DATE: October 26, 2007

MEMORANDUM TO: Board of Directors

FROM: Sandra L. Thompson, Director
Division of Supervision and Consumer Protection

SUBJECT: Final Rule regarding *Risk-Based Capital Standards: Advanced Capital Adequacy Framework*

Proposal: That the Board of Directors of the Federal Deposit Insurance Corporation approve the attached Final Rule regarding *Risk-Based Capital Standards: Advanced Capital Adequacy Framework*, which would implement the advanced approaches of the Basel II framework in the United States. If approved, the Final Rule would be issued on an interagency basis in the Federal Register by the FDIC, the Board of Governors of the Federal Reserve System, the Office of the Comptroller of the Currency and the Office of Thrift Supervision (together, the Agencies).

The Final Rule is generally consistent with the advanced approaches outlined in the Basel Committee on Banking Supervision document, *International Convergence of Capital Measurement and Capital Standards: A Revised Framework, Comprehensive Version* published in June, 2006 (a revised version of the June, 2004 document). The Final Rule would require certain banks (core banks), and permit other banks (opt-in banks), to use the advanced internal ratings-based approach to calculate regulatory credit risk capital requirements and the advanced measurement approach to calculate regulatory operational risk capital requirements. The Final Rule has been submitted by the Office of the Comptroller of the Currency and the Office of Thrift Supervision to the Office of Management and Budget for review. The effective date for the Final Rule will be based on the outcome of this review and statutory requirements for the publication of the Agencies' rules. Both core and opt-in banks will remain subject to the present Agency rules for Prompt Corrective Action and the leverage ratio.

The Final Rule also would establish a requirement for the Agencies to jointly evaluate the effectiveness of the Final Rule. The Agencies will issue a series of annual reports providing timely and relevant information on the implementation of the advanced approaches. In addition, after the end of the second transition year, the Agencies will publish a study (interagency study) that will evaluate the advanced approaches to determine if there are any material deficiencies. For any primary Federal supervisor to authorize any bank to exit the third transitional floor period, the interagency study must determine that there are no such material deficiencies that cannot be addressed by then-existing tools, or, if such deficiencies are found, they must be first remedied by changes to regulation. A primary Federal supervisor that disagrees with the finding of material deficiency may not authorize a bank under its jurisdiction to exit the third transitional floor period unless it first provides a public report explaining its reasoning.

Recommendation: That the Board approve publication of the Final Rule.

Concur:

Sara A. Kelsey
General Counsel

I. Introduction

The Board is being asked to approve for publication in the Federal Register the attached interagency Final Rule based on the new capital accord entitled "International Convergence of Capital Measurement and Capital Standards: A Revised Framework, Comprehensive Version," published in June, 2006 (Basel II framework, or framework) by the Basel Committee on Banking Supervision (BCBS or Basel Committee). The Final Rule serves to implement a risk-based capital framework in the United States that is generally consistent with advanced approaches outlined in the Basel II framework.

Specifically, the Final Rule sets forth the U.S. banking and thrift agencies' (Agencies) requirements for the U.S. implementation of the advanced internal ratings-based approach (AIRB) for assessing credit risk capital charges and the advanced measurement approach (AMA) for assessing operational risk capital charges. The use of the AIRB and AMA (collectively, the Advanced Approaches) will be required for a core group of large and internationally active U.S. banking organizations (core banks) and allowed for other banking organizations that, on an opt-in basis, are able to qualify for the framework (opt-in banks). Core banks are banking organizations with consolidated total assets (excluding assets held by an insurance underwriting subsidiary of a bank holding company) of $250 billion or more or with consolidated total on-balance-sheet foreign exposure of $10 billion or more. A bank also is a core bank if it is a subsidiary of another banking organization or bank holding company that uses the Advanced Approaches, unless it is exempted by its primary federal regulator from being required to use the Advanced Approaches.

There are currently 10 U.S. banking organizations that would meet the definition of a core bank based upon either total assets or total on-balance-sheet foreign exposures. At this time, it is unknown how many banking organizations would choose to become opt-in banks; however, if the number of non-core banking organizations that volunteered to participate in the Fourth Quantitative Impact Study (QIS-4) can taken as an indication of interest, there may be as many as 16 banking organizations that choose to become opt-in banks over the next few years. FDIC staff does not anticipate that any FDIC-supervised banks would be deemed core banks. These numbers reflect only the top-tier consolidated banking organizations only. The FDIC serves as primary Federal supervisor for several banks that would be subject to Basel II as a member of a consolidated group where the top-tier banking organization is supervised by another Federal regulator.

The publication of this Final Rule would represent the continuation in the U.S. of a process begun in June 1999 with the publication of the BCBS first consultative paper "A New Capital Adequacy Framework" (CP-1). CP-1 stated that "the Accord is a cornerstone of the current international financial architecture. Its overriding goal is to promote safety and soundness in the international financial system. The existence of an adequate capital cushion is central to this goal, and the Committee believes that the new framework should at least maintain the overall level of capital currently in the banking system."[1] In the intervening time, both banks and supervisors around the world have devoted considerable resources to preparations for the Basel II framework.

The Final Rule implements a risk-based capital framework that is procedurally more comprehensive than the current risk-based requirements, in the sense that all credit risk exposures could, in principle, be subject to a capital requirement. Under the Final Rule a bank's on- and off-balance sheet exposures will be divided into four categories: wholesale, retail, securitization and equity. For example, there is now no risk-based capital required for most unused retail lines of credit or for commercial loan commitments maturing in less than one year, whereas the Final Rule will require some amount of regulatory capital to be held for these items. The Final Rule also contains a regulatory capital charge for operational risk whereas the current rules do not. Moreover, under the Final Rule a bank's capital requirement potentially will vary continuously with the measurement of risk that the bank assigns to its credit exposures, as opposed to the current rules that require the same capital for all exposures fitting within broadly defined

[1] The New Basel Capital Accord, June, 1999, paragraph 10, pp. 9-10.

risk buckets. Other things equal, these aspects of the Final Rule are more risk-sensitive than the current rules.

The Board should be aware that there are potentially significant issues with the Advanced Approaches that may yet need to be addressed. This includes the potential for large reductions in capital requirements that could be detrimental to the safety-and-soundness of the banks using these approaches. For example, after the BCBS published the New Capital Accord, the Agencies conducted an additional quantitative impact study (QIS-4), in the fall and winter of 2004-2005, to better understand the potential impact of the proposed framework on the risk-based capital requirements for individual U.S. banks and U.S. banks as a whole. The dollar-weighted average decline in tier 1 capital requirements for the 26 QIS-4 participants was 22 percent, and the median decline in tier 1 capital requirements was more than 31 percent. QIS-4 participants reported significantly lower capital requirements for all exposure categories except revolving retail credit (credit cards), equities and OTC derivatives. Interagency analysis also revealed that banks assigned substantially different capital requirements to similar or even identical credit exposures.

More recently, financial markets for asset-backed commercial paper and collateralized debt obligations have experienced increased volatility and pricing uncertainty. Events leading to this market turbulence were not accurately predicted by many financial market participants' models, in part because such volatility was not included in the historical data used by the models. Moreover, the asset class most affected by the current market turmoil has been mortgages—the asset class that receives the largest reductions in capital requirements under the Advanced Approaches. Many banks' economic models did not adequately predict the breadth or severity of the current issues affecting the mortgage market. The historical data used to model default on subprime mortgages included a long period of generally appreciating house prices that allowed borrowers to refinance out of financial difficulties. In addition, the historical data did not include a sufficient population of nontraditional mortgage products with features such as teaser rates and rate adjustment mechanisms that could result in a significant payment shock. If the Advanced Approaches of the Basel II framework had been in force during the period leading up to the current market turmoil, there is a possibility that regulatory capital requirements for some institutions may have been inadequate.

In recognition of such concerns, the Agencies have implemented an important safeguard in the Final Rule. Under the Final Rule, the Agencies will jointly evaluate the effectiveness of the new capital framework. The agencies will issue a series of annual reports during the transition period that will provide timely and relevant information on the implementation of the advanced approaches. In addition, after the end of the second transition year in 2010, the Agencies will publish a study (interagency study) that will evaluate the advanced approaches to determine if there are any material deficiencies. For any primary Federal supervisor to authorize any bank to exit the third transitional floor period, the study must determine that there are no such material deficiencies that cannot be addressed by then-existing tools, or, if such deficiencies are found, they must be first remedied by changes to regulation. Notwithstanding the preceding sentence, a primary Federal supervisor that disagrees with the finding of material deficiency may not authorize a bank under its jurisdiction to exit the third transitional floor period unless it first provides a public report explaining its reasoning.

The Agencies intend to establish a transparent and collaborative process for conducting the interagency study, consistent with the recommendations made by the U.S. Government Accountability Office (GAO) in its report on implementation of the New Accord in the United States (GAO report).[2] In conducting the interagency study the Agencies would consider, for example, the following:

- The level of minimum required regulatory capital under U.S. advanced approaches compared to the capital required by other international and domestic regulatory capital standards.

[2] United States Government Accountability Office, "Risk-Based Capital: Bank Regulators Need to Improve Transparency and Overcome Impediments to Finalizing the Proposed Basel II Framework" (GAO-07-253), February 15, 2007.

- Peer comparisons of minimum regulatory capital requirements, including but not limited to banks' estimates of risk parameters for portfolios of similar risk.
- The processes banks use to develop and assess risk parameters and advanced systems, and supervisory assessments of their accuracy and reliability.
- Potential cyclical implications.
- Changes in portfolio composition or business mix, including those that might result in changes in capital requirements per dollar of credit exposure.
- Comparison of regulatory capital requirements to market-based measures of capital adequacy to assess relative minimum capital requirements across banks and broad asset categories. Market-based measures might include credit default swap spreads, subordinated debt spreads, external rating agency ratings, and other market measures of risk.
- Examination of the quality and robustness of advanced risk management processes related to assessment of capital adequacy, as in the comprehensive supervisory assessments performed under Pillar 2.
- Additional reviews, including analysis of interest rate and concentration risks that might suggest the need for higher regulatory capital requirements.

The Basel II framework allows three options for calculating capital requirements, which includes the AIRB that will be adopted in this Final Rule, a Foundation Approach, and a Standardized Approach. Recently, the Agencies received written requests to allow U.S. banking organizations, including those defined as core in the Final Rule, to use the Standardized Approach. The Agencies are currently developing a Notice of Proposed Rulemaking that would provide certain U.S. banking organizations with the option of adopting the Standardized Approach of the Basel II Accord (Basel II Standardized NPR), which will be presented to the Board in the coming months. The Agencies will pose a question in the Basel II Standardized NPR whether core banking organizations should be allowed to adopt the Standardized Approach as an alternative, given the wide support for using this approach.

II. The Basel II Accord and U.S. Rulemaking Process

A. Background

The use of banks' internal risk assessments to set capital requirements dates back to 1996 and the market risk amendments to the Basel I accord. For certain instruments held in trading accounts, these amendments permitted banks to set required capital based on their own empirically supported estimates of value-at-risk (VaR), a statistical estimate of a market value loss on the instrument that was considered highly unlikely to be exceeded.

An initial step towards the limited use of credit risk VaR to set capital requirements came in June, 1999, when the BCBS published a Consultative Paper (CP-1). The Committee announced in CP-1 that it had decided to revise the 1988 international capital accord commonly known as Basel I. In its 62 pages, CP-1 described a framework that would ultimately become known as the standardized approach; essentially an incremental refinement of Basel I. CP-1 also indicated the BCBS believed the use of internal risk estimates by certain large banks could help to refine further the risk sensitivity of capital requirements. It acknowledged the subjectivity inherent in the use of such estimates and stated that its expectation was that such estimates would be used, initially, in some simple way such as slotting loans into predefined risk weight buckets.

In January, 2001, the BCBS published a second consultative paper, "Consultative Document: The New Basel Capital Accord" (CP-2). In CP-2 and other accompanying public documents, the Committee stated that its work had revealed that many banks were capable of robust estimates of borrower default probabilities and that some banks had developed, or soon would develop, the capability to accurately estimate loss given default and exposure at default. The Committee identified the basic framework for a models-based regulatory capital system. In April, 2003, the Committee published the third consultative paper, "Consultative Paper: The New Basel Capital Accord" (CP-3). CP-3 included a complete set of formulas for determining capital requirements for both wholesale and retail credit risk, as well as a capital requirement for operational risk.

On August 4, 2003, the Agencies issued an advance notice of proposed rulemaking (ANPR) (68 FR 45900) that sought public comment on selected regulatory capital approaches contained in CP-3. These approaches included the internal ratings-based (IRB) approach for credit risk and the advanced measurement approaches (AMA) for operational risk (together, the advanced approaches). The ANPR solicited public comment on a number of issues. The agencies received approximately 100 public comments on the ANPR from banks, trade associations, supervisory authorities, and other interested parties.

In the ANPR, the Agencies stated that they "do not expect the implementation of the New Accord to result in a significant decrease in aggregate capital requirements for the U.S. banking system."[3] Further the Agencies expressed concern that "banking organizations face risks other than credit and operational risks, and the assumed loss distributions underlying banking organizations' economic capital calculations are subject to the risk of error."[4] "Consequently, the Agencies continue to view the leverage ratio tripwires contained in existing PCA and other regulations as important components of the regulatory capital framework."[5]

In June 2004, the Basel Committee published the Basel II framework. The June 2004 text described the Committee's overall capital objective as being broad maintenance of the overall level of capital, while providing some incentives for banks to adopt the advanced approaches. The text also indicated the Basel Committee's expectation that the Basel II framework would be used by individual countries as a basis for national consultation and implementation. Work continued at the BCBS on certain items of unfinished business from the June 2004 text. Those included refinements to the capital requirements for market risk, expanded recognition of the effects of guarantees, and a

[3] 68 FR 45902, August 4, 2003.
[4] *Ibid*.
[5] *Ibid*.

new way of modeling exposures to counterparty credit risk. This new work was conducted jointly by a Basel-IOSCO task force and published by the BCBS in July 2005. The Basel-IOSCO proposals are incorporated in this Final Rule, as well as the market risk rule that the Agencies are currently finalizing.

In late 2004 and early 2005, the Agencies conducted QIS-4 to examine the potential effect of the New Capital Accord on minimum regulatory capital requirements at the largest banks in the United States. As discussed above, the results of the QIS-4 exercise indicated that the Basel II framework could result in an unacceptable decline in minimum regulatory capital requirements.

In September, 2005, the Agencies announced their intention to move forward with implementation of the Basel II framework, subject to additional prudential safeguards designed to prevent actual declines in minimum regulatory capital of the magnitude suggested by the QIS-4 exercise from occurring. These safeguards included a one year delay in the targeted effective date of the regulation, a longer transition to the unconstrained use of the Basel II risk-based requirements, limitations on the amount risk-based capital requirements at individual banks could decline during the transition period, and the retention of U.S. leverage and Prompt Corrective Action requirements.

With the framework of the September 2005 agreement in place, the Agencies proceeded to work on a notice of proposed rulemaking for Basel II (NPR). The NPR described a number of objectives in relation to overall capital outcomes that were not part of the proposed regulation, but were statements about that regulation—what the Agencies would hope to accomplish and avoid in implementing the regulation. The overall capital objectives described in the NPR were, in brief:

- Broad maintenance of the overall level of risk-based capital requirements;
- A 10 percent downward limit on aggregate reduction in minimum risk-based capital;
- Comparable capital requirements for similar portfolios;

- A level playing field between institutions that participate in Basel II and those that do not; and
- Retention of the current leverage ratio and prompt corrective action requirements.

On September 25, 2006, the Agencies published the NPR (71 FR 55830) for public comment. The Agencies received approximately 90 public comments on the NPR from banking organizations, trade associations, supervisory authorities, and other interested parties. Commenters generally supported the development of the Basel II framework in the United States; however, commenters expressed serious concern with respect to certain areas where the NPR differed from the Basel II Accord. Commenters stated that these divergences generally created competitive problems, raised home-host issues, and entailed extra cost and regulatory burden. Further, many commenters objected to the Agencies' retention of the leverage ratio, the transitional arrangements in the proposal, and the 10 percent numerical benchmark for identifying aggregate reductions in risk-based capital requirements to be used for evaluating and responding to capital outcomes during the parallel run and transitional floor periods. Commenters stated that these requirements represented overly conservative regulatory capital constraints that lacked risk sensitivity. Further, commenters expressed concerns that these requirements were not included in either the Basel II framework or the European Capital Requirements Directive (CRD).

In addition, commenters generally disagreed with the Agencies' proposal to adopt only the advanced approaches from the Basel II framework. Most commenters, including several banking organizations defined as "core" under the NPR, requested that the Agencies offer the Standardized Approach as provided in Basel II. These commenters stated that both Basel II and the CRD allow the use of the Standardized Approach and that precluding these approaches in the United States would place U.S. banks at a competitive disadvantage.

B. Basel II Final Rule

A comprehensive description of the final rule, or all the changes made to the NPR in response to comments, is beyond the scope of this memorandum. The interested reader is referred to the attached draft *Federal Register* notice. The remainder of this memorandum provides only a few highlights of the rule and the major changes made from the NPR. The overall thrust of the changes is to make the rule more consistent with the Advanced Approaches used internationally, while modifying the regulatory process for determining when institutions will be able to exit their final transitional floor (the interagency study described above).

Pillar 1: Minimum Risk-Based Capital Requirements

U.S. banks and banking organizations are subject to a dual framework of capital regulation. A set of leverage requirements specify the minimum amount of tier 1 capital that banks and banking organizations must hold as a percentage of balance sheet assets. For insured banks, the leverage requirements are an integral component of the statutory framework of Prompt Corrective Action (PCA) mandated in the Federal Deposit Insurance Corporation Improvement Act of 1991 (FDICIA).[6] The leverage and PCA requirements are unaffected by this rule.

Risk-based capital requirements complement the leverage requirements by requiring capital for risks that are either not reflected on the balance sheet, or that pose materially more risk than the leverage requirements were designed to address. Current risk-based capital rules involve converting the notional amounts of off-balance sheet risks to on-balance sheet equivalents using defined conversion factors, and then requiring capital for the resulting on-balance sheet equivalents, and for all other balance-sheet items, using pre-defined risk-buckets. As indicated earlier, some off-balance sheet items are exempted. Current rules also prescribe separate capital requirements for market risk (these rules apply to a small number of U.S. banks).

[6] Statutory PCA requirements apply only to insured depository institutions, not their corporate owners.

The Final Rule changes the method of calculating capital requirements for credit risk, and adds a requirement for banks to compute a capital requirement for operational risk. The mechanism for computing credit-risk capital is called the advanced internal ratings-based approach (AIRB) and the mechanism for computing operational risk capital is called the advanced measurement approach (AMA). Other risks facing banks, such as interest rate risk on exposures held outside the trading account, liquidity risk, strategic or business risk, and reputational risk associated with off-balance sheet activities (for example, with asset-backed commercial paper conduits) are not explicitly addressed either by the Advanced Approaches or by the current risk-based capital requirements. A number of these risks were significant factors in recent credit market volatility.

Credit Risk. The Final Rule requires core banks to use the AIRB approach for determining risk-based capital requirements for credit risks. The AIRB approach requires banks to estimate certain key risk parameters for each credit exposure or pool of exposures. Banks must then feed these risk parameters into pre-defined formulas (henceforth we will call these the "supervisory formulas"). The supervisory formulas identify the amount of risk-weighted assets that are required for each exposure or pool of exposures. The amount of risk weighted assets is a function of the risk parameters input by the bank into the supervisory formulas. The minimum capital requirement is then, by definition, eight percent of the risk-weighted asset amount (an adjustment to the capital requirement based upon the level of the institution's loan loss reserves is described later).

The AIRB framework is broadly similar to the credit value-at-risk (VaR) approaches used by some banks as the basis for their internal assessment of the economic capital necessary to cover credit risk. It is common for a bank's internal credit risk models to consider a one-year loss horizon, and to focus on a high loss threshold confidence level. As with the internal credit VaR models used by banks, the output of the risk-based capital formulas in the IRB framework is an estimate of the amount of credit losses over a one-year horizon that would only be exceeded a small percentage of the time. The agencies' use of a one-year loss horizon is intended to balance the fact that banking book positions likely could not be easily or rapidly exited, with the possibility that a bank could attempt to cover credit losses by raising additional capital should the underlying credit problems manifest themselves gradually. The nominal confidence level of the IRB risk-based capital formulas (99.9 percent) means that if all the assumptions in the IRB supervisory model for credit risk were correct for a bank, there would be less than a 0.1 percent probability that credit losses at the bank in any year would exceed the IRB risk-based capital requirement.[7]

Exposure at default (EAD). To calculate capital requirements for credit risk using the supervisory formulas, banks must estimate certain key risk inputs for each credit exposure or pool of exposures. The first key risk parameter banks must estimate is the exposure at default, or EAD. This is a dollar amount, and it is important because it is the amount against which capital will be held. The EAD of a credit exposure must at least equal the amount of the exposure that is carried on the balance sheet. For portions of an exposure that reside off balance sheet, the EAD is the bank's own estimate of the amount of the exposure that would likely be owed the bank if there were a default. This contrasts with current rules: instead of converting off-balance sheet amounts using pre-defined regulatory conversion factors, these amounts are converted based on each bank's own estimate of the appropriate conversion factor.

Probability of default (PD). The second key risk parameter determining the capital requirement for a credit exposure is the probability of default, or PD. The PD is the bank's estimate of the probability the borrower will default over the next 12 months. It is intended to be a conservatively estimated "through the cycle" average of default rates the credit exposure would be likely to experience during both expansionary and recessionary periods of economic activity. The rule gives banks significant flexibility as to how they will estimate their PDs, but these estimates are expected to be supported by historical data including default data from recession periods.

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[7] Banks' internal economic capital models typically focus on measures of equity capital, whereas the total regulatory capital measure underlying this proposal includes not only equity capital, but also certain debt and hybrid instruments, such as subordinated debt. Thus, the 99.9 percent nominal confidence level embodied in the IRB framework is not directly comparable to the nominal solvency standards underpinning banks' economic capital models.

Capital requirements under the rule will depend importantly on banks' PDs. These PDs, in turn, will depend on the way defaults are defined in the banks' databases. Thus, the definition of default is of fundamental importance to the operation of the rule. In the final rule the agencies have changed the definition of default for wholesale credit exposures from that proposed in the NPR.

In the NPR, the Agencies had modified the definition of default for wholesale exposures from that in the Basel II framework to address issues commenters had raised regarding the Basel II ANPR. However, many commenters objected to the modified definition, asserting that a definition different from the Basel II framework would result in competitive inequities and significant implementation burden without associated supervisory benefit. In response to these concerns, the Agencies have adopted a definition of default for wholesale exposures in the Final Rule that is consistent with the New Accord. In particular, the Final Rule has deleted the NPR's requirement that default is triggered by a bank incurring a credit-related loss of 5 percent or more of the exposure's initial carrying value in connection with the sale of the exposure or the transfer of the exposure to the held-for-sale, available-for-sale, trading account, or other reporting category.

For the Basel II framework, "A default is considered to have occurred with regard to a particular obligor when either or both of the two following events have taken place.

- The bank considers that the obligor is unlikely to pay its credit obligations to the banking group in full, without recourse by the bank to actions such as realizing security (if held).
- The obligor is past due more than 90 days on any material credit obligation to the banking group.[8] Overdrafts will be considered as being past due once the

[8] In the case of retail and PSE obligations, for the 90 days figure, a supervisor may substitute a figure up to 180 days for different products, as it considers appropriate to local conditions. In one member country, local conditions make it appropriate to use a figure of up to 180 days also for lending by its banks to corporates; this applies for a transitional period of 5 years.

customer has breached an advised limit or been advised of a limit smaller than current outstandings.

The elements to be taken as indications of unlikeliness to pay include:

- The bank puts the credit obligation on non-accrued status.
- The bank makes a charge-off or account-specific provision resulting from a significant perceived decline in credit quality subsequent to the bank taking on the exposure.[9]
- The bank sells the credit obligation at a material credit-related economic loss.
- The bank consents to a distressed restructuring of the credit obligation where this is likely to result in a diminished financial obligation caused by the material forgiveness, or postponement, of principal, interest or (where relevant) fees.[10]
- The bank has filed for the obligor's bankruptcy or a similar order in respect of the obligor's credit obligation to the banking group.
- The obligor has sought or has been placed in bankruptcy or similar protection where this would avoid or delay repayment of the credit obligation to the banking group."[11]

For retail exposures, the The New Accord specifies that ". . . the definition of default can be applied at the level of a particular facility, rather than at the level of the obligor. As such, default by a borrower on one obligation does not require a bank to treat all other obligations to the banking group as defaulted."[12]

For retail exposures, the Final Rule retains the proposed definition of default, which is consistent with the Basel II Accord. However, the Agencies clarified that, subject to certain considerations, a foreign subsidiary of a U.S. bank may, in its

[9] In some jurisdictions, specific provisions on equity exposures are set aside for price risk and do not signal default.
[10] Including, in the case of equity holdings assessed under a PD/LGD approach, such distressed restructuring of the equity itself.
[11] The New Accord, paragraphs 452-453, pp. 100-101.
[12] The New Accord, paragraph 455, p. 101.

consolidated risk-based capital calculations, use the applicable host jurisdiction definition of default for retail exposures of the foreign subsidiary in that jurisdiction.

Loss given default (LGD). The third determinant of the capital requirement is the loss given default or LGD. LGD is the bank's estimate of the credit loss as a percentage of exposure in the event the borrower defaults. LGD is especially important because the capital requirement is a straight line multiple of the LGD. For example, required capital for an exposure whose LGD is 20 percent will be exactly one half the amount that would be required if the LGD were 40 percent. Similarly, required capital would be zero if LGD were zero. The LGD is expected to include all material credit related losses including indirect expenses and an appropriate risk-adjusted discount rate for defaulted assets held in a workout mode. It is also expected to reflect the loss experience likely to be realized during economic downturn conditions. Downturn estimates, however, have been difficult for banks to obtain. LGD data for important portfolios may be sparse, and there is limited industry experience with incorporating downturn conditions into LGD estimates. Recent credit market volatility has been accompanied by a lack of liquidity and reports of financial market participants experiencing difficulty obtaining correct market prices. Thus, a lack of high-quality market price data could also affect the ability of banks to correctly estimate downturn LGD.

The NPR proposed addressing the difficulty of estimating "downturn LGDs" by requiring a bank to use a supervisory mapping function if their supervisor determined that bank was unable to estimate appropriate downturn LGDs. The mapping function was essentially a mechanical upward adjustment to the bank's estimated LGD.

Many commenters objected to the supervisory mapping function as a significant deviation from the Basel II framework that they believed to be overly prescriptive and burdensome. Commenters requested more flexibility to address problems with LGD estimation, especially for exposure categories with relatively low loss severities. To provide banks with greater flexibility, the agencies have eliminated the supervisory mapping function as a requirement in the rule. However, the Agencies continue to believe that the mapping function (and the associated estimation of the long-run default-weighted average economic loss rate given default within a one-year horizon) may be one way a bank could address difficulties in estimating LGD.

Expected loss (EL). A final determinant of required capital for a credit exposure or pool of exposures is the expected loss or EL, defined as the product of EAD, PD and LGD. For example, consider a pool of subprime credit card loans with an EAD of $100. The PD is 10 percent; in other words, $10 of cards per year are expected to default, on average. The LGD is 90 percent, so that the loss on the $10 of defaults is expected to be $9. The EL is then $100 multiplied by 0.10 multiplied by 0.90, that is, $9. EL can be interpreted as the amount of credit losses the lender expects to experience in the normal course of business, year in and year out. If the total EL for the bank, on all its exposures, is less then its allowance for loan and lease losses (ALLL), the excess ALLL is included in the bank's tier 2 capital (this credit is capped at 0.6 percent of credit risk weighted assets). Conversely, if the total EL exceeds the ALLL, the excess EL is deducted from capital, half from tier 1 and half from tier 2. In this example, the EL that would be compared to the ALLL was a very substantial 9 percent of the exposure. The example is intended to illustrate that for subprime lenders or other lenders involved in high charge-off, high margin businesses, the EL capital adjustment may be significant.

The NPR explicitly separated the expected component of loss given default from the additional downturn component of loss. Thus a bank's total LGD estimate was the sum of its "expected loss given default (ELGD)" plus any incremental loss, possibly zero, attributable to a downturn. The NPR defined ELGD as the bank's empirically-based best estimate of the default-weighted average economic loss per dollar of exposure the bank expected to incur on exposures that default within a one-year horizon. The LGD was used as an input to the supervisory formulas for calculating risk weighted assets, while the ELGD was used to calculate the EL (the NPR defined EL as the product of EAD, PD and ELGD). This ELGD concept was not part of the June, 2004 Basel II framework. Many commenters objected to the inclusion of ELGD as a departure from the Basel II framework that would create regulatory burden and competitive inequity.

The agencies have eliminated ELGD from the Final Rule. Banks are required to estimate only the LGD risk parameter in a way that appropriately reflects economic downturn conditions.

Definition of Securitization Exposures and Hedge Funds. The NPR generally defined securitization exposures as exposures that involve the credit risk tranching of underlying financial assets. Many commenters objected to the proposed definition as overly broad. As such, these commenters contended that the definition captured many exposures that should not be considered securitization exposures, including tranched exposures to a single underlying financial exposure and exposures to many hedge funds and private equity funds. Commenters requested flexibility to apply the wholesale credit risk rules or the equity rules (depending on the exposure) rather than the securitization framework to these exposures.

The Final Rule also provides the primary Federal supervisor of a bank with discretion to exclude from the definition of securitization investment firms that exercise substantially unfettered control over the size and composition of their assets, liabilities, and off-balance sheet transactions. The Agencies will consider a number of factors in the exercise of this discretion, including the assessment of the investment firm's leverage, risk profile, and economic substance. This supervisory exclusion is intended to provide discretion to the primary Federal supervisor to distinguish structured finance transactions, to which the securitization framework was designed to apply, from more flexible investment firms such as many hedge funds and private equity funds.

However, the Agencies realize that equity exposures to investment firms such as hedge funds and private equity funds can in some cases result in leveraged exposures to the underlying financial assets. The Agencies believe that equity exposures to such investment firms with greater than immaterial leverage warrant a 600 percent risk weight due to their particularly high risk.

Operational Risk. The Final Rule also provides for the use of the advanced measurement approach (AMA) for determining risk-based capital requirements for operational risk. Operational risk is defined as the risk of loss resulting from inadequate or failed internal processes, people, and systems or from external events. This definition also includes legal risk – which is the risk of loss (including litigation costs, settlements, and regulatory fines) resulting from the failure of the bank to comply with laws, regulations, prudent ethical standards, and contractual obligations in any aspect of the bank's business – but excludes strategic and reputational risks.

Under the AMA, a bank would use its internal operational risk management systems and processes to assess its exposure to operational risk. Given the complexities involved in measuring operational risk, the AMA provides banks with substantial flexibility and, therefore, does not require a bank to use specific methodologies or distribution assumptions. Nevertheless, a bank using the AMA must demonstrate to the satisfaction of its primary Federal supervisor that its systems for managing and measuring operational risk meet established standards, including producing an estimate of operational risk exposure that meets a one-year, 99.9^{th} percentile confidence interval. A bank's estimate of operational risk exposure includes both expected operational loss (EOL) and unexpected operational loss (UOL) and forms the basis of the bank's risk-based capital requirement for operational risk.

The AMA allows a bank to base its risk-based capital requirement for operational risk on UOL alone if the bank can demonstrate to the satisfaction of its primary Federal supervisor that the bank has eligible operational risk offsets, such as certain operational risk reserves, that equal or exceed the bank's EOL. To the extent that eligible operational risk offsets are less than EOL, the bank's risk-based capital requirement for operational risk must incorporate the shortfall.

Market Risk. The Agencies are finalizing the rulemaking that would change certain aspects of the Agencies' market risk capital rules. The proposal will improve risk sensitivity and enhance the disclosure of qualitative and quantitative factors. The Agencies expect the Market Risk rule to be finalized in the first quarter of 2008.

Total Capital Requirement. The total capital requirement for a bank subject to this Final Rule includes the amount of capital determined by the application of the IRB framework and the amount determined for operational risk under the AMA formulas (and, for banks subject to the market risk capital standards, a market risk capital charge).

The formulas derive an actual dollar amount for a capital requirement. Accordingly, in order to fit within the PCA framework and render capital ratios for regulatory purposes, the advanced approaches transform this direct capital requirement into a risk weighted assets equivalent. This is done by multiplying the dollar amount of the calculated capital charge by a 12.5 conversion factor – the reciprocal of the 8 percent minimum capital requirement.

The BCBS announce in May, 2007 that it has launched an initiative to review the definition of regulatory capital, due to advances in economic capital management and markets for capital instruments (and in particular, markets for hybrid capital instruments). The Definition of Capital subgroup will evaluate the current definition of capital and determine how market participants value the equity-like characteristics of capital instruments, and the ability of such instruments to absorb losses. The subgroup will also consider accounting and the relationships between regulatory capital definitions and bank definitions in their internal economic capital models.

Pillar 2: Supervision

The second pillar of the Basel II Accord, supervisory review, outlines several principles highlighting the need for banks to assess their capital adequacy positions relative to risk, and the need for supervisors to review and take appropriate actions in response to those assessments such as requiring additional buffer capital given the risk profile of the institution. While the Final Rule primarily focuses on the first pillar, minimum capital requirements, there are significant provisions within the rule which require supervisory review.

The agencies intend that banks adopting the advanced approaches possess the highest level and quality of internal risk measurement and management systems. Not only must these banks develop and maintain qualifying loss and default data for portfolios subject to the IRB framework, but those measurement systems must be subject to strict internal control processes, stress testing and validation programs, independent review and oversight, and other qualitative standards.

Similar standards are required for the measurement and management of operational risk. Clearly, a capital standard is not the sole or complete solution to address operational risks. As described in the Final Rule, the advanced measurement approach for determining a capital charge for operational risk will depend heavily upon supervisory judgment. Active federal supervision, independent auditors, effective internal controls and strong bank management are obvious key components. The AMA is as much about promoting these objectives as it is about computing explicit capital charges.

In February, 2007, the Agencies issued proposed guidance for a bank's internal capital adequacy assessment process (ICAAP) and the process for a comprehensive supervisory assessment of capital adequacy.[13] A bank's primary Federal supervisor will assess the bank's overall capital adequacy and will take into account a bank's ICAAP, its compliance with the minimum capital requirements set forth in this rule, and all other relevant information. The primary Federal supervisor will require a bank under its jurisdiction to increase its capital levels if the supervisor determines that current levels are deficient or some element of the bank's business practices suggests the need for more capital. In addition, a primary Federal supervisor may, under its enforcement authority, require a bank to modify or enhance risk management and internal control authority, or

[13] 72 FR 9189, February 28, 2007.

reduce risk exposures, or take any other action as deemed necessary to address identified supervisory concerns.

Pillar 3: Disclosures

Market discipline is a key component of the Basel II Accord. Under the third pillar, disclosure requirements are established to allow market participants to assess key information about an institution's risk profile and its associated level of capital, provide for comparability of risk elements, and at the same time allow bank management adequate flexibility. Increased disclosures, especially regarding a bank's use of the AIRB approach for credit risk and the AMA for operational risk are intended to allow an institution's private sector stakeholders to more fully evaluate the institution's financial condition, including its capital adequacy. This greater transparency is critical in order to foster the development of a significant amount of market discipline.

The Final Rule would require the top-tier legal entity at the global, consolidated level – either the top-tier banking holding company or depository institution, if not under a holding company structure — to make certain mandatory disclosures on a quarterly basis. The Final Rule's specification of disclosures at the global, consolidated level was a change from the NPR in response to commenters who believed that disclosures for foreign-owned U.S. banks or bank holding companies at the national level would have little meaning and potentially produce confusion among readers. The Final Rule also would require one or more senior officers of the bank to attest that the disclosures meet the Agencies' requirements.

In addition to disclosing risk-based capital ratios and their components, the reporting entity must also report other information that is designed to enable market participants to better evaluate the banks' capital structure, risk exposure, risk management performance, and capital adequacy. To further enhance transparency, the reporting entity is encouraged to place all disclosures made over the last three years in a single location on the bank's public website.

The Final Rule requires each reporting entity to have a formal disclosure policy that is approved by the board of directors. This policy must provide for effective internal controls and disclosure controls and procedures to ensure that appropriate verification of the disclosure takes place.

Separately from this Final Rule the agencies will require IDIs and holding companies to report certain supporting details of their risk-based capital calculations on their quarterly reports of financial condition and income filed with the Federal banking agencies. Finally, separately from this Final Rule the Agencies will collect on a confidential basis, from each IDI and holding company adopting the new framework, more detailed data supporting the capital calculations for each type of exposure. Such information would be shared among the Agencies and used for purposes of benchmarking, analyzing trends and promoting consistency in the implementation of these proposals.

In the NPR, the Agencies proposed that a bank that fell out of compliance with the qualification requirements would be required to disclose publicly its noncompliance with the qualification requirements. Commenters objected to this requirement, noting that it is not one of the public disclosure requirements of the New Accord. The Agencies have determined that the public disclosure of noncompliance is not always necessary, because the disclosure may not reflect the degree of noncompliance. Therefore, the Final Rule does not include a general noncompliance disclosure requirement. However, a bank's material noncompliance with the qualification requirements is an important factor in market participants' assessments of a bank's risk profile. Under the Final Rule a primary Federal supervisor may require public disclosure of material noncompliance with the qualification requirements.

Domestic Implementation and Timeline

The Final Rule identifies three types of U.S. banking organization: institutions subject to the Final Rule on a mandatory basis (core banks); institutions not subject to the Final Rule on a mandatory basis, but that choose to voluntarily apply those approaches (opt-in banks); and institutions that are not subject to and do not apply the Final Rule (general banks). In general a core bank is defined as a depository institution with consolidated total assets of $250 billion or more, with consolidated on-balance sheet foreign exposure of $10 billion or more, or a subsidiary of a bank or bank holding company that applies the Final Rule.

Both core and opt-in banks would be required to comply with all qualification standards concerning the internal ratings systems used to measure credit and operational risk exposures and would be subject to supervisory requirements for risk management before being able to apply the Final Rule for regulatory capital calculation purposes. Also, under the Final Rule, all U.S. institutions would continue to calculate the numerator of the regulatory risk-based capital ratios in a manner substantially similar to the way it is currently calculated. Except for the adjustment based on the difference between EL and ALLL described above, and a few new capital deductions required for advanced banks, the elements of capital would be unchanged under the Final Rule.

In addition, notwithstanding the presumptive requirement that all IDI subsidiaries adopt Basel II if their holding company is adopting Basel II, any such IDI may request an exemption from its primary Federal supervisor from the requirement to adopt Basel II. The primary supervisor may grant such a request based on factors such as the size, complexity or risk profile of the IDI. It is anticipated any such requests would be carefully considered to ensure that banking organizations are not “cherry picking” the framework by requesting exemptions for the purpose of selectively applying capital regimes across IDIs in order to minimize regulatory capital requirements.

As indicated earlier, all insured banks would continue to comply with the existing leverage ratio requirements under existing Prompt Corrective Action (PCA) legislation and implementing regulations. Specifically, to be considered well-capitalized under PCA, a bank must have at least a 10 percent total risk-based capital ratio, a 6 percent tier 1 risk-based capital ratio, and a 5 percent leverage ratio. The leverage ratio is the ratio of Tier 1 capital to average total assets. These and other PCA categories will not change.

Under the Final Rule, all banks would need to submit an implementation plan for approval to their primary supervisors and complete a parallel run of at least four consecutive quarters before they would be allowed to apply the Final Rule for purposes of determining minimum regulatory capital requirements. During parallel run, the bank would remain subject to the general risk-based capital rules, including ratios required for PCA, but would also be required to calculate its capital ratios using the advanced approaches included in the Final Rule.

The bank's primary Federal regulator would have responsibility for determining its readiness to apply an advanced approach and is ultimately responsible, after consultation with other relevant supervisors, for determining whether the institution satisfies the qualifying criteria for the AIRB and AMA. The Agencies recognize that interagency consistency in implementing the advanced approaches will be important to the ultimate success of any final standards to be implemented and they are developing a uniform set of validation standards and procedures that would ensure consistency.

The bank's primary federal regulator would notify the bank of the date that it may begin using the advanced approaches for determining risk-based capital requirements. However, the Final Rule imposes three transitional floor periods which limit the amount by which capital may decline under the advanced approaches of the Final Rule relative to the general risk-based capital rules. The bank's primary federal regulator will inform the bank when it may move from one transitional floor period to the next, and, after the Agencies release a study finding no material deficiencies with the framework that cannot be addressed with then-existing tools, when it may exit the final transitional floor period.

During the initial transitional floor period for a core or opt-in bank, the bank would be required to calculate its risk-weighted assets under the general risk-based capital rules and multiply by the appropriate transitional floor percentage provided in Table 1. The resulting "floor-adjusted" risk-weighted assets would then be used as the denominator for purposes of determining risk-based capital ratios using the general risk-based capital rules. The resulting capital ratios would be compared against the capital ratios determined under the Final Rule; with the lower of the ratios binding for risk-based capital and PCA purposes. Banks that do not opt-in to the Final Rule at the earliest possible date may use the general risk based capital rules or the Standardized Approach for their transitional floor calculations.

Table 1

Transitional Floor Period	Transitional Floor Percentage
First Floor Period	95 Percent
Second Floor Period	90 Percent
Third Floor Period	85 Percent

For core banks, and banks that opt in to the Final Rule at the earliest possible date, the transitional floors will be determined using the general risk-based capital rules without consideration of any changes to the risk-based capital rules that may be enacted by the Standardized Approach.

Attachments