

# **KEY ASPECTS OF THE PROPOSED RULE ON RISK-BASED CAPITAL STANDARDS: *ADVANCED CAPITAL ADEQUACY FRAMEWORK***

## **I. Introduction**

The attached interagency NPR is based on the new capital accord entitled "International Convergence of Capital Measurement and Capital Standards: A Revised Framework" (Basel II or New Capital Accord) published in June 2004 by the Basel Committee on Banking Supervision (BCBS or Basel Committee). The NPR explains how the U.S. banking and thrift agencies (Agencies) propose to adopt the advanced internal ratings-based approaches to assessing credit risk capital charges and the advanced measurement approaches to assessing operational risk capital charges. The use of these approaches would be required by a core group of large and internationally active U.S. banking institutions and allowed by a select group of other banks that, on an opt-in basis, are able to qualify for the framework.

The NPR describes 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 NPR. 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 NPR would require some capital for these items. The NPR also contains a capital charge for operational risk whereas the current rules do not. Moreover, under the NPR a bank's capital requirement potentially varies continuously with the measured risk it assigns to its credit exposures, as opposed to the current rules that require the same capital for all exposures fitting within broadly defined risk buckets. Other things equal, these aspects of the NPR are more risk-sensitive than the current rules.

However, there are potentially significant issues with the NPR framework that may yet need to be addressed. The reduction in capital requirements suggested by the most recent U.S. quantitative impact study of the proposed framework was both substantial from a safety-and-soundness perspective. Interagency analysis revealed that banks assigned substantially different capital requirements to similar or even identical credit exposures, which complicates the assessment of the risk-sensitivity of the framework. Finally, substantial differences in risk-based capital requirements between banks adopting this framework, and those that do not, could have unintended competitive effects.

In recognition of such concerns, the Agencies are proposing to implement the advanced approaches under controlled conditions and safeguards that allow time for further work, and are intended to ensure capital outcomes that are consistent with the Agencies' objectives.

The New Capital Accord allows three options for calculating capital requirements, which includes an Advanced Internal Ratings Based Approach which has been proposed in this NPR, and a Standardized Approach. Recently, the Agencies

received written requests to allow core banks to use the Standardized Approach. This NPR includes a request for comments on the use of credit and operational risk capital requirements similar to those provided under the New Accord, including a U.S. version of the Standardized Approach that could take the form of the forthcoming Basel 1A proposal.

## **II. The New Capital Accord**

On August 4, 2003, the Agencies issued an advance notice of proposed rulemaking<sup>1</sup> (ANPR) that sought public comment on selected regulatory capital approaches contained in the Basel Committee's Third Consultative Paper<sup>2</sup>. 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 June 2004, the Basel Committee published the New Capital Accord. This version, that has since become variously known as the midyear text, final text or revised framework required risk-weighted assets to be computed only for "unexpected losses." It included a single scaling factor of 1.06 that would multiply each bank's credit risk capital requirements (intended to ensure the capital impact of the change would be approximately neutral relative to the QIS-3 results<sup>3</sup>). 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 New Capital Accord 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 new way of modeling exposures to counterparty credit risk. This new work was conducted by a joint task force comprised of representatives of the Basel Committee and the International Organization of Securities Commissions (Basel-IOSCO) and published by the Basel Committee in July 2005<sup>4</sup>. The Basel-IOSCO proposals are incorporated in this NPR and the market risk NPR that has been published simultaneously with this NPR.

In late 2004 and early 2005, the Agencies conducted a quantitative impact study (QIS-4)<sup>5</sup> to examine the potential effect of the New Capital Accord on minimum regulatory capital requirements at the largest banks in the United States. The QIS-4 did not include an assessment of the additional Basel-IOSCO work referenced above. The

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<sup>1</sup> 68 FR 45900 (August 4, 2003).

<sup>2</sup> BCBS, "Basel II: The New Basel Capital Accord - Third Consultative Paper," April 2003.

<sup>3</sup> BCBS, "QIS 3: Third Quantitative Impact Study," May 2003.

<sup>4</sup> BCBS, "The Application of Basel II to Trading Activities and the Treatment of Double Default Effects," July 2005.

<sup>5</sup> See "Summary Findings of the Fourth Quantitative Impact Study," February 24, 2006.

results of the QIS-4 exercise indicated that the New Capital Accord 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 New Capital Accord, 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.

The overall capital objectives described in the NPR are, in brief:

- Broad maintenance of the overall level of risk-based capital requirements;
- A 10 percent downward limit on aggregate reductions in minimum risk-based capital requirements;
- 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 leverage ratio and prompt corrective action.

The proposed rule describes a three pillar approach to capital regulation. Pillar 1 consists of regulatory capital requirements. Pillar 2 is supervision, and includes descriptions of the types of internal controls and systems banks adopting the new framework are expected to have in place. Pillar 3 is transparency, and includes a set of public disclosures that would be required of banking organizations adopting the framework.

#### **A. Pillar 1: Minimum Risk-Based Capital Requirements**

It is important to clarify that 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.<sup>6</sup> The leverage and PCA requirements would be unaffected by this proposed 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. The framework described in this NPR changes the current framework for calculating capital requirements for credit risk, and adds a requirement for banks to compute a capital

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<sup>6</sup> Statutory PCA requirements apply only to insured depository institutions, not their corporate owners. See 12 USC 1831o.

requirement for operational risk. The mechanism for computing credit-risk capital is called the advanced internal ratings-based approach (A-IRB) 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 and strategic or business risk, are excluded both from this proposed framework of risk-based capital requirements, and from the current risk-based capital requirements.

The risk-based capital proposals in this proposal would, collectively, greatly increase the complexity of the risk-based capital calculation for affected banks. The proposed requirements for insured depository institutions (IDIs) to report on the details of those capital calculations in both their Call Reports, and to report on a confidential basis to the Agencies, are described in another Federal Register notice. Finally, as the implementation of much of this proposed rule would be judgment-driven, supervisory guidance on the implementation of the A-IRB and AMA approaches would be an integral part of the overall framework. Such guidance is expected to be published for comment later this year.

***Credit Risk.*** The Proposed Rule provides for the use of the A-IRB approach for determining risk-based capital requirements for credit risks. The A-IRB 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 (supervisory formulas). The supervisory formulas identify the amount of risk-weighted assets that are required for each exposure or pool of exposures. The minimum capital requirement is then, by definition, eight percent of the risk-weighted asset amount.

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.

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 framework 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.

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 downturn conditions if this is likely to exceed a through the cycle default-weighted average. The portion of the LGD that is the through-the-cycle default weighted average is called the expected loss given default, or ELGD. Thus, LGD equals ELGD plus whatever incremental loss, if any, would be expected to be experienced during downturn conditions. LGD estimates are expected to be supported by data or other analysis; banks that supervisors deem unable to estimate the effects of downturn conditions on LGD would be required to add a predefined amount to their ELGDs using a so-called "wedge function" described in the NPR.

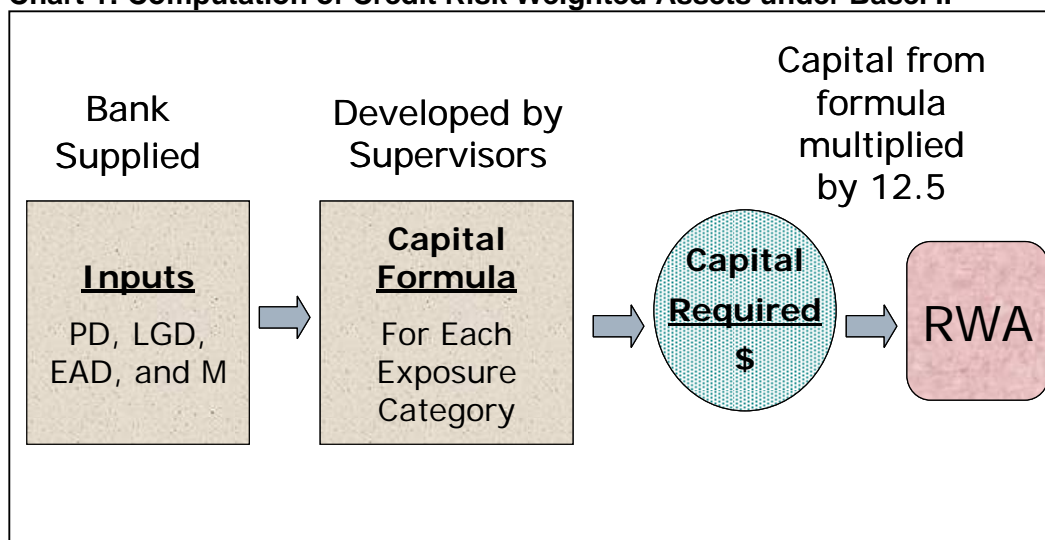
For wholesale loans, the maturity (M) of the exposure is another important determinant of the regulatory capital requirement.

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 ELGD. For example, consider a pool of subprime credit card loans with an EAD of \$100. 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 than 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.

The determination of capital requirements for credit risk is summarized schematically in Chart 1. The bank estimates its risk inputs, feeds them into a formula, and the formula determines the capital requirement. The NPR contains five separate formulas for determining risk-weighted assets for credit risk, depending on the particular type of credit. The five formulas cover:

- wholesale lending;
- high volatility commercial real estate lending;
- residential mortgage lending;
- qualifying revolving retail lending (e.g., credit cards); and
- other retail lending.

**Chart 1: Computation of Credit Risk Weighted Assets under Basel II**



Memorandum:  $EL = PD \times ELGD \times EAD$ ; M is not required for Retail Exposures

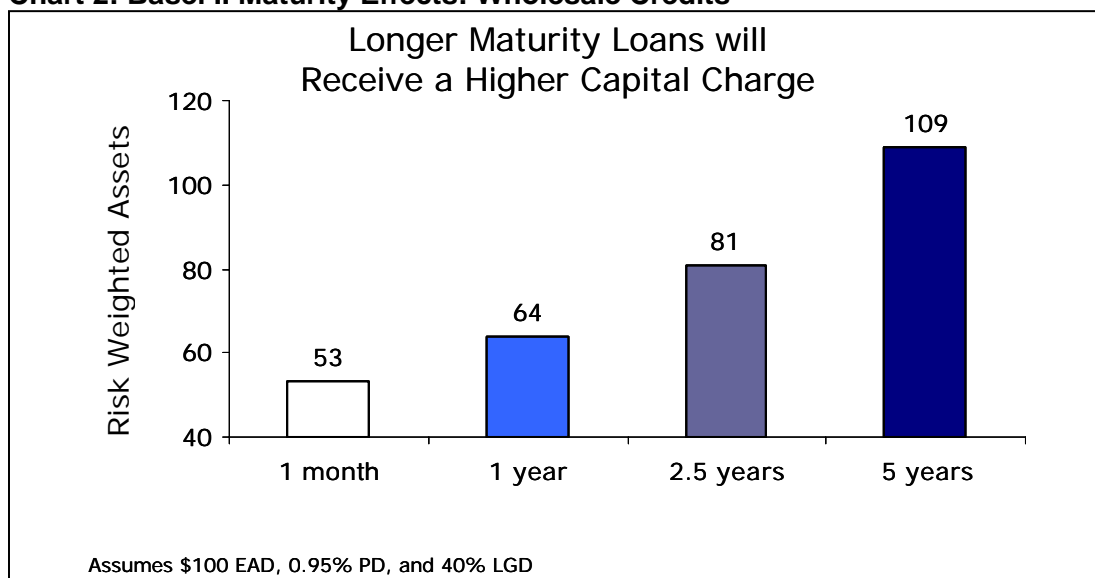
Table 1 shows the capital required per \$100 of wholesale lending exposure for various combinations of PD and LGD (assuming a maturity of 2.5 years). An \$8 requirement corresponds to the current rules. The table illustrates that capital requirements for wholesale lending under the NPR can range from much less than the current requirements to much more, depending on the PDs and LGDs used as inputs to the calculations. Table 2 considers only PD and LGD without considering the effects of maturity; Chart 2 shows that the effects of maturity on the capital requirement are material.

**Table 1: Wholesale UL Capital Requirement**

PD	Loss Given Default							
	10%	20%	30%	40%	50%	60%	70%	80%
0.03%	0.26	0.51	0.77	1.03	1.28	1.54	1.80	2.05
0.05%	0.35	0.70	1.05	1.40	1.75	2.10	2.45	2.79
0.10%	0.53	1.05	1.58	2.11	2.64	3.16	3.69	4.22
0.25%	0.88	1.76	2.64	3.52	4.40	5.28	6.16	7.04
0.50%	1.24	2.48	3.71	4.95	6.19	7.43	8.66	9.90
1.00%	1.64	3.28	4.92	6.56	8.21	9.85	11.49	13.13
2.00%	2.04	4.08	6.13	8.17	10.21	12.25	14.29	16.33
5.00%	2.66	5.33	7.99	10.66	13.32	15.98	18.65	21.31

Assumed maturity is 2.5 years, \$100 exposure. EL adjustments are not depicted; shaded cell represents dollar-weighted average capital requirement reported by QIS-4 participants.

**Chart 2: Basel II Maturity Effects: Wholesale Credits**



Tables 2 –5 show capital required per \$100 of exposure for the four other exposure types (high volatility commercial real estate, mortgage lending, revolving credit, and other retail).

**Table 2: High Volatility Commercial Real Estate UL Capital Requirement**

PD	Loss Given Default							
	10%	20%	30%	40%	50%	60%	70%	80%
0.03%	0.35	0.70	1.05	1.39	1.74	2.09	2.44	2.79
0.05%	0.47	0.95	1.42	1.89	2.37	2.84	3.31	3.78
0.10%	0.71	1.41	2.12	2.83	3.54	4.24	4.95	5.66
0.25%	1.15	2.30	3.46	4.61	5.76	6.91	8.06	9.21
0.50%	1.57	3.14	4.71	6.28	7.85	9.42	10.98	12.55
1.00%	1.98	3.96	5.95	7.93	9.91	11.89	13.88	15.86
2.00%	2.31	4.61	6.92	9.23	11.53	13.84	16.15	18.45
5.00%	2.74	5.49	8.23	10.98	13.72	16.47	19.21	21.96

Assumed maturity is 2.5 years, \$100 exposure. EL adjustments are not depicted; shaded cell represents dollar-weighted average capital requirement reported by QIS-4 participants.

**Table 3: Residential Real Estate UL Capital Requirement**

PD	Loss Given Default							
	10%	20%	30%	35%	40%	50%	60%	70%
0.03%	0.07	0.15	0.22	0.26	0.30	0.37	0.44	0.52
0.05%	0.11	0.22	0.33	0.39	0.44	0.55	0.66	0.78
0.10%	0.19	0.38	0.57	0.67	0.76	0.95	1.14	1.33
0.25%	0.38	0.76	1.14	1.33	1.51	1.89	2.27	2.65
0.50%	0.62	1.25	1.87	2.18	2.49	3.12	3.74	4.37
1.00%	1.00	2.01	3.01	3.51	4.01	5.01	6.02	7.02
2.00%	1.56	3.13	4.69	5.47	6.25	7.82	9.38	10.94
5.00%	2.64	5.27	7.91	9.22	10.54	13.18	15.81	18.45

Assumed \$100 exposure. EL adjustments are not depicted; shaded cell represents dollar-weighted average capital requirement reported by QIS-4 participants.

**Table 4: Qualifying Revolving Exposures UL Capital Requirement**

PD	Loss Given Default							
	60%	65%	70%	75%	80%	85%	90%	95%
0.75%	1.47	1.59	1.72	1.84	1.96	2.09	2.21	2.33
1.25%	2.18	2.36	2.54	2.72	2.90	3.08	3.26	3.45
2.00%	3.09	3.34	3.60	3.86	4.11	4.37	4.63	4.88
2.75%	3.88	4.20	4.53	4.85	5.17	5.49	5.82	6.14
3.25%	4.36	4.72	5.09	5.45	5.82	6.18	6.54	6.91
4.00%	5.03	5.45	5.87	6.29	6.71	7.13	7.55	7.96
5.00%	5.84	6.33	6.81	7.30	7.79	8.27	8.76	9.25
10.00%	8.95	9.69	10.44	11.19	11.93	12.68	13.42	14.17

Assumed \$100 exposure. EL adjustments are not depicted; shaded cell represents dollar-weighted average capital requirement reported by QIS-4 participants.

**Table 5: Other Retail UL Capital Requirement**

PD	Loss Given Default							
	20%	30%	40%	45%	50%	60%	70%	80%
0.25%	0.75	1.13	1.50	1.69	1.88	2.26	2.63	3.01
0.50%	1.15	1.73	2.30	2.59	2.88	3.45	4.03	4.60
0.75%	1.43	2.14	2.85	3.21	3.56	4.28	4.99	5.70
1.50%	1.90	2.85	3.80	4.27	4.74	5.69	6.64	7.59
2.00%	2.06	3.09	4.12	4.64	5.15	6.19	7.22	8.25
2.50%	2.17	3.25	4.33	4.87	5.41	6.50	7.58	8.66
3.00%	2.23	3.35	4.47	5.02	5.58	6.70	7.81	8.93
5.00%	2.36	3.54	4.72	5.31	5.90	7.08	8.26	9.45

Assumed \$100 exposure. EL adjustments are not depicted; shaded cell represents dollar-weighted average capital requirement reported by QIS-4 participants.

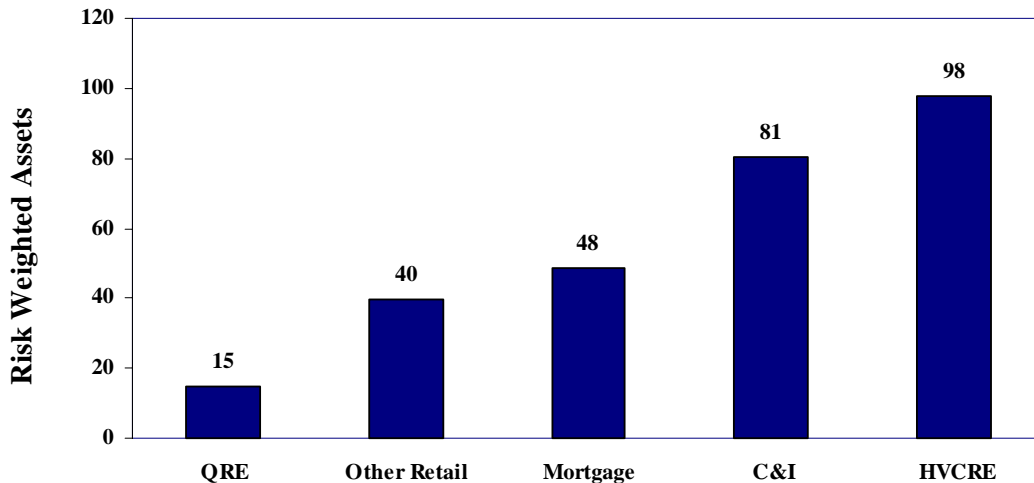
Chart 3 shows that the exposure type itself is an important determinant of capital requirements. If we fix the PD, LGD and maturity for an exposure<sup>7</sup>, the capital

<sup>7</sup> In practice PD and LGD are not likely to be constant across exposure types. LGDs will tend to be high for credit cards; PDs and LGDs may tend to be low for mortgages. For credit cards in particular, how the banks implement the NPR capital requirement for undrawn balances may overwhelm all other factors in importance, and this effect appears to mean that credit card capital requirements would increase significantly under the NPR proposals.



requirement will depend greatly on how the exposure is classified. For the PD and LGD pair that is held fixed for purposes of Chart 3, high volatility commercial real estate requires the most capital, followed in descending order by wholesale lending, residential mortgages, other retail and qualifying revolving credit.

**Chart 3: Exposure Type Can Have a Material Effect on RWA Calculations**



Assumes \$100 EAD, 0.95% PD, 40% LGD, and also a 2.5 yr M for C&I and HVCRE  
 Note: Higher PD/LGD associated with most QRE loans will result in much higher RWA than depicted

Each A-IRB supervisory function makes different assumptions about the correlations of defaults for the relevant type of exposure. These assumed asset value correlations, or AVCs, determine how much capital A-IRB will require for any given bank-assigned risk inputs. The AVC assigned to a given portfolio of exposures is an estimate of the degree to which any unanticipated changes in the financial conditions of the underlying obligors of the exposures are correlated (that is, would likely move up and down together). High correlation of exposures in a period of economic downturn conditions is an area of supervisory concern. For a portfolio of exposures having the same risk parameters, a larger AVC implies less diversification within the portfolio, greater overall systematic risk, and, hence, a higher risk-based capital requirement. For example, a 15 percent AVC for a portfolio of residential mortgage exposures would result in a lower risk-based capital requirement than a 20 percent AVC and a higher risk-based capital requirement than a 10 percent AVC.

**Operational Risk.** The Proposed 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 distributional 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<sup>th</sup> 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.

The NPR also includes options for the calculation of operational risk capital that are intended to balance two critical competing objectives associated with implementing the AMA. The first objective is that the capital held by an FDIC-insured bank should be adequate for the risk profile of that bank, consistent with the ultimate accountability of the management and directors of the bank for governing the institution in a safe-and-sound manner. The second objective is to avoid the excessive costs that would arise for banking organizations if a stand-alone AMA were required at each and every insured bank. These two objectives are competing: a single centralized risk calculation that is allocated to individual banks may not meet the first objective, while an elaborate and customized calculation tailored to each bank may not meet the second objective.

The NPR offers the option to IDIs of developing an alternative approach to calculating its operational risk capital requirement. Such alternative approaches are not defined but could include, for example, calculation of an AMA for a pool of insured institution subsidiaries, or use of a simpler approach to the operational risk capital calculation involving percentages of income, such as Basel II makes available to banks outside the United States.

## **B. Pillar 2: Supervision**

The second pillar of the New Capital 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 Proposed Rule primarily focuses on the first pillar, minimum capital requirements, there are significant provisions within the rule which require supervisory review.

Banks adopting the advanced approaches must 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 Proposed 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.

### **C. Pillar 3: Disclosures**

Market discipline is a key component of the New Capital 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 A-IRB 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 market discipline.

The Proposed Rule would require the top-tier legal entity – 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. All disclosures must be certified by the chief financial officer of the reporting entity. 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.

Finally, the Proposed 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.

The Agencies also are proposing to 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, the Agencies are proposing to 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. Details are provided in the Agencies' joint initial Paperwork Reduction Act Federal Register notices, published separately today.

#### **D. Domestic Implementation and Timeline**

The NPR identifies three types of U.S. banking organization: institutions subject to the Proposed Rule on a mandatory basis (core banks); institutions not subject to the Proposed 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 Proposed 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 Proposed 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 Proposed Rule for regulatory capital calculation purposes. Also, under the Proposed Rules, all U.S. institutions would continue to calculate the numerator of the regulatory risk-based capital ratios in a manner similar to the way it is currently calculated. Thus, the elements of capital would be generally unchanged under the Proposed 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.

The Agencies are also considering possible modifications to the general risk-based capital rules. These possible revisions, referred to as Basel IA, are intended to introduce enhanced risk sensitivity into the general risk-based capital framework and to reduce competitive inequities between those banks that apply Basel II and non-Basel II banks. In October 2005, the Agencies published the Basel IA ANPR in the Federal Register for a 90-day public comment period that ended in mid-January 2006.<sup>8</sup> The Agencies are currently analyzing the comments received and considering alternatives for a more fully developed proposal that can be published in NPR form later in 2006. The Agencies have committed to publishing the Basel IA NPR soon after the publication of this NPR so that there will be a meaningful overlap in their comment periods.

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<sup>8</sup> 70 FR 61068 (October 20, 2005).

It is important to note that 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 Proposed 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 Proposed Rule for purposes of determining minimum regulatory capital requirements. The earliest date that a bank may begin a parallel run would be January 1, 2008. During parallel run, the bank would remain subject to the general risk-based capital rules, but would also be required to calculate its capital ratios using the advanced approaches included in the Proposed Rule.

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 Proposed Rule imposes three transitional floor periods which limit the amount by which capital may decline under the advanced approaches of the Proposed 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, when a bank is operating under the final floor period, when it may exit the transitional floor requirement.

**Table 6**

<b>Transitional Floor Period</b>	<b>Transitional Floor Percentage</b>
First Floor Period	95 Percent
Second Floor Period	90 Percent
Third Floor Period	85 Percent

During the transitional floor periods, 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 6. 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 Proposed Rule; with the lower of the ratios binding for risk-based capital and PCA purposes.

For core banks, and banks that opt in to the Proposed Rule at the earliest possible date, the transitional floors will be determined using the general risk-based capital rules without consideration to any modifications that may be enacted by Basel IA. Banks that opt in to the Proposed Rule at a later date may calculate transitional floors using the general risk-based capital rules as modified by Basel IA.

### III. Potential Regulatory Concerns

The FDIC believes there are three issues that could have a bearing on the ultimate desirability of implementing the Proposed Rule: (1) the impact of adopting the advanced approaches on capital levels at individual U.S. institutions and the domestic banking industry as a whole; (2) competitive implications of a bifurcated capital framework; and (3) the potential under this framework for there to be wide variations in required capital for similar risk exposures held at different Basel II banks.

#### A. Capital Adequacy

After the Basel Committee published the New Capital Accord, the Agencies conducted the additional quantitative impact study referenced earlier, 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 results showed a substantial dollar-weighted average decline and variation in risk-based capital requirements across the 26 participating U.S. banks and their portfolios.<sup>9</sup> In an April 2005 press release,<sup>10</sup> the Agencies expressed their concern about the magnitude of the drop in QIS-4 risk-based capital requirements and the dispersion of those requirements and decided to undertake further analysis.

As indicated in Table 7, QIS-4 participants reported a dollar-weighted average reduction of 15.5 percent in risk-based capital requirements at participating banks when moving from the current Basel I-based framework to a Basel II-based framework.<sup>11</sup> The median decline in capital requirements was 26 percent. The dollar-weighted average decline in tier 1 capital requirements was 22 percent, and the median decline in tier 1 capital requirements was more than 31 percent.

**Table 7**

#### **QIS-4 Estimates Show Large Reductions in Risk-Based Capital Requirements**

<b>Percentage Change in:</b>	<b>Weighted Average</b>	<b>Median</b>
Total Capital Requirement	-15.5%	-26.3%
Tier 1 Capital Requirement	-21.8%	-30.8%

<sup>9</sup> Since neither an NPR and associated supervisory guidance nor final regulations implementing a Basel II-based framework had been issued in the United States at the time of data collection, all QIS-4 results relating to the U.S. implementation of Basel II are based on the description of the framework contained in the QIS-4 instructions. These instructions differed from the framework issued by the BCBS in June 2004 in several respects. For example, the QIS-4 articulation of the Basel II framework does not include the 1.06 scaling factor. The QIS-4 instructions are available at <http://www.ffiec.gov/qis4>.

<sup>10</sup> See “Banking Agencies to Perform Additional Analysis Before Issuing Notice of Proposed Rulemaking Related to Basel II,” April 29, 2005.

<sup>11</sup> The Basel II framework on which QIS-4 is based uses a UL-only approach (even though EL requirements were included in QIS-4). But the current Basel I risk-based capital requirements use a UL+EL approach. Therefore, in order to compare the Basel II results from QIS-4 with the current Basel I requirements, the EL requirements from QIS-4 had to be added to the UL capital requirements from QIS-4.

QIS-4 participants reported significantly lower capital requirements for all exposure categories except revolving retail credit (credit cards), equities and OTC derivatives. Table 8 provides a numerical summary of the QIS-4 results, in total and by portfolio, aggregated across all QIS-4 participants.<sup>12</sup> The first column shows changes in dollar-weighted average minimum required capital (MRC) both by portfolio and overall, as well as in dollar-weighted average overall effective MRC. Column 2 shows the relative contribution of each portfolio to the overall dollar-weighted average decline of 12.5 percent in MRC, representing both the increase/decrease and relative size of each portfolio. The table also shows (column 3) that risk-based capital requirements declined by more than 26 percent in half the banks in the study. Most portfolios showed double-digit declines in risk-based capital requirements for over half the banks, with the exception of credit cards. It should be noted that column 3 gives every participating bank equal weight. Column 4 shows the analogous weighted median change, using total exposures as weights.

**Table 8**

<b>QIS-4 Results: Changes in Minimum Required Capital</b>						
<b>Portfolio</b>	<b>Column 1: % Change in Portfolio MRC</b>	<b>Column 2: % Point Contrib. to MRC Change</b>	<b>Column 3: Median % Change in Port. MRC</b>	<b>Column 4: Weighted Median % Chg in Port. MRC</b>	<b>Column 5: Share of Basel I MRC</b>	<b>Column 6: Share of Basel II MRC*</b>
<b>Wholesale Credit</b>	<b>(24.6%)</b>	<b>(10.9%)</b>	<b>(24.5%)</b>	<b>(21.6%)</b>	<b>44.3%</b>	<b>38.2%</b>
Corporate, Bank, Sovereign	(21.9%)	(7.4%)	(29.7%)	(13.5%)	33.9%	30.3%
Small Business	(26.6%)	(1.2%)	(27.1%)	(24.8%)	4.6%	3.9%
High Volatility CRE	(33.4%)	(0.6%)	(23.2%)	(42.4%)	1.8%	1.3%
Income Producing RE	(41.4%)	(1.7%)	(52.5%)	(52.4%)	4.0%	2.7%
<b>Retail Credit</b>	<b>(25.6%)</b>	<b>(7.8%)</b>	<b>(49.8%)</b>	<b>(28.7%)</b>	<b>30.6%</b>	<b>26.0%</b>
Home Equity (HELOC)	(74.3%)	(4.6%)	(78.6%)	(76.8%)	6.1%	1.8%
Residential Mortgage	(61.4%)	(6.8%)	(72.7%)	(64.4%)	11.1%	4.9%
Credit Card (QRE)	66.0%	4.0%	62.8%	72.2%	6.1%	11.6%
Other Consumer	(6.5%)	(0.4%)	(35.2%)	(18.3%)	6.0%	6.4%
Retail Business Exposures	(5.8%)	(0.1%)	(29.2%)	11.6%	1.2%	1.3%
Equity	6.6%	0.1%	(24.4%)	9.6%	1.3%	1.6%
Other assets	(11.7%)	(1.2%)	(3.2%)	(11.6%)	10.0%	10.1%
Securitization	(17.9%)	(1.4%)	(39.7%)	(45.8%)	8.1%	7.6%
<b>Operational Risk</b>		<b>9.2%</b>			<b>0.0%</b>	<b>10.5%</b>
Trading Book	0.0%	0.0%	0.0%		5.2%	5.9%
<b>Change in MRC</b>	<b>(12.5%)</b>	<b>(12.5%)</b>	<b>(23.8%)</b>	<b>(17.1%)</b>	<b>100.0%</b>	<b>100.0%</b>
<b>Change in Effective MRC</b>	<b>(15.5%)</b>		<b>(26.3%)</b>	<b>(21.7%)</b>		

\* QIS-4 interpretation of Basel II framework as articulated in QIS-4 instructions

<sup>12</sup> In the table, “Minimum required capital” (MRC) refers to the total risk-based capital requirement before incorporating the impact of reserves. “Effective MRC” is equal to MRC adjusted for the impact of reserves. As noted above, under the Basel II framework, a shortfall in reserves generally increases the total risk-based capital requirement and a surplus in reserves generally reduces the total risk-based capital requirement, though not with equal impact.

Notes to the table: The first two columns of the table show the *dollar-weighted* average percentage change in MRC by portfolio and the percentage point contribution of each portfolio to the overall average percentage change (of 12.5%). The third column shows the *unweighted* median percentage change in MRC by portfolio. The fourth column shows the *weighted* median percentage change in MRC by portfolio, weighting by total exposures at the portfolio level. The next two columns show the share each portfolio contributes to MRC, under the current framework (column 5) and the QIS-4 interpretation of Basel II as defined in the QIS-4 instructions (column 6). Entries in parentheses denote negative numbers. There are no percentage change numbers for operational risk because it is not separated out as a specific risk-based capital requirement under Basel I.

Table 9 provides some perspective on the levels of tier 1 capital that the QIS-4 results, taken at face value, indicate would be permissible under the new framework. Table 9 displays the distribution of the QIS-4 minimum tier 1 capital requirement for each of the 26 organizations as a percentage of their balance sheet assets. Table 9 highlights that minimum capital requirements reported under QIS-4 were, for almost all the participants, far less than what is required under current leverage requirements for banks and holding companies.

**Table 9**

**QIS-4 Capital Requirements Were Well Below Leverage Based Requirements**

(Minimum Tier 1 Requirements as a Percentage of On-Balance Sheet Assets)

<b>Ratio</b>	<b>Number of companies in range</b>
< 2 percent	10
2 -3 percent	10
3-4 percent	4
4-5 percent	0
> 5 percent	2
Total QIS-4 banks:	26

**B. Competitive Issues**

Table 8 above provided summary indicators of the risk weights reported in QIS-4 for various loan types. Those summary indicators do not provide a complete picture of the potential differences in capital requirements that may exist between Basel II banks and those using the general rules.

Charts 4 and 5 below illustrate the distribution of risk-weights for wholesale and residential mortgage credit exposures reported by the QIS-4 participants. The risk weights depicted in these charts do not include the effect of adjustments to the numerator of the risk-based capital ratio arising from differences between EL and reserves. Such adjustment, if included, would not materially affect the distribution of risk weights presented in these charts.



Chart 4 indicates that approximately 46 percent of the dollar value of all wholesale exposures held by the 26 participating organizations was assigned a risk weight of less than 20 percent. In total, approximately 70 percent of wholesale exposures were assigned a risk weight of 50 percent or less. The Basel 1A ANPR indicated that the Agencies are considering assigning a 100 percent risk weight to unrated commercial loans (and asked whether and how a 75 percent risk weight bucket could be defined for high quality small business loans).

#### Chart 4

**Risk Weight Distribution for Corporate, Bank, and Sovereign Exposures (drawn)  
26 QIS-4 Participants**

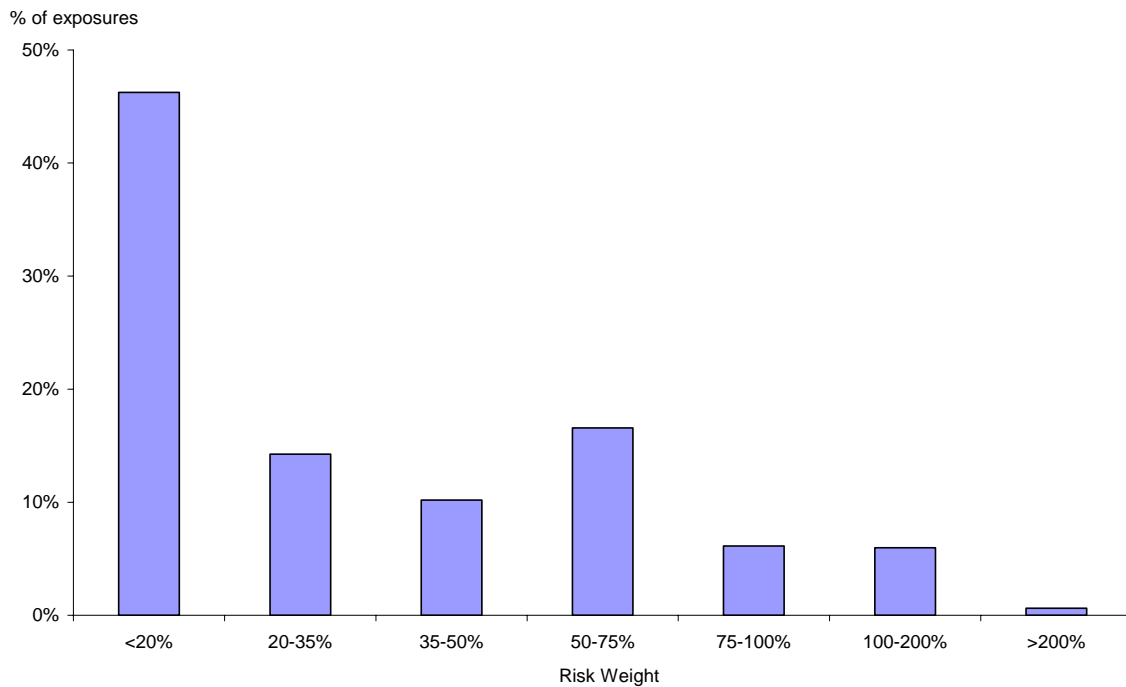
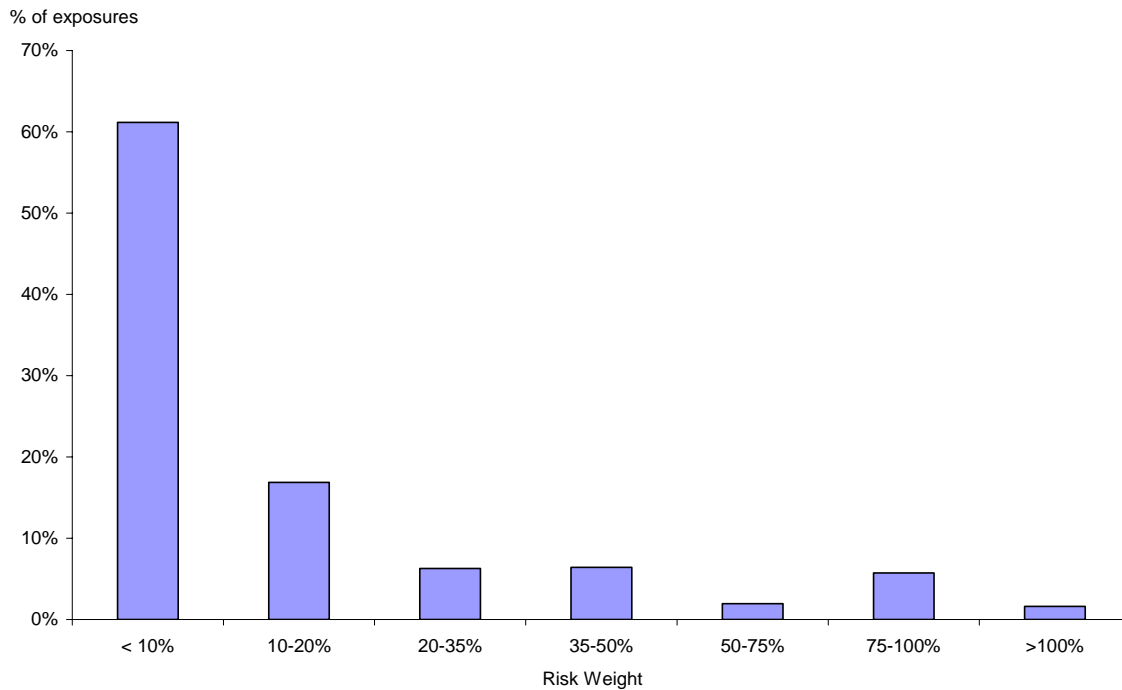


Chart 5 indicates that approximately 61 percent of the dollar value of all residential mortgage exposures held by the 26 participating organizations was assigned a risk weight of less than 10 percent. In total, approximately 84 percent of residential mortgage exposures were assigned a risk weight of less than 35 percent. The Basel 1A ANPR indicated that the Agencies were considering a schedule of risk weights for residential mortgages that ranged from 20 percent to 100 percent depending on the LTV and whether the mortgage was a first or second lien.

**Chart 5**

**Risk Weight Distribution for 1-4 Family Mortgage Exposures (drawn)  
26 QIS-4 Participants**



Similar large differences in risk weights exist for high-volatility commercial real estate loans and other retail loans, with the QIS-4 reporting much lower risk weights than the ANPR indicated that the Agencies are considering. For revolving retail loans, notably credit cards, the overall picture is reversed with the QIS-4 participants reporting higher capital charges on these exposures than the current rules require, and higher than the approaches discussed in the ANPR likely would require.

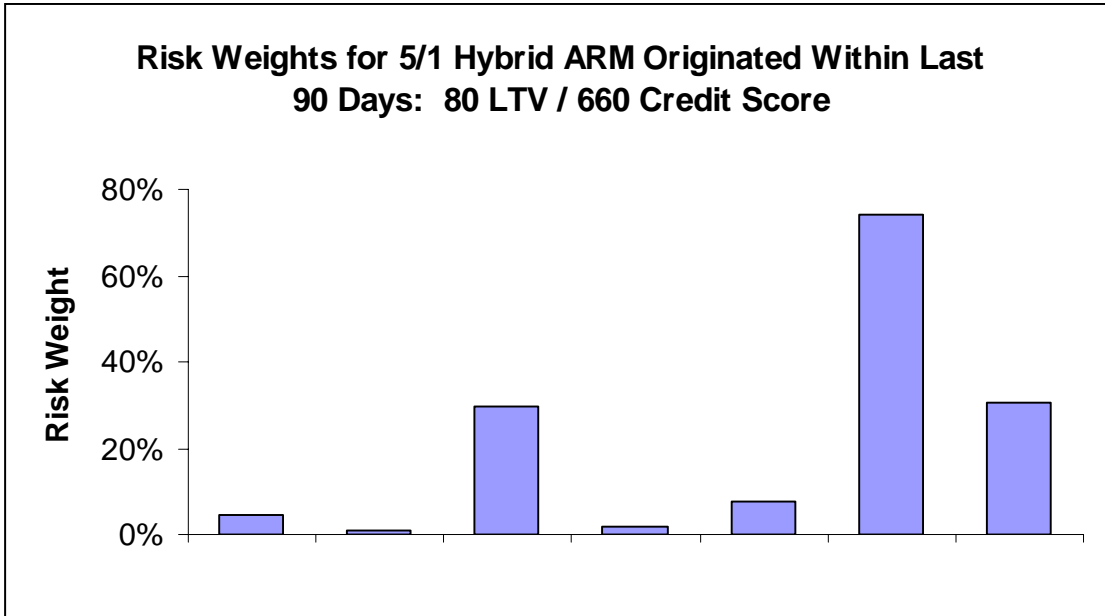
### **C. Variations in capital requirements for similar risk exposures**

The Agencies' QIS-4 analysis conducted during the summer of 2005 attempted to determine whether similar risk exposures received similar capital requirements across the participating banks. In those areas where detailed analysis was conducted the findings indicated substantial differences in capital requirements for similar exposures. This section describes those results and the tradeoffs involved with narrowing such differences in the future.

For seven participating banks, the Agencies compared the risk weights assigned to similar residential mortgage portfolios. Those portfolios were similar in average FICO score, average LTV and underwriting characteristics. The average risk weights assigned by these seven banks to these portfolios ranged from less than one percent to 74 percent (Chart 6). Differences can be attributed to different methodologies for estimating PDs and ELGDs and different approaches to estimating the effects of downturn conditions on LGD (in most but not all cases there was no allowance for the effect of downturn conditions). Some of these different methodologies reflected differences permissible

within the framework and others reflected approaches that were not in compliance with the framework.

**Chart 6**



For six participating banks, the Agencies also compared risk weights that were assigned to exposures that were part of the shared national credit program (SNCs). SNCs are participated among institutions and thus the agency analysis compared risk weights for exposures that were in fact identical. As compared with a reference bank, risk weights assigned by the other five banks on average ranged from 30 percent lower than assigned by the reference bank to 190 percent higher than those assigned by the reference bank.

The NPR allows banks significant flexibility in how they estimate PDs, LGDs and EADs. This flexibility is consistent in spirit with the premise of Basel II which is to use the information banks generate themselves to set their capital requirements. Not allowing banks to use their own estimation methodologies would go against this philosophy. The Agencies continue to emphasize to the industry that flexibility in parameter estimation methodologies remains intact.

#### **IV. Safeguards and Statement of Overall Capital Objectives**

The material presented in section III suggests that basing regulatory capital requirements on the A-IRB approach could ultimately prove to raise significant concerns and that further work with the framework may be necessary. Experience in practice may mitigate the issues that arose in the QIS-4, but the fact remains that the proposed rule is based on the same framework that produced the QIS-4 results. All of the Agencies have agreed these results were unacceptable and that future use of this framework would be, in effect, on a trial basis with refinements likely based on experience.

On account of the concerns raised by the QIS-4 results and its subsequent analysis, the Agencies have agreed to include various safeguards in the NPR that are designed to allow additional time for future changes to ensure overall capital objectives and other objectives are met. Those safeguards are:

- The delay of date that a bank may begin parallel run of the Proposed Rule by one year – from January 1, 2007 to January 1, 2008.
- The imposition of transitional floors on the amount by which a bank’s risk-based capital requirements may decline relative to the general risk-based capital rules over a period of at least three years.
- An agreement by the Agencies to view a 10 percent or greater decline in aggregate minimum required risk-based capital (without reference to the effects of the transitional floors), compared to minimum required risk-based capital as determined under the existing rules, as a material reduction warranting modifications to the supervisory risk functions or other aspects of this framework.
- A reiteration by the Agencies of the intent to retain the tier 1 leverage ratio and other prudential safeguards as they currently exist (for example, PCA) as needed solvency standards to complement the new framework.

## **V. Industry Concerns and Requests for Options**

A number of core banks, industry trade associations, regulators and other commentators have recently requested that the Agencies provide core banks with the option of using the standardized approach, described in the 2004 BCBS text, to compute their risk-based capital requirements. This NPR does not contain a proposal for U.S. implementation of the standardized approach, and does propose to require core banks to implement the advanced approaches. The NPR does, however, contain a question about the desirability of allowing core banks such an option.