Clearly, any type of modeling of credit risk involves a degree of uncertainty, given the relative rarity of default. Adjusting all the parameters conservatively, as well as following the prescriptions listed below will result in overly conservative ratings, rather than best estimates of the risk, affecting our ability to compete in the marketplace (where we compete against many different intermediaries, many of whom do not fall under these regulations):

    - The prohibition against the use of joint default probabilities despite recognition of the favorable risk-mitigation effect.
    - The prohibition against implied support or verbal assurances, even in the presence of supporting empirical evidence.
    - The prohibition against LGDs of zero. Our empirical studies indicate that LGDs of zero are relatively frequent and, in some cases we actually have found negative LGDs. For instance, trade loans guaranteed by the Exim Bank, where the guarantee covers any interest drag during the 6-month filing period.
    - The required reliance on stressed PDs. As such, the risk measures move away from the most probable estimates of individual obligor defaults toward the worst case scenarios, no longer producing a good measure of expected loss of an obligor or of the economic risk for a global portfolio. A measure of economic capital for corporate credit risk that was based on stressed PDs for all obligors in all the industries and countries around the world we operate in

would materially exaggerate our risks. With regard to the PDs, the ANPR asserts that ratings must "take into account possible adverse events that might increase an obligor's likelihood of default." There is little guidance as to what is appropriate within the "possible adverse events" schema.

- Required reliance on stressed LGDs, in addition to stressed PDs: the ANPR states that loss severity ratings must "reflect losses expected during periods with a relatively high number of defaults". Although research based on bond default and recovery rates have shown a positive correlation between the total number of bond defaults in the economy within a year and the average LGD, such a relationship has not been established for loans – at least based on our own internal work (more on the reliance on bond data further on). Historically, there has been a material difference between how our bank has typically managed corporate loans after default and how defaulted bonds are treated in the market.

- **Reliance on Agency Processes and Vendor Models**
  - The guidance indicates a regulatory preference for agency practices or vendors over that of banks. The multiple requirements to map, validate and define rating practices using external ratings as benchmarks is troubling for several reasons:
    - Lack of clear ratings definitions and transparent processes at the agencies or vendors. It is unclear what validation standards are to be applied to the agencies and vendors that are consistent with requirements on the internal ratings processes of banks. In our own research, we have found agency ratings to be inconsistent across industries, for instance, in terms of implied default rates. The published studies from the agencies lack that level of granularity. Similarly, the output from some of our validated internal models varies considerably from some vendor models.
    - Rating agencies have focused on the bond markets, not on loans. For instance, the studies cited regarding the correlation on defaults and losses are generally based on an analysis of bond defaults and losses.
    - The focus and experience of rating agencies are largely limited to North America and Europe. The empirical data on ratings and recovery are heavily weighted toward these two markets. Rating agencies have limited experience and data in many markets we operate in.

  - The guidance implies a reliance on the agencies and other "third parties" for validating ratings processes without providing the standards that to which the third parties will be held. For instance, it is unclear how the supervisors would view a rating process where the conceptual practices are sound and the validation against defaults, for instance, proves quite compelling but the comparison to external ratings produces divergent outcomes.
  - The guidance places considerable importance on benchmarking, often to external agencies, however ratings vary for many reasons and, except against

actual default/loss events, it is near impossible to determine what an individual rating should be. Indeed, one supervisory standard speaks about a bank adopting and defending a ratings philosophy, but the Guidance gives overly broad definitions of two different philosophies ("through-the-cycle" and "point-in-time"). Later, though, the Guidance states "The ratings agencies are commonly believed to use through-the-cycle rating approaches." As such, requiring a convergence to agency ratings or any other external benchmark may introduce a higher degree of systemic risk.

- The guidance also states "banks will eventually be expected to use variables that are widely recognized as the most reliable predictors of default risk in mapping exercises". Who is the arbiter of "most reliable predictors" and how is "most reliable" determined? This would seem to go very much against the premise that credit risk analysis is evolving and the availability of data will allow enhancements to the current state of credit risk analysis. For instance, the guidance cites that borrower size is predictive but less so than leverage and cash flow, without citing the source of that statement. This citation seems extremely broad and sweeping. We have developed a large number of rating models for different industries and global regions based on and validated by the empirical data from that industry/region. In some of our internal modeling efforts, size proved to be the most significant determinant of credit quality. And yet, in other internal modeling efforts, we found the key determinants of credit quality and their relative importance to vary from industry to industry, market to market. We think it is inappropriate and naïve for the ANPR to assume that the relative importance of the particular input variables needed to estimate an obligor's PD is universal for all corporations, in all industries and countries of the world. Finally, this emphasis on use of widely recognized variables may introduce systematic risk into the banking system. To wit: if all banks use widely-recognized variables in their models, then banks may all move in tandem in and out of markets, heightening volatility and potentially damaging whole sectors of the economy.

- **Practical Issues for Global Banks**

  There are many processes included in the guidance, which are quite burdensome, without appearing to add significant value.

  - **Re-estimating or validating the model/process risk parameters on an annual basis:** Except for the largest markets, such as the United States, there will rarely be sufficient new defaults and resolved defaults (for LGD/EAD) to justify the re-estimation and reprogramming, testing, training and distribution of models and processes used to assign ratings. Even within the United States, there are generally few defaults within a particular industry/geography segment of a portfolio on an annual basis, much less a quarterly basis, except in the SME. On average, defaults take more than a year to resolve, so even during periods of higher-than-average defaults, the additional information would not seem to justify the required changes. Constant turnover in rating methodologies and processes could jeopardize the quality of the ratings. In addition, given that the Guidance states a minimum of five years of reference

data, which must include periods of economic stress to estimate PDs, re-estimating or validating year after year during an economic expansion may dilute the stressed periods' data and weaken a model's ability to accurately assess risks when a downturn occurs.

- **Re-rating the portfolio for each change to the rating process:** In addition, the process becomes even more onerous with the requirement to re-rate the entire portfolio every time a rating process changes. It is possible to re-rate a portfolio to the degree that all inputs into a rating are quantifiable. However, a system that relies both on models and expertise is difficult to replicate. The risk manager may not apply the same adjustment to a rating once the model changes.
- **Gauging impact of changes in actual economic circumstances on PDs and LGDs:** This guidance may seem relatively straightforward for a bank operating in a single or relatively few markets. However, in building models or establishing LGDs that cover multiple countries, economic cycles often diverge or are not easily identifiable.
- **Calibrate models to fit customer base:** We request more information on this requirement. This requirement could become very burdensome for a large global bank where the portfolios change rapidly. Our goal is to build models, for instance, that are appropriate for rating across the credit spectrum, even if all of the current customer base are rated investment grade. Models built on one industry or geography can be tested for ratings accuracy on other customers, assuming that the concepts are sound for the other business. If for instance, a rating model is built on corporates in Eastern Europe and due to an acquisition in Poland, companies from that country become more prevalent in the portfolio, is the existing model invalid? If the acquired bank did not have 5 years of data on the customers, should the model be recalibrated?
- **Comparability of reference data to current credit portfolio:** As above, more clarification is requested, as well as some examples of how to establish that comparability.
- **Potential Erosion of Comparative Advantage:** We need to understand the exact nature of what would be disclosed in "Summaries of (trends developed from obligor and facility risk rating data)...included...public disclosures."

- **Appropriate Control and Oversight Mechanisms.** In contrast to market risk, the guidance requires an additional level of internal review of ratings and all ratings processes, models, and data aside from Audit and regulatory oversight. For banks where the responsibilities are already distributed across independent risk functions, this additional level of review is superfluous, expensive and bureaucratic.

    - While we believe in independent oversight, the prescripts found in the Control and Oversight sections is inconsistent, impractical, and contradicts current best practices in the industry, and as outlined by the Agency's own on-site supervisory staff. In fact, the guidance is internally inconsistent and arbitrary—for example section 213 describes 'flexibility' while table 4.1

mandates the creation of a 'ratings system review' area. We ask the Agencies to reconsider their approach in its entirety.

- We are concerned that the Agencies, in spite of their good intentions, are shockingly naïve in their underlying premise regarding how a bank typically operates effectively. In sections 215-216 and 220, two very different institutions are described (one with independent model-based ratings development groups vs. one without), but in BOTH circumstances a separate ratings review function is necessary. In the latter case, we agree. In the former case, we completely disagree; the prescribed role is typically performed by the 'loan review group' that is often found in Internal Audit. In this situation, there are lending officers that have only modest discretion to adjust ratings, there is an independent ratings-setting group that reports to independent risk management, and there is Internal Audit/Loan Review.

- For banking institutions that primarily use models to assign ratings, only two independent organizational units are necessary to create the 'checks and balances'—an Independent Ratings Group and Internal Audit's Loan Review Group. A 'Ratings Review Group' as described in Table 4.2 in the text is completely superfluous. Specifically, all responsibilities are already accounted for in an organization such as ours:

Responsibility—per Table 4.2	**Group Responsible**
Design of ratings systems	Independent Ratings Group
Compliance with policies	Audit/Loan Review
Check risk rating grades	Audit/Loan Review
Consistency across industries	Indep Ratings Group and Audit/Loan Review
Model development	Audit/Loan Review
Model use	Audit/Loan Review
Overrides and policy exceptions	Audit/Loan Review
Quantification process	Independent Ratings Group
Back testing	Audit/Loan Review
Actual and predicted ratings trans.	[meaning is unclear]
Benchmarking	Independent Ratings Group
Adequacy of data maintenance	Audit/Loan Review
Identify errors and flaws	[meaning is unclear]
Recommend corrective actions	Audit/Loan Review

- The agencies fail to realize that when a Ratings Group reports to independent risk management, they have no incentive to sacrifice ratings accuracy for sales and marketing purposes. In fact, just the opposite is true: the ethos that develops in such a group is one of economic logic, empirical facts, thoughtful modeling, which is the best 'check and balance' against the influence of sales and marketing. And then Audit/Loan Review creates even more independence.

- The Ratings system oversight suggested by the guidance is impractical and obfuscates the role of management. The risk-rating system can best be

understood by practitioners, and not by directors who will be unable to understand the data and detail inherent in this task.