



October 20, 2003

National City Corporation  
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Jeffrey D. Kelly  
Executive Vice President  
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Office of the Comptroller of the Currency  
Public Information Room, Mail stop 1-5  
Attention: Docket No. 03-14  
250 E Street, SW  
Washington, D.C. 20219

Ms. Jennifer J. Johnson, Secretary  
Board of Governors of the Federal Reserve System  
Docket No. R-1154  
20<sup>th</sup> Street and Constitution Avenue, NW  
Washington, D.C. 20551

Robert E. Feldman, Executive Secretary  
Attention: Comments  
Federal Deposit Insurance Corporation  
550 17<sup>th</sup> Street, NW  
Washington, D.C. 20429

**Re: Risk-Based Capital Guidelines; Implementation of New Basel Capital Accord  
Advanced Notice of Proposed Rulemaking (ANPR)**

Dear Messrs. and Mmes.:

National City Corporation (National City) appreciates the opportunity to comment on the subject ANPR. Founded over 150 years ago and headquartered in Cleveland, Ohio, National City is one of the nation's largest financial holding companies, holding assets of more than \$121 billion. We operate through an extensive bank distribution network in Illinois, Indiana, Kentucky, Michigan, Ohio and Pennsylvania and conduct selected consumer lending businesses and other financial services on a nationwide basis. Our primary businesses include commercial and retail banking, consumer finance, asset management, mortgage financing and servicing and payment processing.

Our comments address the proposed framework for implementing the New Basel Capital Accord (The New Accord) in the United States, and highlight our views with respect to elements of the Advanced Internal Ratings-Based approach for credit risk relative to loan loss provisions, treatment of guarantees and treatment for credit derivative hedges. This letter also accentuates National City's concerns with the underlying rules as presented by the Basel Committee on Banking Supervision most recently in the Third Consultative Paper (CP3) on The New Accord.

In principle National City supports The New Accord, but finds that The New Accord provides for a framework that is:

- overly complex and potentially inflexible, and which will be costly to implement. It appears to be mechanical in approach without the requisite human judgment that should be exercised.
- creates an unlevel playing field for Basel Banks, Non-Basel Banks, and Non Bank competitors.
- potentially could result in negative impacts on certain types of lending and securitizations which although prudent and necessary may be accorded a higher risk weighting than necessary (i.e. Community Reinvestment Act lending).
- contains Operational Risk calculation models that are not sufficiently tested to assure in all instances they will operate correctly. Further testing and analysis is needed and a separate timetable for implementation should be considered.
- creates disclosure requirements that may not take into account the requirements of The Sarbanes Oxley Act and other applicable laws. The quality and clarity of disclosure should be stressed over the quantity of disclosure.

To assist you the attached comments are formatted to generally track the outline provided in the subject document. For clarity, selected questions drawn from the ANPR (highlighted in blue font) precede our comments. Where appropriate, we have provided certain supporting data and analysis as attachments to this letter.

We trust that our responses and input will provide you with the information necessary to facilitate the further development of The New Accord and its implementation in the United States. Ultimately, it is our desire to see the new capital rules become an effective and efficient arrangement to ensure banks are adequately capitalized while allowing banks to benefit from the expected lower capital levels that will result from a more risk sensitive regulatory capital framework.

Should you want to discuss our comments in greater detail, we invite you to contact Don H. Smith at (216) 222-9720, email: [don.smith@nationalcity.com](mailto:don.smith@nationalcity.com), or John L. Johnson at (216) 222-2384, email: [john.johnson@nationalcity.com](mailto:john.johnson@nationalcity.com).

Sincerely,

A handwritten signature in black ink that reads "Jeffrey D. Kelly". The signature is written in a cursive, flowing style.

Jeffrey D. Kelly  
Executive Vice-President and  
Chief Financial Officer

Copied to: Sandra Pianto  
President and Chief Executive Officer  
Federal Reserve Bank of Cleveland

Deeann Beatty  
Supervisory Examiner  
Banking Supervision and Regulation Department  
Federal Reserve Bank of Cleveland

L. Rodney Burgett  
Examiner In Charge  
Office of the Comptroller of the Currency  
c/o National City Bank

**Contents: Comments and Appendices**

Responses to questions from The Executive Summary.....5

Application of the Advanced Approaches in the United States.....6

Advanced Internal Ratings-Based (A-IRB) Approach.....7

Securitization.....12

AMA Framework for Operational Risk.....14

Disclosure.....16

Regulatory Analysis.....16

Appendix 1: On Loan Loss Provisions in the New Basel Accord.....18

Appendix 2: Treatment of Guarantees in the New Basel Accord.....24

Appendix 3: Alternative Capital Treatment for Credit Derivative Hedges.....34

## **The Executive Summary – ANPR Pages 14 - 15**

What are commenters' views on the relative pros and cons of a bifurcated regulatory capital framework versus a single regulatory capital 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 capital framework that is not risk sensitive?

- **Bifurcated regulatory framework:** It is difficult to predict the impact of a bifurcated framework before the rules making process is complete. However, it is fair to presume that if the final rules for the New Accord reinforce requirements to treat common risks equally across institutions (i.e. core, opt-in and general banks), then bifurcation will not cause more or less consolidation in the industry. If instead, a framework is created that so favors the core and opt-in banks as to leave some general banks acutely, relative to other banks, short of capital (i.e. with limited means to raise or attract new capital), then consolidation will certainly occur.

The potential impact to community and mid-sized banks is the creation of a non-competitive, un-level “playing-field” in markets that overlap with the core group. General banks could find themselves less able to price products competitively and to react quickly to market induced pressure to optimize their allocation of capital. These institutions will be compelled to opt-in to the advanced approaches (assuming it is not cost prohibitive). If they choose not to opt-in, then they may find themselves competing only for the least profitable business, and this scenario will eventually lead to consolidation in the industry.

If regulatory minimum capital requirements declined under the advanced approaches, would the dollar amount of capital held by advanced approach banking organizations 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 (for example, 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?

- **Declining regulatory minimum capital with A-IRB:** The primary reason for adopting The New Accord and it's advanced approaches is to more closely align capital with the underlying economic risks faced by institutions. For general banks, this is the overwhelming reason to opt-in. Assuming the issues discussed later in our comments are adequately addressed, core and opt-in banks will be persuaded to use the new capital framework in anticipation of receiving the rewards that “allows” capital to seek its lowest level consistent with regulatory needs, current risk profile and the institutions' growth opportunities.

Another possibility exists for institutions that choose not to “release” excess capital. If excess capital is redeployed through increased lending, trading and investing, the institution may actually increase its risk profile, but only up to acceptable levels (i.e. until excess capital is depleted).

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?

- Other regulatory capital approaches: We suggest that a principle based approach to calculating regulatory capital will be the best approach to ameliorating the competitive concerns between the core group and general banks. If Agencies will remain open to replacing the suggested rules that are overly complex and prescriptive with an appropriate internally developed models approach, then more general banks may be willing to invest in systems and processes that will allow them to determine acceptable levels of risk and how to calculate it.

The only remaining risk exposure that requires development is represented by operational risk. Except for insurance, no other market transactions exist to transfer this type of risk. Therefore, the methodologies suggested in the ANPR should continue development to arrive at an industry standard framework for measuring and calculating operational risk capital.

### **Application of the Advanced Approaches in the United States – ANPR Pages 15 - 20**

The Agencies seek comment on whether changes should be made to the existing general risk-based capital rules to enhance their 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.

- Changing existing general risk-based capital rules: We suggest that no significant changes to the general rules be made until the full implications of the new rules are known. If changes become necessary, full consideration should be given to establishing caps on the costs that would be incurred by general banks before the changes would be made mandatory.

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.

- Appropriate treatment for investments in insurance underwriting and other non-bank subsidiaries: An approach allowing excess capital from a subject subsidiary to be included as capital available to the parent is appropriate so long as the parent can then distribute the capital, as needed, throughout the organization. Likewise, excess capital at the parent should be available for use in any subsidiary in order to support ongoing business needs (e.g. expansion of insurance activities or contingent liabilities of fee businesses).

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.

- Availability of data: The availability of quality data is a major concern. This is especially true with respect to the scarcity of operational loss data. We suggest creation of a staggered implementation approach that favors a greater transition period. The transition should be tailored to correlate to the scarcity of data available to financial institutions.

### **Advanced Internal Ratings-Based (A-IRB) Approach – ANPR Pages 21 - 72**

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 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.

- Conceptual basis of the A-IRB approach: A single-factor assumption will create distortions in capital for large-regional and community banks that have market strength in specific geographic areas, and often in economic sectors. The best remedy is to permit banks to use internally designed multi-factor models to set capital.

To address the question relative to the use of statistical techniques that may be based on credit ratings by external rating agencies, we agree that this approach introduces desirable flexibility into the rating process.

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.

- Allocating capital to EL plus UL or to UL only: The assignment of capital to both EL and UL is not consistent with a VaR-based framework for estimating credit losses. In particular, the VaR framework estimates losses up to a given percentile loss (e.g. 99.9%). The loss distribution itself reflects both EL and UL. EL is the average loss implied by the distribution (i.e. first moment of the probability density function). UL are losses above the mean and below the target percentile (e.g. 99.9%). The internally consistent framework for capital allocation is one, which covers EL by FMI and provisions (both general and specific), and covers UL by capital. We describe our recommended methodology in appendix 1.

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.

- Asset correlation treatment for one to four-family residential construction loans: The decision on appropriateness and ultimately on the allocation of capital should be based on the bank’s internal models, underwriting standards and historical losses.

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 AIRB capital requirement relating to EL by demonstrating that their anticipated FMI for this sub-category is likely to more than sufficiently cover EL over the next year.

- Recognition of FMI: There has been no convincing evidence that would support such a restriction, and it fails to recognize that all banks explicitly or implicitly try to cover EL by FMI. We encourage the Agencies to expand the rules to allow, for all exposure categories, the choice to offset EL with FMI.

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?

- Risk inputs for the retail A-IRB framework: We suggest caution with the proposal to use EL to estimate PD or LGD unless rules reinforcing the use of risk characteristics like PD, LGD are specified at a pool/segment level and originate at the account level. Averaging over a suitable pool is appropriate. The exclusive use of estimates based solely on historical EL will dilute the current characteristics of any given pool, and eventually lead to distortions in assignment of capital during shifts in the economic cycle.

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 above.



The Agencies seek views on this issue, including whether the proposed U.S. 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).

- Treatment of ALLL: The proposed rules are unnecessarily complex and arbitrary, especially with respect to the “partial” allocation of ALLL in capital (1.25% limit) while simultaneously deducting the same amount from ALLL before it is offset against the EL portion of the capital requirement. The inclusion and deduction cancel out and serve only to complicate the rules and may further provide a disincentive for general banks to opt-in. We urge the Agencies to allow full offset against EL.

In appendix 1, we offer a discussion structured around a comparison of Basel I minimum capital requirements to The New Accord proposals currently under consideration. A proposal results from this discussion that Agencies are encouraged to explore as a means to develop an adequate approach to the treatment of ALLL.

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.

- Method of adjusting PD or LGD estimates for various types of guarantees: Of particular concern is that the risk weight floor appears to ignore the fact that a joint default of an obligor and a guarantor is less likely than just one of the parties defaulting. Of special note for multiple guarantors (a common practice in CRE lending), it is clear that the joint probability of default is lower than the default of a single guarantor, and the probability declines as the number of obligors rises. Such a conservative treatment, under the proposal, would tend to raise the cost of lending to smaller CRE developers and managers to such a degree as to be inconsistent with the true risk.

We suggest that the Agencies consider the comments provided in the June 10, 2003 working paper published by the Federal Reserve titled “Treatment of Double Default and Double Recovery Effects for Hedged Exposures”. In our appendix 2, we offer a more detailed discussion that draws upon this working paper and suggests a more appropriate treatment of guarantees for capital allocation purposes.

Consistent with the New Accord, the Agencies are proposing not to recognize credit protection from total return swaps where the hedging banking organization records net payments received on the swap as net income, but does not record offsetting deterioration in the value of the hedged obligation either through reduction in fair value or by an addition to reserves. The Agencies are considering imposing similar non-recognition on credit default swaps where mark-to-market gains in value are recognized in income and, thus, in Tier 1 capital, but no offsetting deterioration in the hedged obligation is recorded. (This situation generally would not arise where both the hedged obligation and the credit default swap are recorded in the banking book because under GAAP increases in the swap’s value are recorded in the Other Comprehensive Income account, which is not included in regulatory capital.)

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.

- Proposal not to recognize credit protection from total return swaps: The Agencies proposal for non-recognition of credit default swaps (CDS) where mark-to-market gains are recorded in net income and thus Tier 1 capital appears liberal. In particular, if a hedged credit deteriorates, the resulting rise in the CDS value would be reflected in Tier 1 capital (after tax basis). However, the change in the loan's value would be reflected in higher risk-adjusted assets. Consequently, the Tier 1 capital ratio would improve due to the accounting asymmetry (see example in appendix 3). Two alternative treatments are suggested: 1) Reflect the change in loan and CDS value in Tier 1 capital only or; 2) Reflect the change in loan and CDS value in risk adjusted assets only. The former approach would require a formal process for calculating the change in the loan's actual market value or its mark-to-model value. It also moves the industry closer to a market-value based approach for accounting for credit risk. The second approach is more consistent with standard accrual-based accounting for loans. Both methods are illustrated in appendix 3.

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 a maturity mismatch.

- Mismatches in credit derivatives and treatment of maturity mismatch: The Agencies approach to adjusting capital ratios to reflect the impact of credit default swaps seems out of step with common portfolio management practice. In particular, consider the observation that credit derivative hedges will only be recognized where the reference and underlying obligations are the same or the obligors are the same (subject to seniority constraints). Such treatment does not account for the purchase of credit protection, whether it is intended to reduce exposure to a particular obligor or not, which reduces the overall credit exposure of the portfolio. Take the example of a firm that has exposure to several auto manufacturing firms and, as a hedge, purchased protection on a basket of firms in the auto industry (but not the firms to which it has extended credit). Clearly, one would expect there to be some correlation between the banks two customers and the firms that comprise the basket. Even though the correlation may be difficult to establish, it is overly conservative to assume that there is no benefit derived from the bank's short-credit position in the default basket. The treatment of CDS contracts can be improved upon if less emphasis is placed on matching the CDS with a specific hedged obligation and instead, focus is placed on modeling the credit exposure of the position. That is, the basket CDS should be treated as a short-credit position and the appropriate amount of negative capital assigned to it. Assuming both the bank's loans and the basket CDS are modeled correctly (i.e. PD's, LGD's and EAD's are properly estimated), the net position should accurately reflect the bank's credit risk.

.... a banking organization that is required or elects to use the A-IRB approach for any credit portfolio would also generally be required to use the A-IRB approach for its equity exposures. However, if the aggregate equity holdings of a banking organization are not material in amount, the organization would not be required to use the A-IRB approach to equity exposures. For this purpose, a banking organization's equity exposures generally would be considered material if their aggregate carrying value, including holdings subject to exclusions and transitional provisions (as described below), exceeds 10 percent of the organization's Tier 1 and Tier 2 capital on average during the prior calendar year. To address concentration concerns, however, the materiality threshold would be lowered to 5 percent of the banking organization's Tier 1 and Tier 2 capital if the organization's equity portfolio consists of less than ten individual holdings. Banking organizations would risk weight at 100 percent equity exposures exempted from the A-IRB equity treatment under a materiality threshold.

Comment is sought on whether the materiality thresholds set forth above are appropriate.

- Setting materiality thresholds: The length of the look-back period is a potential weakness. The proposed approach would allow banks to take sizeable positions in equities, over short periods of time, without the burden of A-IRB methods to support the risk assessment. A more conservative approach would be to use a 1 or 2-quarter look-back that would be more responsive to changes in equity exposure levels.

The primary Federal supervisor would be responsible for evaluating an institution's initial and ongoing compliance with the infrastructure requirements and supervisory standards for approval to use the A-IRB approach for regulatory capital purposes. As noted, the Agencies will be developing and issuing specific implementation guidance describing the supervisory standards for wholesale, retail, equity and securitization exposures. The Agencies will issue the draft implementation guidance for each portfolio for public comment to ensure that there is an opportunity for banking organizations and others to provide feedback on the Agencies' expectations in regard to A-IRB systems.

...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.

- Consistency of the proposals to the ongoing improvements in banks: The spirit of the proposed requirements are consistent with the industry's general direction towards greater quantification and more centralized management of credit and operational risk. However, the proposed requirements for validation of internal parameter estimates and the covered paragraph entitled "Validation of Internal Estimates" would require a significant investment in human and technical resources for compliance. In our understanding of the proposal, banks would be required to staff departments that are solely dedicated to the testing and validation of model performance. That is, the testing and validation process and staff would exist in addition to the production staff that produces the actual risk and capital numbers, and the routine auditing process that currently provides adequate validation procedures. If this proposal is not changed, National City would expect to spend over \$2 million to establish a function to address compliance with the proposal (ongoing costs were not estimated).

### **Securitization – ANPR Pages 73 - 91**

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.

- General risk-based rules for residual interests: If the A-IRB method is performing properly, there is no need to retain the general risk-based rules for residual interests.

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 the pool's A-IRB capital charge plus any applicable deductions? Please provide the underlying rationale.

- Requiring originators to hold dollar-for-dollar capital: Total capital held after securitization should not be greater than before securitization. The total amount of risk in a pool of assets is unaffected by the securitization of that pool of assets or the retention of the pool of assets. Securitization is a means of raising funding, not transferring credit risk. The more subordinated tranches an originator retains, the nearer capital after securitization should be to the capital held before securitization. In the industry, most originators sell-off AAA through BBB risk, but retain first loss and other highly subordinated tranches. Therefore, capital after securitization should be moderately less to reflect the transfer of some of the risk.

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.

- Treatment of securitization exposures by originators: Capital levels based on an external rating agency review of a pool of assets may at times be higher than the actual amount of capital that should be held for originators (i.e. who are first-time securitizers). Rating agencies tend to be conservative when historical pool performance information is in short supply. Therefore, it is likely an originator, who theoretically knows the performance characteristics of the pool better than anyone else, would appropriately calculate a capital level below that required by an external rating agency.

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

- Deductions for non-rated positions above KIRB: The risk in a pool of assets is independent of how those assets are funded. Therefore, the best method is one where total capital after securitization is no greater than before, unless additional risks have been assumed via the securitization structure. Banks are by nature "experts" in evaluating these exposures and pricing accordingly. In addition, shedding first loss pieces and other highly subordinated tranches assumes that there is a liquid market for these assets, which there is not.

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?

- Treatment of exposure under RBA: The treatment under RBA is only appropriate if the table of proposed risk weights results in the same amount of capital before and after securitization. Risk weights should not be differentiated based on tranche thickness or pool granularity.

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

- Non-retail securitizations information: In most cases, yes.

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

- View on thresholds: The ANPR does not provide adequate detail to formulate a comprehensive response, but on the surface, the thresholds appear to be arbitrary.

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?

- Reliability of external ratings and their use: External ratings are "expert" opinions as to the level of risk and capital required for a pool of assets. In most cases, external ratings are conservative and should be analyzed along with the originating bank's view on risk for the same pool.

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.

- Capital treatment absent an A-IRB approach: It should be the same regardless of who holds the risk (originator or investor). The RBA and Alternative RBA approaches should be merged. The one with the most appropriate weights should be used. Most appropriate is defined as the risk weighting scheme that produces equal capital whether the assets are securitized or not.

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?

- Treatment of revolving credit facilities: Structures with early amortization features should have made allowances for this feature within their initial capital structures. As a result, there should be no additional computations needed if the initial capital structure is accurately captured.

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.

- Interplay between A-IRB capital charge and undrawn lines: Potential draw downs on lines, whether securitized and in early amortization or held on balance sheet, should be treated the same for capital purposes.

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

- Differences in CCF's for controlled and non-controlled amortizations: As long as plans are in place to ensure sufficient capital and liquidity in the event of an early amortization, the delineation between controlled and non-controlled is irrelevant.

### **AMA Framework for Operational Risk – ANPR Pages 91 - 97**

The Agencies are proposing the AMA to address operational risk for regulatory capital 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.

- Alternative approaches to the AMA proposal: We support the eventual adoption of an AMA approach and the flexibility to use internal methodologies to ascertain the best measurement of operational risks for each participating bank. However, some changes are needed before banks are ready to use this approach to calculate meaningful operational risk capital. Most importantly, the industry needs to address the overall shortage of operational loss data. We believe it will take a minimum of 2 additional years to resolve this shortage. This assumes that the data collected (internal and external) is statistically significant and useable within our operational risk models. Without an adequate volume of quality data, banks will not be able to meet acceptable modeling standards, and further concern is generated for deriving meaningful event correlation.

Until adequate data is available, we suggest a “phase-in” of the AMA requirements while concurrently allowing banks to develop internal methodologies designed to more accurately represent the underlying risks. With regulatory oversight during this development period, suitable “best practices” will begin to emerge (i.e. less prescriptive and more principles based). By suggesting a greater degree of collaboration between regulators and industry, we believe a better AMA approach will result.

In the interim, we suggest that the AMA approach be delayed from the overall implementation strategy. During the suggested period of collaboration, regulatory guidance should be developed to complement the final AMA solution. Until then, banks should be allowed to use their existing methodologies to calculate operational risk capital.

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?

- Operational risk function, governance and responsibilities: We suggest it is inappropriate, too prescriptive and contrary to existing regulatory practice for Agencies to direct the establishment of a specific function to manage operational risk. Given the operational risk management techniques used, institutions should be allowed to decide the organizational structures that work best in their environments. With respect to governance and the roles and responsibilities of boards of directors, management and audit, the proposals are excessively prescriptive and go too far in establishing job responsibilities which are too intrusive upon the prerogative of management to “run the business” and the board of directors to provide oversight.

We suggest that Agencies consider the extent to which current changes in public policy (e.g. GLBA and Sarbanes-Oxley Act) have already changed the responsibilities and governance requirements for management and boards in the U.S. Additional changes are not warranted to ensure successful implementation and ongoing management of all aspects of The New Accord as adopted for U.S. institutions.

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

- Reasonableness of risk mitigants, especially insurance: We suggest adding “diversification” as a mitigant. For example, concentration of typical bank operations risk into single facilities, regions, and work forces will be mitigated by dispersing these risks among multiple facilities, regions and/or work forces. Recognition of diversification should be included in the final rules. With respect to insurance, the proposed rules are unclear, arbitrary and do not recognize that all risks described in the proposal cannot be insured in the current insurance market. For example, current insurance contracts do not offer coverage that has no exclusions or limitations based upon regulatory action or for the receiver or liquidator of a failed bank. Policies of this nature are simply not available. As a result, and given the proposal’s “all or nothing” treatment, insurance would not be available as a risk mitigant.

Typically, an insurance underwriter will assess a bank’s operational risks that may result in an offer to cover the exposures that are typically underwritten in the industry and available only at the time the coverage is written. Note, insurance companies do not offer coverage for all risk types listed in the proposal. We suggest that Agencies coordinate with the insurance industry to establish requirements that more closely match products available to banks, and that the benefits of insurance, as a risk mitigant, be applied with maximum flexibility in reducing operational risk exposure.

We urge the Agencies to remove the 20% cap imposed by the proposed AMA approach. The value of the insurance obtained should be evaluated and a suitable offset calculated. Agencies should collaborate with the banking and insurance industries to resolve the issues of availability of coverage, insurer solvency, claims payment practices, and eventually the best method for calculating the amount of the offset to an operational risk capital charge.

### **Disclosure – ANPR Pages 97 - 102**

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.

- Disclosure of pertinent information: The level of information disclosure that is described in this section is substantial, will be expensive to produce, and will require significant effort on the part of the investors to interpret accurately and fairly. Careful consideration to the presentation and discussion surrounding the information must be given to prevent misunderstandings. For example, readers may confuse conservative, “through-cycle-average” PD’s and LGD’s with actual predictions of loss over the coming financial reporting period. Also, differences in modeling horizons, as well as model and validation process differences, will make comparative analyzes of different banks difficult or even misleading.

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

- Adequacy of proposed disclosure policy: There is concern that adequate harmonization will exist with SEC and FASB requirements. Proposals should also consider the adequacy and compliance burden for existing disclosure requirements in the U.S., especially with respect to the GLB Act and the Sarbanes-Oxley Act. We further suggest that Agencies devise a conflict-resolution process to deal with any future disclosure changes brought about by public policy and professional accounting practice decisions.

### **Regulatory Analysis – ANPR Pages 102 – to end**

Federal agencies are required to consider the costs, benefits, or other effects of their regulations for various purposes described by statute or executive order.

We offer a brief discussion relative to cost, but with the caveat that estimated costs to opt-in are difficult to ascertain. This is especially true given the prospect:

- The proposed rules will likely change;
- There will be unforeseen costs associated with adding new internal information technology systems and supporting infrastructure; and
- There will be unknown impacts to our product mix after new capital allocation rules are implemented.



National City has estimated that \$6.5 million of added expense will be incurred to prepare for The New Accord as proposed for implementation in the U.S. Included in this conservative estimate for revising our existing capital determination and allocation process is the additional costs associated with the following:

- Acquiring and training new staff to develop, oversee, manage and validate processes,
- Revising and purchasing certain systems to address new processing, reporting, data creation and archiving requirements, and
- Unknown costs to establish additional internal oversight and governance processes.

The costs will be even higher if the existing proposal relative to establishing the “Validation of Internal Estimates” is not changed. A substantial investment in staff, software and infrastructure will be needed to comply with the independence expectations, frequency and depth of the validation effort.

## Appendix 1

### **On Loan Loss Provisions in the New Basel Accord**

#### *Executive Summary*

The proposed method for calculation of regulatory capital is unnecessarily convoluted in some aspects, but can be simplified without affecting the substance. What follows is a suggested approach to treatment of General Loan Loss Provisions (GLLP) in the regulatory capital assignment process. We start with a stylized discussion of the Basel I principals and develop them into the more adequate Basel II framework. We will demonstrate the following points.

- The 8% Rule: In all segments of credit risk, the prescribed calculations yield the minimum regulatory capital in dollar numbers. The proposals then multiply this number by 12.5 (to get Risk Weighted Assets or RWA) and then set the regulatory capital at 8% of the result. These two operations are redundant and cancel out each other. They appear to have been created with the purpose of artificial retention of the “8% rule”.

We suggest the abandonment of the outdated 8% rule and instead, we suggest the direct use of the minimum regulatory capital as the capital charge that must be met by the combined Tier 1 and Tier 2 capital.

$$Tier1 + Tier2 \geq EL + UL$$

The suggestions that follow further modify the treatment of EL in this formula.

- Tier 2 Capital and GLLP. Basel I did not explicitly segregate capital into EL and UL, but the two portions were implied by the 1.25% rule. It allowed part of GLLP to be included in Tier 2 capital subject to a cap of 1.25% of RWA, and since GLLP is usually meant to cover EL, the implication was that a part of Tier 2 capital will cover for EL. Without explicit ways of calculating EL and UL it was understandably difficult to set appropriate rules for dealing with them separately within the simplistic framework of Basel I.

This problem does not exist in the formulation of Basel II, which prescribes ways to get separate numbers for EL as well as UL. It further allows offset of EL against GLLP, a welcome proposal. However, this is done in a two-step process that is unnecessary. A part of GLLP (1.25% of RWA) is included in Tier 2 capital, the remaining is used as offset against EL, and the rest of EL is to be covered by Tier 1 + Tier 2 capital. It would be much simpler to achieve the same result by allowing the entire GLLP to be used as offset against EL and exclude the 1.25% RWA from Tier 2.

### **Appendix 1 (cont.)**

We have the impression that the 1.25% rule is an anachronism of Basel I that has unnecessarily traveled into Basel II and should be abandoned. Moreover, we think that the abandonment is in the spirit of Basel II, and does not "harm" the soundness principles of regulatory capital allocation.

- We suggest the following rules for the treatment of GLLP in the regulatory capital assignment:
  - Calculate EL as EAD times PD times LGD.
  - Allow this amount to be covered by the GLLP available.
  - Apply the remainder of the GLLP (if any) to the Tier 2 capital, or add the remainder of EL, if any, to UL.
  - Abandon 1.25% cap, as an arbitrary and artificial limit for overcapitalization.

It is our firm belief that the markets (shareholders) are the only ones that should have the right to "punish" companies for sub-optimal investment of capital.

The regulations should fully recognize all types of provisions as cover for EL. Any leftover EL should be added to UL requiring capital coverage, while any excess provisions should be available for use as Tier 2 capital.

#### ***Features of Basel I Present in Basel II***

The Basel I Accord of 1988 was developed to set a minimum capital requirement for the banking industry worldwide. It gave a two-tiered definition of regulatory capital, and it was agreed that the banks should keep this regulatory capital not less than 8% of the so-called risk-weighted assets (RWA):

$$\frac{\textit{Tier1} + \textit{Tier2}}{\textit{RWA}} \geq 8\%, \textit{ or } \textit{Tier1} + \textit{Tier2} \geq 8\% \cdot \textit{RWA}.$$

The term RWA occurred as a means to attribute the capital to the constituents of a Bank's assets in some accordance with the perceived risk level of a given asset class. The perceptions were named Risk Weights (RW), hence the name risk-weighted. The RWs of the Basel I are listed in Table 1.

**Appendix 1 (cont.)**

Asset Class or Exposure Type	Risk Weights
OECD central government	0%
Domestic public sector entities	0%,10%,20%, or 50%
OECD banks and regulated securities firms	20%
Loans fully backed by residential mortgages	50%
Counterparties to derivatives transactions	50%
Public sector corporations, Non-OECD banks	100%

Table 1. Basel I Risk Weights.

Within this framework then the constraint on necessary capital can be rewritten as

$$Tier1 + Tier2 \geq 8\% \cdot \sum_i RW_i A_i = \sum_i 8\% RW_i A_i = \sum_i K_i A_i.$$

Presumably, the quantity  $K_i = 8\% RW_i$  is the risk-based capital for the asset class "i" as a percentage of the outstanding balance of the asset class -  $A_i$ . Expanding Table 1, one could build the following Table 2.

Asset Class or Exposure Type	Risk Weights	Capital Levels $K_i$
OECD central government	0%	0%
Domestic public sector entities	0%,10%,20%, or 50%	0%,0.8%,1.6%, or 4%
OECD banks and regulated securities firms	20%	1.6%
Loans fully backed by residential mortgages	50%	4%
Counterparties to derivatives transactions	50%	4%
Public sector corporations, Non-OECD banks	100%	8%

Table 2. Capital Levels  $K_i$  as a percentage of the outstanding balances of the assets.

If one now assumes that  $K_i$  is the capital against both expected (EL) and unexpected (UL) losses, then

$$Tier1 + Tier\hat{2} + 1.25\% \cdot \sum_i RW_i A_i \geq 8\% \cdot \sum_i RW_i A_i, \text{ or}$$

$$Tier1 + Tier\hat{2} + \sum_i 1.25\% \cdot RW_i A_i \geq \sum_i 8\% RW_i A_i, \text{ or}$$

$$Tier1 + Tier\hat{2} + \sum_i EL_i A_i \geq \sum_i K_i A_i, \text{ or}$$

$$Tier1 + Tier\hat{2} + EL \geq K = EL + UL, \text{ or}$$

$$Tier1 + Tier\hat{2} \geq UL.$$

**Appendix 1 (cont.)**

In the expressions above the hatted Tier2 is the Tier2 without the GLLP portion. We have identified "by implication"  $EL_i = 1.25\% RW_i$  as the expected loss for the asset "i" in the same sense that  $K_i$  was identified as the capital requirement for the asset "i". Thus the portion of the General Loan Loss Provisions (GLLP) allowed into the Tier2 capital plays the role of the offset for the EL portion of the capital.

In other words, there is an assumption that the expected loss portion of the capital cannot be more than 1.25% of RWA. Subsequently, only that much of the GLLP can be put into the total capital to compensate for the EL portion.

It seems that in Basel I, EL as well as UL portions were somewhat implied by the 1.25% and 8% rules. Without explicit ways of calculating EL and UL, it would have been difficult, if not impossible, to set rules for appropriate evaluations of these components of capital within the simplistic framework of Basel I.

This problem has been solved in The New Accord where the capital calculation does not require the 8% rule (see the next section) to perform meaningful capital allocation for the asset classes.

We will start with the definition of RWA and minimum capital requirements in Basel II. Capital requirements and the RWA for an asset class in Basel II are calculated as follows:

$$K = EAD \cdot LGD \cdot N[z] \cdot M[PD] \equiv EL + UL,$$
$$RWA = 12.50 \cdot K.$$

Here the notations are the same as in CP3. The minimum capital requirements are the same as in Basel I:

$$\frac{Tier1 + Tier2}{RWA} \geq 8\%.$$

After simple substitutions, one can rewrite the latter as:

$$\frac{Tier1 + Tier2}{RWA} \geq 8\%;$$
$$\frac{Tier1 + Tier2}{12.50 \cdot K} \geq 8\%;$$
$$\frac{Tier1 + Tier2}{EL + UL} \geq 1.$$

**Appendix 1 (cont.)**

When expanded in the manner done for the Basel I case in the previous section, one arrives at the following expression:

$$Tier1 + Tier\hat{2} + 1.25\% \cdot RWA \geq EL + UL,$$

thus arriving at the Basel I case. As in the case of Basel I, Tier 2 capital can include General Loan Loss Provisions (GLLP) only up to 1.25% RWA.

Since EL, on the right hand side, is calculated independently within the capital K in an endogenous way, this equation already shows the irrelevance of the 1.25% RWA factor.

This is why controlling the relationship between the three scale parameters in the Basel capital allocation rules - GLLP, the Cap = 1.25%RWA and EL is required to prevent the so-called double gearing situation. The latter refers to situations where the EL can be offset by GLLP excessively, thus decreasing the amount of the UL. However, let's recall that the cap 1.25% RWA was serving this goal only because of the implicit (or explicit) assumption that EL can be expressed as  $\sum_i 1.25\% \cdot RW_i \cdot A_i$ .

We suggest the following capital allocation rules for all the possible situations with respect to those three parameters.

First, subtract the GLLP from EL = EAD PD LGD. If GLLP - EL > 0, then add Excess = GLLP - EL to the Tier2 capital. The minimum capital requirement rule looks then as:

$$\frac{Tier1 + Tier\hat{2} + Excess}{UL} \geq 1.$$

If GLLP - EL < 0, then the Deficit = EL - GLLP remains in the capital requirement side of the inequality, that is:

$$\frac{Tier1 + Tier\hat{2}}{Deficit + UL} \geq 1.$$

These rules can be combined into one expression as follows:

$$\frac{Tier1 + Tier\hat{2} + \text{Max}[0, GLLP - EL]}{\text{Max}[0, EL - GLLP] + UL} \geq 1.$$

**Appendix 1 (cont.)**

To demonstrate that the suggested rules do not prevent use of a Cap on the amount of GLLP that can be included in Tier 2 capital, the rules can be modified to incorporate the presence of a Cap. So what remains to settle is the relationship between the Excess and a Cap (e.g. 1.25% of RWA), or more specifically, when Excess > Cap. To modify, one simply rewrites the inequality as

$$\frac{Tier1 + Tier\hat{2} + Cap}{UL} \geq 1.$$

Combining, one would rewrite a generalized rule for the minimum capital requirements, that encompasses all the possible cases as:

$$\frac{Tier1 + Tier\hat{2} + \text{Min}[Cap, \text{Max}[0, GLLP \square EL]]}{\text{Max}[0, EL \square GLLP] + UL} \geq 1.$$

## Appendix 2

### **Treatment of Guarantees in the New Basel Accord**

#### ***Executive Summary***

After considering the recommendations discussed in both the ANPR and the working paper “Treatment of Double Default and Double Recovery Effects for Hedged Exposure under Pillar I of the Proposed New Basel Capital Accord”, we recommend the following approach described in the working paper for reflecting the impact of guarantees on capital allocation to credit risk.

$$K_{adj} = N\left[\frac{N^{\square}(\min\{PD_O, PD_G\})}{\sqrt{1 \square r_o}} + \sqrt{\frac{r_o}{1 \square r_o}} \cdot N^{\square}(0.999)\right] \cdot LGD_O \cdot LGD_G \cdot EAD_T$$

If we make the following assumptions;

- $LGD_O$  is assumed to be 1.0,
- $PD_G \square PD_O$ ,

then the equation simplifies to:

$$K_{adj} = N\left[\frac{N^{\square} \cdot (PD_G)}{\sqrt{1 \square r_o}} + \sqrt{\frac{r_o}{1 \square r_o}} \cdot N^{\square}(0.999)\right] \cdot LGD_G \cdot EAD_T$$

We believe that this approach is consistent with the Agencies’ desire to provide a conservative level of capital relief for exposures that benefit from the financial backing of a guarantor. In particular, our proposal:

1. Is consistent with Agency guidance to refrain from using joint default probabilities and double recoveries;
2. Provides reasonable capital relief in cases where capital relief becomes a function of the shape of the guarantor’s risk-weight curve.

The remainder of this document provides support to our conclusions as well as observations on the impact of the Agencies recommended methods.



## Appendix 2 (cont.)

### **Introductory Remarks**

The Regulatory Agencies have sought comments on the treatment of guarantees for capital allocation purposes within the framework of the Basel II Accord. They have proposed that banking organizations reflect the credit risk mitigation effects of guarantees through adjusting the PD or LGD estimates of the underlying obligation that is protected. The following rules have been put forward:

1. Develop a consistent way of making adjustments to the PD or LGD of the underlying obligation. The process should not take into account the joint probability of default of the obligor-guarantor pair (the “double default” case).
2. Calculate the risk weight  $RW_{adj}$  of the hedged obligation using the adjusted PD or LGD.
3. Compare the adjusted risk weight  $RW_{adj}$  with the risk weight for a direct obligation of the guarantor  $RW_G$ .
4. In all cases, the adjusted risk weight for the hedged obligation could not be less than the risk weight associated with a comparable direct exposure on the protection provider.
5. The higher of the two risk weights would then be used to determine the risk-weighted asset amount of the hedged obligation.

In other words, the following two inequalities should hold for the adjustment schemes. First, there should be a sensitive capital relief

$$RW_o \geq RW_{adj}.$$

Second,  $RW_G$  should serve as a floor

$$RW_{adj} \geq RW_G.$$

We will refer to the two inequalities as the capital relief, and the floor inequalities respectively.

In what follows, we will try to create a consistent framework for applying these five rules and illustrate the problems encountered. Since, by definition the risk weights are  $12.50 \cdot K$ , we will discuss the capital level  $K$  instead of the risk weights  $RW$ .

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To assign capital to a loan according to the CP3 IRB models one simply has to replace the unconditional probabilities of default ( $PD_{G,o}$ ) in the expected loss ( $EL_{G,o}$ ) formulae

## Appendix 2 (cont.)

with the probability of default ( $CPD_{G,o}$ ) conditional on the realization of the 99.9% percentile adverse move in the systematic risk factor:

$$CPD_{G,o} = N\left[\frac{N^{-1}(PD_{G,o})}{\sqrt{r_{G,o}}} + \sqrt{1 - r_{G,o}} \cdot N^{-1}(0.999)\right] \equiv N[z(r_{G,o})].$$

Here  $r_{G,o}$  is the correlation of the guarantor's (respectively, the obligor's) asset returns with the systematic risk factor, specific to the exposure class to which the guarantor (respectively, the obligor) is assigned. For simplicity, we've compacted the expression in the square brackets into  $z(r_{G,o})$ .

Hence, we will start with the expected losses.

### Expected Loss

Consider a loan to an obligor with an unconditional probability of default  $PD_o$  and a loss given default for the senior unsecured debt  $LGD_o$ . The exposure is collateralized by a collateral worth  $C_t$  at the time of lending. The loan is extended in the form of a credit line  $CL$ , with an original outstanding balance of  $OB_t$ . At any given time  $T$  in the future, the exposure to the obligor is the *positive* difference between the outstanding balance  $OB_T$  at time  $T$  and the value of the collateral  $C_T$  at time  $T$ :

$$EAD_T = \text{Max}[0, OB_T - C_T] \equiv \text{Max}[0, OB_t + u_o \cdot (CL - OB_t) - C_T].$$

$u_o$  is the expected level of credit line usage, characteristic to obligor's rating class. To cover the possible devaluation in the collateral value, banks usually price it with a haircut.

Thus, there is a non-zero exposure only if one or both of the following cases were to be realized. First, the haircut was incorrectly estimated and the collateral lost more value than expected, second the estimate for the utilization level  $u_o$  was lower and the obligor has drawn more than expected and there's not enough collateral to recover. The function  $\text{Max}$  in the expression for  $EAD_T$  captures this observation.

Having established the exposure function, the expected loss to the obligor (without the guarantee) can be written as usual

$$EL_o = EAD_T \cdot LGD_o \cdot PD_o.$$

## **Appendix 2 (cont.)**

If there is an exposure at default (i.e.  $EAD_T = OB_T - C_T > 0$ ), it is due to the “collateral deficit” described above, and one will be able to recover only a  $1 - LGD_o$  portion of this “collateral deficit”.

Banks seek to recover the possible deficit of this type by buying insurance in the form of a guarantee from a third party, whose ratings are sufficiently higher than that of the obligor. In this case, the deficit that is being insured, i.e. the exposure to the guarantor’s solvency  $EAD_G$  can be presented as

$$EAD_G = EAD_T \cdot LGD_o.$$

This is the exposure if and when the guarantor defaults, given the obligor is in default. Accordingly, the expected loss from the exposure to the guarantor should have the following form

$$EL_G = EAD_G \cdot LGD_G \cdot PD_G;$$

where  $PD_G$  is the unconditional probability of default for the guarantor and  $LGD_G$  is the loss given default for a senior unsecured debt of the guarantor.

The choice of  $PD_G$  versus the joint default probability for the obligor-guarantor pair is dictated by the no double default effect constraint in rule 1 above (sections 269 – 275 in CP3).

As it is clear from the expression for  $EAD_G$ , the loss given default or one minus the recovery of the obligor is an essential part of the estimation of the exposure to the guarantor.

We would like at this point to introduce yet another expected loss number defined as the expected loss for an identical exposure to the guarantor, i.e. as if the loan was made to the guarantor. We will refer to this as the equivalent guarantor exposure:

$$EL_{O \square G} = EAD_T \cdot LGD_G \cdot PD_G;$$

Notice, that this is equivalent to setting  $LGD_o = 1$  in the expression for the guaranteed exposure  $EL_G$ , and as a result the exposure is now that of a loan with the same collateral extended to the guarantor. While the credit mitigation effect of the collateral was captured through adjusting the exposure at default ( $EAD_T$ ), the claim on obligor’s assets was constituted by the fact that  $LGD_o$  was not set to 100%. This gives incentive to lending banks to word the loan documentation (or to price the loans) in a manner that does not allow the obligor to default “at will”, when the collateral value becomes observably low.

**Appendix 2 (cont.)**

**Assigning A-IRB Capital**

To discuss the topic further, let's write the capital for all the three exposures discussed above. With the notations above, the capital allocated to the exposures will look as follows:

$$K_o = EAD_T \cdot LGD_o \cdot N[z(r_o)]$$

for the exposure to the obligor without the guarantee,

$$K_G = EAD_G \cdot LGD_G \cdot N[z(r_G)] = EAD_T \cdot LGD_o \cdot LGD_G \cdot N[z(r_G)]$$

for the guarantor, and

$$K_{o \square G} = EAD_T \cdot LGD_G \cdot N[z(r_G)]$$

for the equivalent guarantor exposure.

Following the instructions in steps 4 and 5 from the Introductory Remarks Section, we have to compare now the risk weights for the exposure to the guarantor, obligor and the adjusted risk weight of the obligor. The three should satisfy the following inequalities:

$$K_o \geq K_{adj} \geq K_{o \square G}.$$

First, let's adjust the LGDs. This means that the adjusted capital level is:

$$K_{adj} = EAD_T \cdot LGD_G \cdot N[z(r_o)].$$

The capital relief inequality in this case is readily satisfied as long as

$$LGD_o \geq LGD_G;$$

which is usually the case when  $PD_o > PD_G$ . The floor inequality is satisfied if

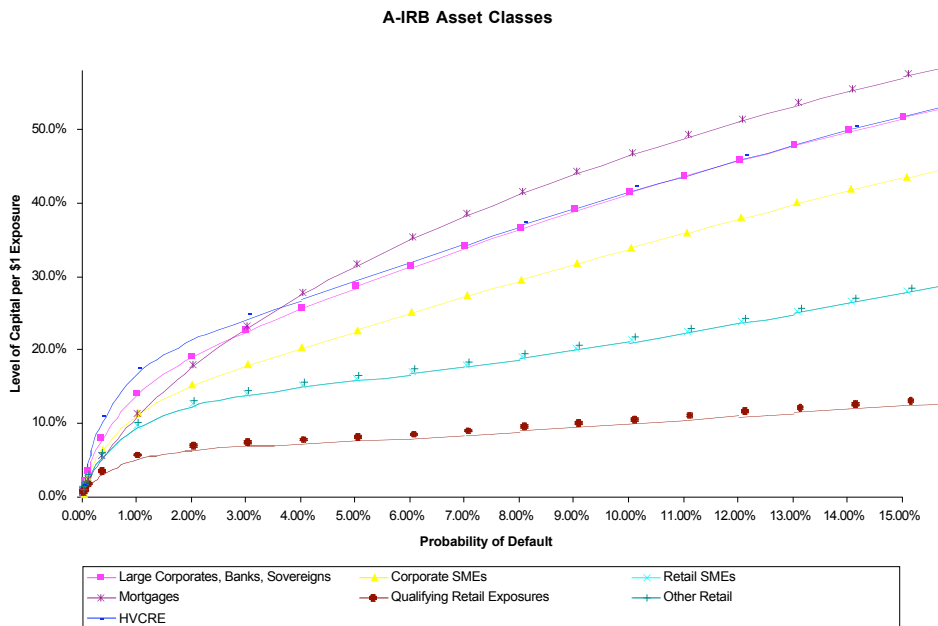
$$N[z(r_o)] \geq N[z(r_G)].$$

**Appendix 2 (cont.)**

The latter relationship is very difficult to satisfy. This inequality will trivially hold for the case where both the obligor and the guarantor belong to the same risk weight class of A-IRB (i.e.  $r_G = r_o$ ). In this case, since  $PD_o > PD_G$ , one is simply moving down the risk weight curve. On the other hand, since from  $PD_o > PD_G$  it follows that  $LGD_o > LGD_G$ , it adjusts the RW curve down. These two effects combined guarantee a capital relief, as well as the floor  $K_G$ .

On the other hand, when the obligor and the guarantor belong to different exposure classes. The outcome depends on the steepness of the risk weight curves for different exposures, as well as the distance between the RW curves of different exposure classes.

As a matter of fact the guarantors, who for the overwhelming majority of the cases will be large banks, large corporations and sovereigns, will always be assigned to the exposure class that has the highest capital assigned for a given equivalent exposure, with some exception for the HVCRE exposures. This means that  $LGD_G$  should be small enough with respect to the  $LGD_o$  to cancel out the “distance” from one exposure class’s RW curve to another.



**Appendix 2 (cont.)**

Now let's adjust the PDs.

$$K_{adj} = EAD_T \cdot LGD_o \cdot N[z(r_o | PD = PD_G)].$$

This simply moves the capital along the curve of the obligor, and the first inequality will be satisfied almost by definition

$$N[z(r_o | PD = PD_o)] \geq N[z(r_o | PD = PD_G)],$$

assuming that  $PD_o > PD_G$ .

The second inequality then will be satisfied if the calibration of the RW curves allows the following relationship

$$N[z(r_G | PD = PD_G)] \geq \frac{LGD_o}{LGD_G} \cdot N[z(r_o | PD = PD_G)].$$

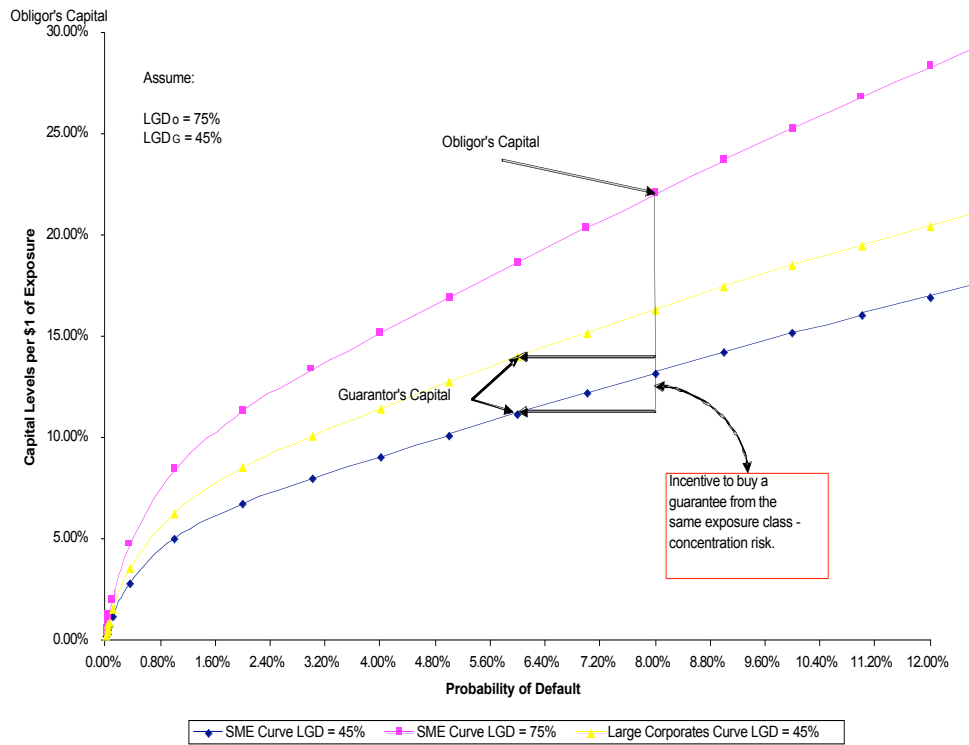
This inequality essentially contains all of the possibilities and contains the previous case as some variation of it.

It will take a favorable combination of the two main variables (PDs and LGDs), to overcome the shape and calibration factors of the respective RW curves to gain some capital relief and satisfy the floor condition  $K_G$ , too.

As the considered cases demonstrate, there is a clear incentive to have a guarantor from the same exposure class. We perceive this as a major unintended consequence that would create skewed concentrations, or so-called wrong-way exposures in banks' portfolios.

The situation is illustrated in the following graph for the case where the obligor is an SME with  $LGD_o = 75\%$ , and the guarantor is first a large corporation (banks, sovereigns, etc.) with  $LGD_G = 45\%$ , and  $PD_o > PD_G$ , and then an SME with the same credit quality.

**Appendix 2 (cont.)**



This in turn means that to provide adequate capital relief for a prudent guarantee strategies, the adjustments should be applied in two dimensions – PDs, that will move the capital levels down the curve, and LGDs that will adjust the higher level capital curves of guarantors downward. This is consistent with the general practice of credit risk measurement, where any rating class is not only described by a probability of default, but by LGD for the senior unsecured debt as a severity measure.

With these observations, we would like to endorse as a solution the version of the substitution approach described in the working paper “Treatment of Double default and Double Recovery

**Appendix 2 (cont.)**

Effects for Hedged Exposure Under Pillar I of the Proposed New Basel Capital Accord” released by the Federal Reserve on June 10, 2003.

$$K_{adj} = EAD_T \cdot LGD_G \cdot LGD_o \cdot N[z(r_o | PD_o = PD_G)]$$

We would like to concede, however, that for the sake of being conservative, one could “internally” set  $LGD_o = 1$ .

$$K_{adj} = EAD_T \cdot LGD_G \cdot N[z(r_o | PD_o = PD_G)], \text{ or}$$

$$K_{adj} = EAD_T \cdot LGD_G \cdot N\left[\frac{N^{-1}(PD_G)}{\sqrt{1 - r_o}} + \sqrt{\frac{r}{1 - r_o}} N^{-1}(0.999)\right]$$

Notice also that the better step toward conservatism has already been made by not allowing the joint default probabilities to be used. Further introduction of any other measure (the floor, only PD or LGD, but not both) turns the methodology suggested into an arbitrary rationing of the capital relief, with unintended consequences.

**Summary In Conclusion**

The Regulatory Agencies have sought comments on the treatment of guarantees for capital allocation purposes within the framework of the Basel II Accord. They have proposed that banking organizations reflect the credit risk mitigation effects of guarantees through adjusting the PD or LGD estimates (but not both) of the underlying obligation that is protected.

In the note presented we described an effort to apply the rules prescribed for accounting for guarantees. We demonstrate, that the way the rules are worded creates more confusion than a clear point of view on how the capital relief for a guarantee should be measured.

First, we would argue that not allowing the use of joint default probabilities is already a considerable effort towards being conservative, and allowing the adjustment of only one risk parameter (PD or LGD) makes the proposal considerably arbitrary.

Second, if the choice is between adjusting the LGD or PD, then the choice should be the LGD, since the capital levels (the RW curves) are directly proportional to it. However, this



## **Appendix 2 (cont.)**

adjustment would be the desirable case only if the guarantor and the obligor belonged to the same exposure class. In this case there is enough capital relief to look for a guarantor, and the floor condition is met as well (because obligor's probability of default is higher than that of the guarantor).

Consider now a guarantor who is a large corporation or a bank guaranteeing a loan to an SME. For a given LGD (obligor's LGD is substituted by that of the guarantor) these guarantors would have the higher capital assigned to the same exposure. This situation will make meeting the floor condition impossible, hence no capital relief for a case that covers the overwhelming number of cases for guaranteeing SME loans. The situation is even worse when the SMEs are treated as retail.

The choice of adjusting the PD does not change the situation. Here the hope is that the guarantor's LGD is small enough to bring the guarantor's RW curve below that of the obligor. Otherwise, the floor behaves, in most cases, as a "ceiling".

With these observations, we would like to state that the rules create an environment for "gaming" in the quest for the highest capital relief achievable. For example, the case above shows that lenders would be tempted to acquire a guarantor from obligor's exposure class to gain the most capital relief. This will create excessive concentration to a given type of exposure in lending portfolios.

We have suggested using the substitution formula with obligor's LGD set to 100%. However, we would like to caution against impacting current loan underwriting practices. This condition could have the effect of releasing the obligor from his responsibilities, and may incent the obligor to default "at will" when the collateral value becomes low. Loan agreements should be drafted in a way that it is clear that the guarantor is liable to the residual exposure, and will be forced to deliver the recovery deficit after the collateral and obligor's recovery have been met. This could be a topic of discussion for the Pillar II, and the minimum requirements for guarantees.

### Appendix 3

#### Basel II

	<u>Current</u>	<u>Credit Deterioration Event</u>			<u>Proforma Capital</u>
		<u>Loan Value Falls</u>	<u>CDS Value Rises</u>	<u>Total Change</u>	
Tier 1	8,000	-	100	100	8,100
Risk-adjusted assets	100,000	100	-	100	100,100
Tier 1 Capital Ratio	8.0%	n/a	n/a	n/a	8.1%

Tier 1 ratio improves due to asymmetrical accounting treatment for CDS and loan. Either the change in the CDS value should be reflected in risk-adjusted assets or the deterioration in the loans market value should be reflected in Tier 1 capital.

#### Alt 1: All changes in Tier 1

	<u>Current</u>	<u>Credit Deterioration Event</u>			<u>Proforma Capital</u>
		<u>Loan Value Falls</u>	<u>CDS Value Rises</u>	<u>Total Change</u>	
Tier 1	8,000	(100)	100	-	8,000
Risk-adjusted assets	100,000	-	-	-	100,000
Tier 1 Capital Ratio	8.0%	n/a	n/a	n/a	8.0%

Reflect the change in the model or market-based value of the hedged asset in OCI.

#### Alt 2: All changes in Risk Adjusted Assets

	<u>Current</u>	<u>Credit Deterioration Event</u>			<u>Proforma Capital</u>
		<u>Loan Value Falls</u>	<u>CDS Value Rises</u>	<u>Total Change</u>	
Tier 1	8,000	-	-	-	8,000
Risk-adjusted assets	100,000	100	(100)	-	100,000
Tier 1 Capital Ratio	8.0%	n/a	n/a	n/a	8.0%

Remove the gain on the CDS from Tier 1 and reflect the change in value in risk-adjusted assets.