

REGULATORY IMPACT ANALYSIS

For

**Risk-Based Capital Guidelines; Capital Adequacy Guidelines;
Capital Maintenance: Domestic Capital Modifications**

2006

Office of the Comptroller of the Currency
International and Economic Affairs

REGULATORY IMPACT ANALYSIS

Executive Order 12866 requires federal agencies to conduct a regulatory analysis for any economically significant regulatory action, which includes any rule that may have an annual effect on the economy of \$100 million or more. In conducting the regulatory analysis of a significant regulatory action that may, among other things, have an annual effect on the economy of \$100 million or more, Executive Order 12866 requires each federal agency to provide to the Administrator of the Office of Management and Budget's (OMB) Office of Information and Regulatory Affairs (OIRA):

- The text of the draft regulatory action, together with a reasonably detailed description of the need for the regulatory action and an explanation of how the regulatory action will meet that need;
- An assessment of the potential costs and benefits of the regulatory action, including an explanation of the manner in which the regulatory action is consistent with a statutory mandate and, to the extent permitted by law, promotes the President's priorities and avoids undue interference with State, local, and tribal governments in the exercise of their governmental functions;
- An assessment, including the underlying analysis, of benefits anticipated from the regulatory action (such as, but not limited to, the promotion of the efficient functioning of the economy and private markets, the enhancement of health and safety, the protection of the natural environment, and the elimination or reduction of discrimination or bias) together with, to the extent feasible, a quantification of those benefits;
- An assessment, including the underlying analysis, of costs anticipated from the regulatory action (such as, but not limited to, the direct cost both to the government in administering the regulation and to businesses and others in complying with the regulation, and any adverse effects on the efficient functioning of the economy, private markets (including productivity, employment, and competitiveness), health, safety, and the natural environment), together with, to the extent feasible, a quantification of those costs; and
- An assessment, including the underlying analysis, of costs and benefits of potentially effective and reasonably feasible alternatives to the planned regulation, identified by the agencies or the public (including improving the current regulation and reasonably viable nonregulatory actions), and an explanation why the planned regulatory action is preferable to the identified potential alternatives.

We submit this regulatory impact analysis to meet the requirements of Executive Order 12866. In doing so, we believe that this regulatory impact analysis also meets the regulatory assessment requirements of the Unfunded Mandates Reform Act of 1995 (UMRA). The regulatory analysis for Executive Order 12866 captures most of the analytical requirements of the UMRA. The UMRA asks for additional estimates of any disproportionate budgetary effects of the federal mandate upon any particular regions of the nation or particular State, local, or tribal governments, urban or rural or other types of communities, or particular segments of the private sector. The OCC does not expect the revised capital adequacy guidelines to have any disproportionate budgetary effect on any particular regions of the nation or particular State, local, or tribal governments, urban or rural or other types of communities, or particular segments of the private sector. The UMRA also requires the OCC to include estimates of the effect the rulemaking action may have on the national economy, if the OCC determines that such estimates

are reasonably feasible and that such effect is relevant and material. We discuss the effect of the rule on the financial sector and the national economy in this regulatory analysis.

EXECUTIVE SUMMARY

I. THE NEED FOR THE REGULATORY ACTION

Federal banking law directs federal banking agencies including the Office of the Comptroller of the Currency (OCC) to require banking organizations to hold adequate capital. The law authorizes federal banking agencies to set minimum capital levels to ensure that banking organizations maintain adequate capital. The law also gives banking agencies broad discretion with respect to capital regulation by authorizing them to also use any other methods that they deem appropriate to ensure capital adequacy.

Capital regulation seeks to address market failures that stem from several sources. Asymmetric information about the risk in a bank's portfolio creates a market failure by hindering the ability of creditors and outside monitors to discern a bank's actual risk and capital adequacy. Moral hazard creates market failure in which the bank's creditors fail to restrain the bank from taking excessive risks because deposit insurance either fully or partially protects them from losses. Public policy addresses these market failures because individual banks fail to adequately consider the positive externality or public benefit that adequate capital brings to financial markets and the economy as a whole.

Capital regulations cannot be static. Innovation in and transformation of financial markets require periodic reassessments of what may count as capital and what amount of capital is adequate. Continuing changes in financial markets create both a need and an opportunity to refine capital standards in banking. The proposed revisions to U.S. risk-based capital rules, "Risk-Based Capital Guidelines; Capital Adequacy Guidelines; Capital Maintenance: Domestic Capital Modifications" ("Basel IA NPR"), which we address in this impact analysis, provide a new option for determining risk-based capital for banking organizations that would not be required to operate under the other risk-based capital adequacy proposal, "Risk-Based Capital Standards: Advanced Capital Adequacy Framework ("Basel II").

II. REGULATORY BACKGROUND

The proposed capital regulation examined in this analysis would apply to commercial banks and thrifts. Three banking agencies, the OCC, the Board of Governors of the Federal Reserve System (Board), and the FDIC regulate commercial banks, while the Office of Thrift Supervision (OTS) regulates all federally chartered and many state-chartered thrifts. Throughout this document, the four are jointly referred to as the federal banking agencies.

The Basel IA proposal seeks to improve the risk sensitivity of the existing risk-based capital rules. This framework would be optional and would be available to banking organizations not covered by the Basel II proposal. Any institution that is not a Basel II bank would be able to remain under the existing risk-based capital rules or elect to adopt Basel IA. The proposed changes in Basel IA would:

1. *Increase the number of risk weight categories from five to eight.*
2. *Allow the greater use of external credit ratings.*

3. *Expand the range of recognized collateral and eligible guarantors.*
4. *Use loan-to-value ratios to risk-weight residential mortgages.*
5. *Increase the credit conversion factor for certain commitments with an original maturity of one year or less.*
6. *Assess a capital charge for early amortizations in securitizations of revolving retail exposures.*
7. *Remove the 50 percent limit on the risk weight for certain derivative transactions.*

The Agencies would continue to reserve the authority to require banking organizations to hold additional capital where appropriate.

III. BENEFIT-COST ANALYSIS OF THE PROPOSED RULE

A cost-benefit analysis considers the costs and benefits of a proposal as they relate to society as a whole. The social benefits of a proposal are benefits that accrue directly to those subject to a proposal plus benefits that might accrue indirectly to the rest of society. Similarly, the overall social costs of a proposal are costs incurred directly by those subject to the rule and costs incurred indirectly by others. In the case of Basel IA, direct costs and benefits are those that apply to the banking organizations that are subject to the proposal. Indirect costs and benefits then stem from banks and other financial institutions that are not subject to the proposal, bank customers, and, through the safety and soundness externality, society as a whole.

The enormous social and economic benefit that derives from a safe and sound banking system supported by vigorous and comprehensive supervision, including ensuring adequate capital clearly dwarfs any direct benefits that might accrue to institutions adopting Basel IA. Similarly, the social and economic cost of any reduction in the safety and soundness of the banking system would dramatically overshadow any cost borne by banking organizations subject to the rule. The banking agencies are confident that the enhanced risk sensitivity of the proposed rule could allow banking organizations to more effectively achieve objectives that are consistent with a safe and sound banking system.

Beyond the relatively minor societal benefit from the relatively minor enhancement to bank safety and soundness, we do not anticipate any benefits accruing other than directly to the banking organizations that elect to adopt Basel IA. Because many factors besides regulatory capital requirements affect pricing and lending decisions, we do not expect the adoption or non-adoption of Basel IA to affect pricing or lending. Hence, we do not anticipate any costs or benefits affecting the customers or competitors of Basel IA institutions. For these reasons, the cost and benefit analysis of Basel IA reduces to an analysis of the costs and benefits directly attributable to institutions that might elect to adopt Basel IA capital rules.

A. Organizations Affected by the Proposed Rule¹

As of June 30, 2006, eleven banking organizations meet the criteria that would require them to adopt the U.S. implementation of Basel II. Removing those 11 mandatory Basel II institutions from the 7,606 FDIC-insured banking organizations active in June 2006 leaves 7,595 organizations that would be eligible to adopt Basel IA. Among national banks, six of the eleven mandatory Basel II institutions are national banks. Out of 1,545 banking organizations with national banks, 1,539 national banking organizations would thus be eligible to adopt Basel IA.

B. Benefits of the Proposed Rule

The proposed rule aims to improve the risk sensitivity of regulatory capital requirements. The five benefits of the proposed rule are:

1. *Enhances the risk sensitivity of capital charges.*
2. *More efficient use of required bank capital.*
3. *Recognizes new developments in financial markets.*
4. *Mitigates potential distortions in minimum regulatory capital requirements between large and small banking organizations.*
5. *Ability to opt in offers long-term flexibility to banking organizations.*

C. Costs of the Proposed Rule

As with any rule, the costs of the proposal include expenditures by banks and thrifts necessary to comply with the new regulation and costs to the federal banking agencies of implementing the new rules. Because of a lack of cost estimates from banking organizations, the OCC found it necessary to use a scope-of-work comparison with Basel II in order to arrive at a cost estimate for Basel IA. Based on this rough assessment, we estimate that implementation costs for Basel IA could range from \$100,000 at smaller institutions to \$3 million at larger institutions.

1. Costs to Banking Organizations

Explicit costs of implementing the proposed rule at banking organizations fall into two categories: setup costs and ongoing costs. Setup costs are typically one-time expenses associated with introducing the new programs and procedures necessary to achieve initial compliance with the proposed rule. Setup costs may also involve expenses related to tracking and retrieving data needed to implement the proposed rule. Ongoing costs are also likely to reflect data costs associated with retrieving and preserving data.

The total cost to national banks of adopting Basel IA depends entirely on the number of institutions that elect to adopt the voluntary rule and the size of those institutions. Obviously, if

¹ Unless otherwise noted, the population of banks and thrifts used in this analysis consists of all FDIC-insured institutions. Banking organizations are aggregated to the top holding company level.

no institutions adopt Basel IA, the cost will be zero. Based on comment letters and discussions with bank supervision staff, we sought to identify national banks that would be more likely to adopt Basel IA. We selected national banks with significant mortgage holdings (over \$500 million in 1-4 family first-lien mortgages and mortgages comprise at least 10 percent of their portfolio) as well as national banks that do not currently meet the well-capitalized threshold for their risk based capital-to-assets ratio. Using those criteria, we identified 46 national banks. We estimate that the total cost of the rule for national banks will be approximately \$78 million. Over time, Basel IA may become more appealing to a larger number of banks. The total cost of the proposed rule would consequently increase to the extent that more institutions opt into Basel IA over time. At present, it is unclear how many national banks will ultimately elect to adopt Basel IA.

2. Government Administrative Costs

Like the banking organizations subject to new requirements, the costs to government agencies of implementing the proposed rule also involve both startup and ongoing costs. Startup costs include expenses related to the development of the regulatory proposals, costs of establishing new programs and procedures, and costs of initial training of bank examiners in the new programs and procedures. Ongoing costs include maintenance expenses for any additional examiners and analysts needed to regularly apply the new supervisory processes. In the case of Basel IA, because modest changes to Call Reports will capture most of the rule changes, these ongoing costs are likely to be minor.

OCC expenditures fall into three broad categories: training, guidance, and supervision. Training includes expenses for workshops and other training courses and seminars for examiners. Guidance expenses reflect expenditures on the development of Basel IA guidance. Supervision expenses reflect organization-specific supervisory activities. We estimate that OCC expenses for Basel IA will be approximately \$2.4 million through 2006. We also expect expenditures of \$1 million per year between 2007 and 2010. Applying a five percent discount rate to future expenditures, past expenses (\$2.4 million) plus the present value of future expenditures (\$3.6 million) equals total OCC expenditures of \$6 million on Basel IA.

3. Total Cost Estimate of Proposed Rule

The OCC's estimate of the total cost of the proposed rule includes expenditures by banking organizations and the OCC from the present through 2010. Based on our estimate that approximately 46 national banks will adopt Basel IA at a cost to each institution of between \$100,000 and \$3 million depending on the size of the institution, we estimate that national banks will spend approximately \$78 million on Basel IA. Combining expenditures provides an estimate of \$84 million for the total cost of the proposed rule for the OCC and national banks.

IV. ANALYSIS OF BASELINE AND ALTERNATIVES

In order to place the costs and benefits of the proposed rule in context, Executive Order 12866 requires a comparison between the proposed rule, a baseline of what the world would look

like without the proposed rule, and a reasonable alternative to the proposed rule. In this regulatory impact analysis, we analyze one baseline and one alternative to the proposed rule. The baseline considers the possibility that the proposed Basel IA rule is not adopted and current capital standards continue to apply.

The baseline scenario appears in this analysis in order to estimate the effects of adopting the proposed rule relative to a hypothetical regulatory regime that might exist without Basel IA. Because the baseline scenario considers costs and benefits as if the proposed rule never existed, we set the costs and benefits of the baseline scenario to zero. Obviously, banking organizations face compliance costs and reap the benefits of a well-capitalized banking system even under the baseline. However, because we cannot quantify these costs and benefits, we normalize the baseline costs and benefits to zero and estimate the costs and benefits of the proposed rule and alternative as deviations from this zero baseline.

1. Baseline Scenario: Current capital standards based on the 1988 Basel Accord continue to apply.

Description of Baseline Scenario

Under the Baseline Scenario, current capital rules would continue to apply to all banking organizations in the United States that are not subject to the U.S. implementation of Basel II. Under this scenario, the United States would not adopt the proposed Basel IA rule but the implementation of the Basel II framework would continue.

Change in Benefits: Baseline Scenario

Staying with current capital rules instead of adopting the Basel IA proposal would eliminate essentially all of the benefits of the proposed rule listed above. Under the baseline, banking organizations not subject to Basel II would not be given the option of voluntarily selecting Basel IA. Institutions that would have adopted the proposed rule would not be able to take advantage of the enhanced risk sensitivity of Basel IA capital charges and the more efficient use of bank capital that implies.

One benefit that would remain under the baseline is that there would be no rule changes instead of just simple and voluntary rule changes. Without Basel IA as an available option, an institution would have to choose between the advanced approaches of Basel II and the *status quo*. The baseline without Basel IA would leave a level playing field for all the non-Basel II banks. However, the absence of an opportunity to mitigate potential distortions in minimum required capital would likely diminish this benefit in the eyes of an institution concerned about potential distortions created by Basel II.

Changes in Costs: Baseline Scenario

Continuing to use current capital rules eliminates the benefits and the costs of adopting the proposed rule. As discussed above, under the proposed rule we estimate that organizations would spend up to \$78 million on implementation-related expenditures. Retaining current

capital rules would eliminate any costs associated with the proposed rule, even though banking organizations would only incur those costs if they elected to do so.

2. Alternative: Require all U.S. banking organizations not subject to Basel II to adopt Basel IA.

Description of Alternative

The only change under the alternative is that adoption of the proposed rule would be mandatory rather than voluntary. Under this alternative, the provisions of the proposed rule would remain intact and apply to all national banks that are not subject to Basel II. Institutions subject to Basel II would include mandatory Basel II institutions and those institutions that elect to adopt the U.S. implementation of the Basel II framework.

Change in Benefits: Alternative

Because there are no changes to the elements of the proposed rule under the alternative, the list of benefits remains the same. Among these benefits, only one benefit is lost by making the proposed rule mandatory: the benefit derived from the fact that the proposed rule is voluntary. As for the benefits relating to the enhanced risk sensitivity of capital charges, because adoption of Basel IA is mandatory under the alternative, more banks will be subject to Basel IA provisions and the aggregate level of benefits will be higher. Because we anticipate that only 46 national banks would adopt Basel IA voluntarily, the difference in the aggregate benefit level could be considerable.

Changes in Costs: Alternative

Clearly the most significant drawback to the alternative is the dramatically increased cost of applying a new set of capital rules to all U.S. banking organizations. Under the alternative, direct costs would increase for every U.S. banking organization that would have elected to continue to use current capital rules under the proposed rule. The cost estimate for the alternative is the total cost estimate for a 100 percent adoption rate of Basel IA. With 1,545 national banking organizations eligible for Basel IA, we estimate that the cost to national banking organizations of the alternative is approximately \$662 million. The actual cost may be somewhat less depending on the number of national banks that elect to adopt Basel II capital rules, but it is much greater than our cost estimate of \$78 million for the proposed rule.

3. Overall Comparison of Proposed Rule with Baseline and Alternative

The objective of the proposed rule is to enhance the risk sensitivity of capital charges for institutions not subject to Basel II capital regulations. The proposal also seeks to mitigate any potential distortions in minimum regulatory capital requirements that the U.S. implementation of Basel II might create between large and small banking organizations. Like Basel II, the anticipated benefits of the Basel IA proposal are difficult to quantify in dollar terms. Nevertheless, the OCC believes that the proposed rule provides benefits without posing any

threat to the safety and soundness of the banking industry or the security of the Federal Deposit Insurance system. To offset the costs of the proposed rule, its voluntary nature offers regulatory flexibility that will allow institutions to adopt Basel IA on a bank-by-bank basis when an institution's anticipated benefits exceed the anticipated costs of adopting this regulation.

The banking agencies are confident that the proposed rule could serve to strengthen institutions electing to adopt Basel IA while the safety and soundness of institutions electing to forgo Basel IA and Basel II will not diminish. On the basis of our analysis, we believe that the benefits of the proposed rule are sufficient to offset the costs of implementing the proposed rule. However, because there is no social cost to allowing institutions to remain subject to current capital rules, we believe it is best to make the proposed rule voluntary in order to let each national bank decide whether it is in that institution's best interest to adopt Basel IA. Because adoption is voluntary, the proposed rule offers an improvement over the baseline scenario and the alternative. The proposed rule offers an important degree of flexibility unavailable with either the baseline or the alternative. The baseline does not give banking organizations a way into Basel IA and the alternative does not offer them a way out. The alternative would compel most banking organizations to follow a new set of capital rules and require them to undertake the time and expense of adjusting to these new rules. The proposed rule offers a better balance between costs and benefits than either the baseline or the alternative. Overall, the OCC believes that the benefits of the proposed rule justify its costs.

End of Executive Summary

REGULATORY IMPACT ANALYSIS

I. THE NEED FOR THE REGULATORY ACTION

A. Statutory Authority for Capital Regulation

Federal banking law² directs federal banking agencies including the Office of the Comptroller of the Currency (OCC) to require banking organizations to hold adequate capital. The law authorizes federal banking agencies to set minimum capital levels to ensure that banking organizations maintain adequate capital. The law also gives banking agencies broad discretion with respect to capital regulation by authorizing them to also use any other methods that they deem appropriate to ensure capital adequacy. Congress has directed the federal banking agencies to apply consistent accounting standards in determining regulatory capital. Specifically, 12 USC 1831n(b), which is titled "Uniform accounting of capital standards", states that "each appropriate federal banking agency shall maintain uniform accounting standards to be used for determining compliance with statutory or regulatory requirements of depository institutions." Further, 12 USC 1831n(c) mandates that the agencies report annually to Congress on any capital differences with explanations of the reasons for any discrepancies.

As the primary supervisor of national banks, the OCC oversees the capital adequacy of national banks and federal branches of foreign banking organizations. If banks under the OCC's supervision fail to maintain adequate capital, federal law authorizes the OCC to take enforcement action up to and including placing the bank in receivership, conservatorship, or requiring its sale, merger, or liquidation.

B. Capital Regulation Seeks to Address Market Failures

Capital regulation seeks to address market failures that stem from the unique structure and role of banks in the financial system. These market failures tend to create incentives for managers of banking organizations to hold less capital than is optimal from a broader societal perspective. Managers, in responding rationally to those distorted incentives, may try to hold capital that may not adequately account for the institution's exposure to risk. This in turn can

² In relevant part, 12 U.S.C. Section 3907 provides:

(a)(1) Each appropriate Federal banking agency shall cause banking institutions to achieve and maintain adequate capital by establishing minimum levels of capital for such banking institutions and by using such other methods as the appropriate Federal banking agency deems appropriate.

(2) Each appropriate Federal banking agency shall have the authority to establish such minimum level of capital for a banking institution as the appropriate Federal banking agency, in its discretion, deems to be necessary or appropriate in light of the particular circumstances of the banking institution.

(b)(1) Failure of a banking institution to maintain capital at or above its minimum level as established pursuant to subsection (a) of this section may be deemed by the appropriate Federal banking agency, in its discretion, to constitute an unsafe and unsound practice within the meaning of section 1818 of this title.

lead banking organizations to hold a level of capital that differs from a socially optimal level.³ The market failures creating these perverse incentives stem from several sources.

Banking faces a market failure attributable to asymmetric information. This arises because of the difference between the information a banking organization has about the risk of its asset portfolio and the information available to outside monitors of the institution, such as depositors and creditors. If outside monitors and inside managers shared the same information about the true amount of risk an institution had assumed, then through financial markets the outsider would be able to compel the organization to hold capital at a level commensurate with its level of risk. This information asymmetry operates to some extent in virtually all firms. However, it is particularly a problem in banking because of the opaque nature of most lending relationships; although borrowers are willing to share information about their finances with their lenders to gain financing, they typically will not share such private information with others. Furthermore, even if borrowers were willing to share this information with outsiders, the cost to outsiders of gathering and evaluating this information for each of an institution's borrowers would be prohibitive. Because outside monitors lack complete information about the risk of the banking organization's portfolio, they may not induce the organization to hold adequate amounts of capital. If outside monitors underestimate the amount of risk, they will expect too little capital from the institution. If they overestimate the risk, they will demand excessive amounts of capital.

Moral hazard problems related to deposit insurance could exacerbate the market failure created by asymmetric information. In banking, moral hazard refers to the incentive financial institutions have to accept greater risks in pursuit of higher returns when they do not bear the full cost of losses associated with risky ventures. Because the Federal Deposit Insurance Corporation (FDIC) insures deposits up to \$100,000,⁴ the FDIC, rather than depositors, bears some of the cost of taking those risks. Thus, even if banking markets were not subject to asymmetric information problems, depositors would expend less effort to monitor capital levels and to constrain risk-taking than they would in the absence of deposit insurance. Deposit insurance may also reduce bankers' concerns about jeopardizing depositors' funds, if they recognize that insurance protects the depositor. Troubled institutions may be particularly willing to take greater risks in an effort to recover by pursuing opportunities along the risk-return frontier that promise higher returns but at much greater risk. Moral hazard problems such as these likely contributed to the savings and loan crisis in the 1980s.⁵

³ Several factors will determine a banking organization's ultimate level of capital. In determining capital levels, banking institutions must begin with the regulatory minimum. Because of Prompt Corrective Action, falling below the regulatory minimum has serious consequences. Beyond the regulatory minimum, institution management will typically add capital to provide an appropriate buffer to the regulatory minimum. A banking organization will also seek a capital level that is consistent with achieving the institution's target credit rating from credit rating agencies. For further discussion of the drivers of capital levels, see Chris Matten, *Managing Bank Capital*, Second Edition, New York: John Wiley & Sons, 2000, p. 26.

⁴ The Federal Deposit Insurance Reform Act of 2005 (Reform Act), enacted in February 2006, increased the deposit insurance limit for certain retirement plan deposit accounts from \$100,000 to \$250,000. The FDIC issued an interim rule to implement this increase in coverage and other provisions of the Reform Act pertaining to deposit insurance coverage effective April 1, 2006 (71 FR 14629).

⁵ For one discussion of moral hazard and the savings and loan crisis, see Elijah Brewer III and Thomas H. Mondschean, "Ex ante Risk and Ex Post Collapse of S&Ls in the 1980s", *Economic Perspectives*, Federal Reserve Bank of Chicago, July/August 1992, pp. 2 – 12.

These individual market failures might be of less concern if not for the presence of externalities in banking. The failure of an individual banking organization can have external effects on depositors, borrowers, and the local economy. Weakness at one institution may affect how the market perceives the health of other banking organizations and lead to pressures on those institutions. Furthermore, a loss in confidence in the banking system can impose considerable costs on the macroeconomy. Adequate capital, therefore, conveys important benefits that extend beyond an individual banking organization and affects the ability of the banking system as a whole to absorb unexpected losses. Whereas each institution's capital protects it from losses, the ability of each individual institution to absorb losses strengthens the collective ability of the banking system to absorb losses like combining individual wires to form a stronger cable. A banking organization does not receive compensation for its contribution to the overall strength of the banking system. Because banking organizations do not receive compensation for the external benefit of their capital, they are likely to hold less than a socially optimal level of capital in the absence of capital requirements.

To sum up, asymmetric information about the risk in a bank's portfolio creates a market failure by hindering the ability of creditors and outside monitors to discern a bank's actual risk and capital adequacy. Moral hazard creates market failure in which a bank's creditors fail to restrain the bank from taking excessive risks because deposit insurance either fully or partially protects them from losses. These market failures engender concerns that public policy seeks to address because of externalities inherent in the banking system. Individual banks' decisions regarding their own capital levels fail to adequately consider the positive externality that adequate capital brings to the banking system. Ensuring adequate capital through regulation seeks to address these market failures and produce the positive externality that adequate capital brings to financial markets and the economy as a whole.

Capital regulations that address the market failures described above cannot be static. Innovation in and transformation of financial markets require periodic reassessments of what may count as capital and what amount of capital is adequate. For example, after financial market turbulence in the 1980s, the implementation of new capital standards based on the 1988 Basel Accord introduced significant changes to the definition of what constitutes both capital and capital adequacy and strove to standardize capital requirements across international boundaries. Continuing changes in financial markets create an opportunity to refine capital standards in banking. The Basel IA proposal provides a step toward more risk sensitive capital calculations for banking organizations that would not be required to operate under the proposed Basel II framework.

II. REGULATORY BACKGROUND

A. The regulated community

The capital regulation examined in this analysis applies to commercial banks and thrifts. Three banking agencies, the OCC, the Board of Governors of the Federal Reserve System (Board), and the FDIC regulate commercial banks, while the Office of Thrift Supervision (OTS) regulates all federally chartered and many state-chartered thrifts. The OCC is the primary

supervisor of national banks. The Board supervises state-chartered banks that are members of the Federal Reserve System, and the FDIC supervises state-chartered banks that are not members of the Federal Reserve System. Throughout this document, the four regulators are jointly referred to as the federal banking agencies.⁶

B. Capital adequacy regulation before 1988

The assessment of capital adequacy has been a cornerstone of bank and thrift regulation since the earliest days of the national banking system. In 1864, the National Banking Act set capital requirements for each national bank based on the population of its service area. Around the start of the 20th Century, supervisors began focusing on capital-to-deposit ratios. In succeeding years, as the demand for loans outstripped the supply of deposits and banking organizations turned to other sources of funding, capital-to-assets ratios gradually supplanted capital-to-deposits ratios as the preferred measure of capital adequacy. By the 1950s, supervisors had begun to study ways of adjusting assets for risk in order to compute capital-to-risk-weighted-assets ratios, but these early efforts did not gain wide acceptance.

Throughout this period, supervisors employed a subjective, case-by-case approach to assessing capital adequacy. Regulators felt that reducing capital adequacy to a formula would preclude the supervisory judgments needed to evaluate the many factors influencing an institution's ability to sustain losses. This view changed in the 1970s and early 1980s when a decline in average capital ratios and a series of high-profile bank and thrift failures convinced supervisors of the need to set a regulatory floor on capital.

In 1981, the federal banking agencies introduced the first explicit minimum capital ratio: a “leverage ratio” of primary capital (consisting mainly of equity and loan loss reserves) to total assets. Initially there were some differences in the thresholds set by the different agencies, but by 1985 they had agreed on a uniform minimum leverage ratio of 5.5 percent for all banking organizations. The banking agencies considered it “unsafe and unsound” for institutions to operate with leverage ratios below 3 percent and subjected such institutions to enforcement action. Legislation strengthened the link between capital ratios and supervisory intervention in the aftermath of the thrift crisis of the late 1980s.

During the 1980s, regulators in the United States and other industrialized countries became concerned that simple capital-to-assets ratios required too much capital for safe assets such as Treasury securities and not enough for riskier assets. Another concern was that the rules did not require any capital for banking organizations’ rapidly growing portfolios of off-balance-sheet exposures. These concerns led to the development of the risk-based capital framework that the Basel Committee on Banking Supervision⁷ adopted in 1988 and implemented at the end of 1992 (the 1988 Accord). This 1988 Accord serves as the basis for current U.S. capital regulations. The 1988 Accord required that internationally active banking organizations adopt

⁶ The term bank will refer to any commercial bank or thrift regulated by one of the federal banking agencies.

⁷ The Basel Committee on Banking Supervision includes representatives from the central banks and other authorities with bank supervisory responsibilities in the G-10 countries. Current member countries are Belgium, Canada, France, Germany, Italy, Japan, Luxembourg, the Netherlands, Spain, Sweden, Switzerland, the United Kingdom, and the United States.

the new capital rules, but some countries, including the United States, chose to apply the 1988 Basel framework to all banks and thrifts.

C. The 1988 Accord and the Basel II Framework

Drafters of the 1988 Accord designed capital rules to create a level playing field for institutions in different countries and to strengthen the soundness and stability of the international banking system. The 1988 Accord sought to level the playing field in international banking by enhancing international consistency and to strengthen the international banking system by more closely aligning required capital with risk. The 1988 Accord consists of three basic elements: a target minimum capital ratio of 8 percent; a definition of the capital instruments to comprise the numerator of the capital-to-risk-weighted-assets ratio; and a system of risk weights for calculating the denominator of the ratio.

As implemented in the United States, the risk-weighting criteria of the 1988 Accord divide credit exposures into four basic categories and assign a fixed risk weight to each category. The four categories and their respective risk weights are (1) cash and sovereign exposures with a risk weight of 0 percent, (2) interbank and certain other relatively low-risk exposures with a risk weight of 20 percent, (3) residential mortgages with a risk weight of 50 percent, and (4) all other exposures (including unsecured corporate exposures), which carry a 100 percent risk weight. A risk weight of 100 percent means that the calculation of risk-weighted assets includes the exposure at its full value, which translates to a capital requirement equal to 8 percent of the amount of the exposure. Off-balance-sheet exposures convert into “credit-equivalent amounts” by applying specified “credit conversion factors” to their notional amounts and then risk-weighting them in the same way as on-balance-sheet exposures.

The 1988 Accord also specifies what instruments may count toward the capital requirement. The Accord requires that equity capital (common and non-cumulative preferred shares) and disclosed reserves cover at least half of the target ratio. Qualifying hybrid capital instruments, subordinated debt, and general, undisclosed, and revaluation reserves may cover the remainder subject to various limitations.

The acknowledged central focus of the original 1988 Accord was credit risk. Minimum required capital did not depend directly on the other types of risk that banks and thrifts must manage, such as interest-rate risk, liquidity risk, or operational risk, although the level of required capital provided *de facto* coverage for such risks. Amendments to the Accord in 1996 added explicit capital charges for interest-rate related instruments and equities in the trading book; as well as charges for foreign exchange risk and commodity risk throughout the institution.

The 1988 Accord had several beneficial effects. At a time when supervisors viewed capital ratios as too low, it had a positive effect on capital levels: during the 1988-1992 transition period, the capital ratios of nearly all internationally active banking organizations increased substantially. The 1988 Accord also fostered greater competitive equity among internationally active banking organizations and introduced an era of improved information sharing and coordination among national supervisors. It also reduced incentives for institutions to avoid liquid, low-risk assets such as Treasury securities, which had capital requirements far in excess of their actual credit risk under the preceding regime of uniform leverage requirements. Perhaps

most importantly, it created a mechanism by which bank capital requirements could reflect, at least to some extent, differences in risk across institutions and over time.

With the passage of time, however, it became clear that the 1988 Accord was not providing a sufficiently accurate measure of capital adequacy. It introduced only a small degree of risk-sensitivity into risk weightings, ignoring an important dimension of risk: the difference between more and less creditworthy counterparties within a given asset class. It did not provide adequate recognition of risk mitigation techniques, probably discouraging institutions from using such techniques and so detracting from the safety and soundness of the banking system. The rigidity of the risk-weighting framework tended to encourage transactions whose sole benefit was regulatory capital relief. Finally, the 1988 Accord could not anticipate financial innovations such as securitization, which shifts most of the notional amount of a credit exposure off the balance sheet while retaining most of the credit risk. In all of these areas, internal systems for measuring risk at many banking organizations have outstripped the 1988 Accord.

Research and experience suggest that current risk-based capital rules may not adequately reflect credit risk in all cases. In some cases the current rules require too much capital in relation to risk. In other cases, the rules require too little capital. This situation gives rise to a number of potential effects, including misaligned private risk-taking incentives.

The Basel II framework aims to maintain and extend the benefits of the 1988 Accord while addressing these signs of age. It comprises three mutually reinforcing “pillars.”⁸ The proposed rule for implementing Basel II in the United States would apply the new framework to the largest and most internationally active banking organizations.

The first pillar of Basel II establishes a method for calculating minimum regulatory capital. It sets new requirements for credit risk and operational risk while retaining the approach to market risk as developed in the 1996 amendments to the 1988 Accord. It includes an extensive set of qualitative requirements designed to help ensure that the internal measurement and control systems used to determine capital adequacy for credit risk and operational risk are sound.

The second pillar calls upon banking organizations to have an internal capital assessment process and for banking supervisors to evaluate each bank’s overall risk profile as well as its risk management and internal control processes. This pillar establishes an expectation that organizations hold capital beyond the minimums computed under Pillar 1, including additional capital for any risks that are not adequately captured under Pillar 1. It also encourages organizations to develop better risk management techniques for monitoring and managing their risks.

The third pillar sets minimum disclosure requirements for banking organizations. The disclosures, covering the composition and structure of the institution’s capital, the nature of its risk exposures, its risk management and internal control processes, and its capital adequacy, are intended to improve transparency and strengthen market discipline. By establishing a common

⁸ The reference document for the Basel II framework is “International Convergence of Capital Measurement and Capital Standards: A Revised Framework,” Basel Committee on Banking Supervision, June 2004.

set of disclosure requirements, Pillar 3 tries to provide a consistent and understandable disclosure framework that market participants can use to assess key pieces of information on the risks and capital adequacy of a bank.

D. The Basel IA proposal

As the rulemaking process moved forward for Basel II, the banking agencies determined that applying greater risk sensitivity to some general banking organizations could also be beneficial. In particular, the agencies considered the possibility of enhancing the risk sensitivity of capital calculations for residential mortgages, an important component of the asset portfolios of many smaller financial institutions. The banking agencies then developed the proposed Basel IA proposal to improve the risk sensitivity of existing risk-based capital rules as they would apply to non-Basel II institutions. The proposed revisions are summarized below.

1. Scope

Adoption of the Basel IA rule would be optional under the proposed rule. This rule would be available to any banking organization that is not subject to the Basel II proposal. Any bank that is not a Basel II bank would be able to remain under existing risk-based capital rules or voluntarily elect to adopt Basel IA. However, a bank that opts in would have to adopt Basel IA in its entirety. Although the proposed rule does not preclude an institution from dropping out of Basel IA after adoption, such a decision would first require notification of the institution's banking supervisor and the inevitable scrutiny that such a notification would warrant.

2. Proposed Revisions

The proposed changes in Basel IA would:

Increase the number of risk weight categories. Currently there are five risk weight categories to which credit exposures may be assigned; this number would be increased to eight.

Allow the greater use of external credit ratings. Existing risk-based capital rules permit the use of external credit ratings issued by a nationally recognized statistical rating organization (NRSRO) to assign risk weights to recourse obligations, direct credit substitutes, residual interests (other than a credit-enhancing interest-only strip), and asset- and mortgage-backed securities. The proposal would expand the use of external credit ratings to determine risk weights for certain exposures that are externally rated by a NRSRO.

Expand the range of recognized collateral and eligible guarantors. The existing risk-based capital rules recognize limited types of collateral.⁹ The proposal would revise the list of recognized collateral to include a broader array of externally rated, liquid, and readily marketable

⁹ Cash on deposit; securities issued or guaranteed by central governments of the Organisation for Economic Co-operation and Development (OECD) countries; securities issued or guaranteed by the U.S. government or its agencies; U.S. government-sponsored entity securities; and securities issued by certain multilateral lending institutions or regional development banks.

financial instruments. It would also expand the list of eligible guarantors¹⁰ by recognizing entities that have long-term senior debt (without credit enhancement) rated at least investment grade by an NRSRO or, in the case of a sovereign, an issuer rating that is at least investment grade.

Use loan-to-value ratios to risk-weight residential mortgages. The existing capital rules apply a 50 percent risk weight to performing, prudently underwritten single-family mortgages. If a single-family mortgage does not meet this standard, it is risk weighted at 100 percent. The proposal would assign risk weights for traditional and non-traditional single-family mortgages based on the loan-to-value (LTV) after consideration of private mortgage insurance (PMI).

Increase the credit conversion factor for certain commitments with an original maturity of one year or less. Currently, banking organizations extending commitments with an original maturity of one year or less or unconditionally cancellable commitments are not required to maintain risk-based capital against the credit risk inherent in these exposures. The proposal would assign a 10 percent credit conversion factor (CCF) for all short-term commitments that are not unconditionally cancellable.¹¹ This would not apply to commitments to originate one-to-four-family residential mortgage loans that are provided in the ordinary course of business.

Assess a capital charge for early amortizations in securitizations of revolving retail exposures. The existing capital rules do not assess risk-based capital for risks associated with early amortization of securitizations of revolving credits, such as credit card receivables. The proposal would apply an approach based on excess spread to all revolving securitizations with early amortization features.

Remove the 50 percent limit on the risk weight for certain derivative transactions. The existing risk based capital rules permit banks to apply a maximum 50 percent risk weight to the credit equivalent amount of certain derivative contracts. The proposal would remove the 50 percent risk weight limit for those derivative contracts.

As with any proposal relating to regulatory capital, the Agencies would continue to reserve the authority to require banking organizations to hold additional capital where the Agencies deem appropriate.

III. BENEFIT-COST ANALYSIS OF THE PROPOSED RULE

In order to place the costs and benefits of the proposed rule in context, Executive Order 12866 requires a comparison between the proposed rule, a baseline of what the world would look like without the proposed rule, and a reasonable alternative to the proposed rule. The baseline

¹⁰ Presently, the recognition of third party guarantees is limited to guarantees provided by central governments of OECD countries, U.S. government and government-sponsored entities, public-sector entities in OECD countries, multilateral lending institutions and regional development banks, depository institutions and qualifying securities firms in OECD countries, depository institutions in non-OECD countries (short-term claims), and central governments of non-OECD countries (local currency exposures only).

¹¹ Commitments that are unconditionally cancellable would retain a zero percent CCF.

considers the possibility that the proposed Basel IA rule is not adopted and current capital standards continue to apply.

A cost-benefit analysis considers the costs and benefits of a proposal as they relate to society as a whole. The social benefits of a proposal are benefits that accrue directly to those subject to a proposal plus benefits that might accrue indirectly to the rest of society. Similarly, the overall social costs of a proposal are costs incurred directly by those subject to the rule and costs incurred indirectly by others. In the case of Basel IA, direct costs and benefits are those that apply to the banking organizations that are subject to the proposal. Indirect costs and benefits then stem from banks and other financial institutions that are not subject to the proposal, bank customers, and, through the safety and soundness externality, society as a whole.

The enormous social and economic benefit that derives from a safe and sound banking system supported by vigorous and comprehensive banking supervision, including ensuring adequate capital, clearly dwarfs any direct benefits that might accrue to institutions adopting Basel IA. Similarly, the social and economic cost of any reduction in the safety and soundness of the banking system would dramatically overshadow any cost borne by banking organizations subject to the rule. The banking agencies are confident that the enhanced risk sensitivity of the proposed rule could allow banking organizations to more effectively achieve objectives that are consistent with a safe and sound banking system. The banking agencies expect that Basel IA will strengthen the safety and soundness of institutions that adopt it while the safety and soundness of institutions electing to forgo Basel IA and Basel II will not diminish. Ensuring the safety and soundness of the banking system is the primary objective of the OCC and a safe and sound banking system in turn safeguards federal deposit insurance funds.

Capital regulation is but one component of the regulatory supervision that buttresses our banking industry. This fact is made most apparent by the CAMELS rating system used by supervisory agencies to monitor conditions at banking organizations.¹² The acronym CAMELS refers to the six components of an institution's condition that examiners use to assess an institution. These six components are Capital adequacy, Asset quality, Management, Earnings, Liquidity, and Sensitivity to risk. Examiners assign an institution a CAMELS rating at the end of an exam and disclose these ratings to senior bank management and appropriate supervisory personnel. Thus, while assessing capital adequacy is an important component of supervision, it is but one facet of a broader supervisory process designed to protect the safety and soundness of the banking system.

Comprehensive supervision, as exemplified by the CAMELS assessment, will help address the potential problems with capital gamesmanship that might emerge with any change to regulatory capital rules. For instance, supervision will help to deal with institutions that might be tempted to switch in and out of Basel IA when it best suits them, so called cherry picking. The OCC retains the authority for broad supervisory oversight regarding minimum capital levels and other aspects of bank management. A broad range of formal and informal enforcement tools are available to support the OCC's supervisory oversight. Supervision, coupled with enforcement

¹² For a description of CAMELS ratings, see Jose A. Lopez, "Using CAMELS Ratings to Monitor Bank Conditions," Federal Reserve Bank of San Francisco, *Economic Letter*, #99-19, June 11, 1999.

authority serves to address a broad range of potential problems that arise in banking organizations, not just those related to ensuring capital adequacy.¹³

Beyond the relatively minor societal benefit from the relatively minor enhancement to bank safety and soundness, we do not anticipate any benefits accruing other than directly to the banking organizations that elect to adopt Basel IA. Because many factors besides regulatory capital requirements affect pricing and lending decisions, we do not expect the adoption or non-adoption of Basel IA to affect pricing or lending. Hence, we do not anticipate any costs or benefits affecting the customers or competitors of Basel IA institutions. For these reasons, the cost and benefit analysis of Basel IA reduces to an analysis of the costs and benefits directly attributable to institutions that might elect to adopt Basel IA capital rules.

As was true with the regulatory impact analysis of the Basel II implementation, cost and benefit analysis of changes in minimum capital requirements entail considerable measurement problems. On the cost side, it can be difficult to attribute particular expenditures because institutions would likely incur some of these costs as part of their ongoing efforts to improve risk measurement and management systems. On the benefits side, measurement problems are even greater because the benefits of Basel IA are more qualitative than quantitative. Measurement problems exist even with an apparently measurable effect such as lower minimum capital because lower minimum requirements do not necessarily mean lower capital. Healthy banking organizations generally hold capital well above regulatory minimums for a variety of reasons and the effect of reducing the regulatory minimum is uncertain and likely to vary across regulated institutions.

A. Organizations Affected by the Proposed Rule¹⁴

Assuming that the U.S. implementation of Basel II occurs, the proposed implementation of Basel IA in the United States would create a trifurcated system of capital requirements. A relatively small group of Basel II mandatory and opt-in organizations would be subject to capital requirements based on Basel II's Advanced IRB approach and AMA. A second group of indeterminate size would opt to adopt Basel IA, and the remainder would use current capital rules.

As of June 30, 2006, eleven banking organizations meet the criteria that would require them to adopt the U.S. implementation of Basel II. Removing those 11 mandatory Basel II institutions from the 7,606 FDIC-insured banking organizations active in June 2006 leaves 7,595 organizations that would be eligible to adopt Basel IA. Among national banks, six of the eleven mandatory Basel II institutions are national banks. Out of 1,545 banking organizations with national banks, 1,539 national banking organizations would thus be eligible to adopt Basel IA.

¹³ Informal enforcement tools include: supervisory letters and directives, special examinations, notices of deficiency and requests for safety and soundness compliance plans. Formal enforcement tools include formal written agreements (including supervisory agreements), temporary cease and desist orders, permanent cease and desist orders, temporary suspensions, removal and prohibition orders, civil money penalties, prompt corrective action directives, and a variety of other agency actions and court orders.

¹⁴ Unless otherwise noted, the population of banks and thrifts used in this analysis consists of all FDIC-insured institutions. Banking organizations are aggregated to the top holding company level.

As discussed further below, the number of institutions that will ultimately elect to adopt Basel IA is one of the major uncertainties regarding this proposed rule. All banking organizations other than those required to adopt Basel II are eligible to adopt Basel IA. Because adopting Basel IA is voluntary, the number of feasible adopters ranges from zero to 7,606 among all FDIC-insured banking organizations and from zero to 1,545 among national banks. Table 1 shows the size distribution and share of total assets for national banks.

Table 1. Size Distribution of National Banks, Aggregated to Top Holding Company, as of June 30, 2006

Asset Size	# of Banking Organizations	Total Assets (\$ millions)	Share of Total National Bank Assets
Less than \$100 million	585	\$33,255	0.5%
Between \$100 million and \$1 billion	821	\$234,660	3.6%
Between \$1 billion and \$10 billion	103	\$290,702	4.5%
Greater than \$10 billion Not Mandatory Basel II	30	\$1,370,571	21.2%
Mandatory Basel II Organizations	6	\$4,532,246	70.1%
Total	1,545	\$6,461,433	100%

B. Benefits of the Proposed Rule

Among its objectives, the proposed rule aims to improve the risk sensitivity of regulatory capital requirements. For example, under current capital rules, residential mortgages generally carry a 50 percent risk weight. However, risk among mortgages tends to increase as the loan-to-value (LTV) ratio increases. Table 2 shows the proposed rule's risk weights for 1-4 family first lien mortgages. As shown in table 2, risk weights for residential mortgages would increase as the LTV ratio increases. Thus, the minimum capital requirement would rise and fall with risk using Basel IA capital calculations. Under current rules, the 50 percent risk weight applies regardless of the mortgage's LTV ratio. The remainder of this section enumerates and discusses this and other benefits of the proposed rule.

Table 2. Proposed LTVs and Risk Weights for 1-4 Family First Lien Mortgages

Loan-to-Value Ratio	Risk Weight
60% or less	20%
Greater than 60% and less than or equal to 80%	35%
Greater than 80% and less than or equal to 85%	50%
Greater than 85% and less than or equal to 90%	75%
Greater than 90% and less than or equal to 95%	100%
Greater than 95%	150%

1. Enhances the risk sensitivity of capital charges

The proposed rule would add three new risk weight categories to the five risk weights currently in use.¹⁵ The proposed rule would also expand the use of external credit ratings to assign certain securities to risk weight categories. In the case of residential mortgages, the proposed rule would use loan-to-value ratios to assign risk weight categories. By increasing the number of risk weights from five to eight and incorporating external credit ratings and loan-to-value ratios into the process of assigning risk weights, the proposed rule enhances the risk sensitivity of capital charges relative to current capital rules. Although the proposed rule would continue to use the simplistic risk-bucket approach of current capital rules, including asset-specific information such as loan-to-value ratios or external credit ratings does serve to make the risk bucket assignment more sensitive to idiosyncratic risk characteristics of various assets.

2. More efficient use of required bank capital

Increased risk sensitivity will allow banking organizations to achieve prudent objectives more efficiently. If the proposed rule can better align capital with risk, then a given level of capital will be able to support a higher level of banking activity while maintaining the same degree of confidence regarding bank safety and soundness. Alternatively, the better alignment of capital and risk could lead to a higher effective level of solvency at the same levels of overall banking activity. Social welfare is enhanced by either the stronger condition of the banking system or the increased economic activity the additional banking services facilitate. Depending on how many institutions elect to adopt Basel IA, the benefit in terms of capital efficiency from more closely aligning regulatory capital charges with risk could be significant, in view of the volume of assets at eligible U.S. banking organizations.

3. Recognizes new developments in financial markets

The proposed rule recognizes new developments in financial markets by incorporating external credit ratings into the process for assigning risk weight categories. To a certain extent, expanding the range of recognized collateral and using loan-to-value ratios also reflects the

¹⁵ The three new risk weights are 35, 75, and 150 percent. Thus, under the proposed rule, the eight risk weights are 0, 20, 35, 50, 75, 100, 150, and 200 percent.

proposed rule's efforts to use financial market information to determine capital requirements. By incorporating this more dynamic information into the capital calculation, the proposed rule represents an improvement over the purely static risk-weight approach of current capital rules.

4. Mitigates potential distortions in minimum regulatory capital requirements between Basel II and non-Basel II banking organizations

One of the principal concerns regarding the U.S. implementation of Basel II relates to the potential distortions in minimum regulatory capital requirements that might occur as a result of the bifurcated capital rules. This general concern also focused more specifically on potential distortions that might occur in the residential mortgage market because of the expectation that institutions subject to Basel II capital rules would generally experience a reduction in their minimum capital requirements for mortgages. By effectively increasing the number of risk weights for residential mortgages from one to eight (see table 2 above), Basel IA serves to mitigate potential distortions between Basel II and non-Basel II banking organizations. The range of potential risk weights is wider under Basel II, from less than 5 percent for mortgages with low default probabilities and low loss given default ratios to over 250 percent for mortgages with high default probabilities and high loss given default ratios. This compares to the 20 percent to 150 percent range for mortgages in Basel IA. The ultimate impact on minimum regulatory capital depends entirely on the composition of the mortgage portfolio. If an institution adopts Basel IA, then its overall capital charge for residential mortgages will fall somewhere between 20 percent and 150 percent, depending on the distribution of its mortgage portfolio across the eight LTV-dependent risk weight categories.

5. Ability to opt in offers long-term flexibility to banking organizations.

In an effort to avoid undue regulatory burden, the proposed rule is voluntary. If a banking organization takes no action in response to this rule, it will continue to operate under current capital rules. The voluntary nature of the proposed rule allows banking organizations the opportunity to weigh the various costs and benefits of adopting the new system. There is no opt-in deadline, so institutions that initially choose to continue with current capital rules, may switch to Basel IA at a later date if their cost/benefit tradeoff changes in the future. The proposed rule does not preclude institutions that initially elect to adopt Basel IA from undoing that decision. However, they must first notify their primary federal regulator and respond to the inevitable scrutiny that such notification would warrant.

C. Costs of the Proposed Rule

One of the principles guiding the development of the proposed rule was to avoid undue regulatory burden. Towards this goal of limiting regulatory burden, the proposed rule allows banking organizations to choose to adopt the revisions in the rule or do nothing and continue to use current risk-based capital rules. Even for those institutions that elect to adopt Basel IA, the principal rule change is the relatively simple expansion of the number of risk weights from five to eight. The proposed rule would also make use of data that are either currently available to the institution, e.g., loan-to-value ratios, or readily available information, e.g., external credit ratings. Basel IA does not involve any of the complex modeling of credit risk and operational risk

associated with Basel II. Organizations adopting Basel IA would be able to do so simply by completing new items related to the Basel IA provisions on the quarterly report of financial condition that the banking organization currently submits to its primary federal regulator. Because these rule changes are relatively simple and use readily available data, the cost of adopting Basel IA is likely to be fairly moderate, as we discuss in the following section on costs.¹⁶

Estimating the costs of the proposed rule presents a number of challenges. As with any rule, the costs of the proposal include expenditures by banks and thrifts necessary to comply with the new regulation and costs to the federal banking agencies of implementing the new rules. Whereas the fourth quantitative impact study (QIS-4) provided specific cost estimates from banking organizations regarding their estimate of the cost of implementing Basel II, no such information exists for Basel IA. Although Basel IA's Advanced Notice of Proposed Rulemaking requested estimates of implementation costs, only one of 73 comment letters included a cost estimate. Further complicating matters, the cost estimate in the one comment letter refers to a broader data gathering effort than anticipated by the banking agencies and consequently provides a cost estimate for establishing a data mart.¹⁷ Because of this lack of cost estimates from banking organizations, the OCC found it necessary to use a scope of work comparison with Basel II in order to arrive at a cost estimate for Basel IA. Based on this rough assessment, we estimate that implementation costs for Basel IA could range from \$100,000 at smaller institutions to \$3 million at larger institutions.

1. Costs to Banking Organizations

Explicit costs of implementing the proposed rule at banking organizations fall into two categories: setup costs and ongoing costs. Setup costs are typically one-time expenses associated with introducing the new programs and procedures necessary to achieve initial compliance with the proposed rule. Setup costs may also involve expenses related to tracking and retrieving data needed to implement the proposed rule. Ongoing costs are also likely to reflect data costs associated with retrieving and preserving data.

The most significant question regarding the costs to banking organizations of the proposed rule relates to the number of institutions that may elect to adopt it. Because adherence to the proposal is entirely voluntary, it is feasible that zero banking organizations may elect to adopt Basel IA, which would result in zero costs to banking organizations. Similarly, it is feasible that all institutions other than those required to adopt Basel II may elect to adopt Basel IA. Table 3 provides a look at the range of possible aggregated costs for a variety of adoption scenarios for national banks.

¹⁶ For instance, Basel IA continues to rely on supervisory oversight and implicit coverage for operational risk, an approach that continues to appear adequate for smaller, less complex banking organizations. Inclusion of an explicit charge for operational risk would significantly increase the cost of the proposed rule.

¹⁷ TD Banknorth, Comment Letter on ANPR for Risk-Based Capital Guidelines: Domestic Capital Modifications, January 18, 2006. The letter states that the initial cost of establishing a data mart "could easily exceed \$5 million". Because the OCC does not expect the proposed rule to necessitate data marts at each institution, we use \$3 million as our upper bound cost estimate.

Table 3. Cost Estimates for Basel IA Adoption by Size, Eligible National Banks, Aggregated to Top Holding Company, June 30, 2006

Asset Size	# of Banking Organizations	Estimated Number of More Likely Adopters	Estimated Cost of Adoption per Institution	Aggregate Cost Estimate (\$ in millions)
Less than \$100 million	585	2	\$100,000	\$0.2
\$100 million - \$1 billion	821	9	\$500,000	\$4.5
\$1 billion - \$10 billion	103	16	\$1 million	\$16
Greater than \$10 billion	30	19	\$3 million	\$57
Total	1,539	46		\$77.7

As table 3 shows, the total cost to national banks of adopting Basel IA depends entirely on the number of institutions that elect to adopt the voluntary rule and the size of those institutions. Obviously, if no institution adopts Basel IA, the cost will be zero. At the opposite extreme, if all 1,539 eligible national banking organizations choose to adopt Basel IA capital rules, the estimated cost of the rule is \$662 million. Based on comment letters and discussions with bank supervision staff, we identified 46 national banking organizations that would be more likely to adopt Basel IA.¹⁸ We estimate that the total cost of the rule for those national banks will be approximately \$78 million.¹⁹

We discuss further below, in the uncertainty section, the factors that might influence an institution regarding its decision to adopt Basel IA. Over time, Basel IA may become more appealing to a larger number of banks. The total cost of the proposed rule would consequently increase to the extent that more institutions opt into Basel IA over time. At present, it is unclear how many national banks will ultimately elect to adopt Basel IA.

¹⁸ These banks include national banks with significant mortgage holdings (over \$500 million in 1-4 family first-lien mortgages and mortgages comprise at least 10 percent of their portfolio) as well as national banks that do not currently meet the well-capitalized threshold for their risk based capital-to-assets ratio.

¹⁹ This cost estimate assumes that each institution incurs these costs in one year, 2007. Spreading the costs equally over two years and applying a five percent discount rate would yield a present value total cost to national banks of approximately \$76 million. We use a five percent discount rate as an approximation to the current yield on a ten-year Treasury Bond. Using a discount rate of three percent or seven percent would yield a present value cost of \$77 million or \$75 million, respectively.

Implicit Costs

In addition to explicit setup and recurring costs, banking organizations may also face implicit costs arising from the time and inconvenience of having to adapt to new capital regulations. At a minimum this involves the increased time and attention required of senior bank and thrift management to introduce new programs and procedures and the need to closely monitor the new activities during the inevitable rough patches when the proposed rules first take effect. Such heightened oversight will necessarily have to continue until the new programs settle into place. Because of the relatively simple nature of the changes in the proposed rule, the OCC does not anticipate significant time and inconvenience costs. It is likely that an institution that expects the adoption of Basel IA to involve significant time and inconvenience costs will choose to remain subject to current capital rules.

2. Government Administrative Costs

Like the banking organizations subject to new requirements, the costs to government agencies of implementing the proposed rule also involve both startup and ongoing costs. Startup costs include expenses related to the development of the regulatory proposals, costs of establishing new programs and procedures, and costs of initial training of bank examiners in the new programs and procedures. Ongoing costs include maintenance expenses for the likely additional examiners and analysts needed to regularly apply potentially more complex supervisory processes. In the case of Basel IA, because modest changes to Call Reports will capture most of the rule changes, these ongoing costs are likely to be minor.

OCC expenditures fall into three broad categories: training, guidance, and supervision. Training includes expenses for workshops and other training courses and seminars for examiners. Guidance expenses reflect expenditures on the development of Basel IA guidance. Supervision expenses reflect organization-specific supervisory activities.

Although we have not collected OCC expenditure information specific to Basel IA, we estimate that Basel IA expenditures will be approximately one third of OCC expenditures on the U.S. implementation of Basel II. While ultimate OCC expenditures on Basel IA depend to a certain extent on the number of institutions that elect to adopt Basel IA, guidance and training expenditures will be relatively independent of the adoption rate. Through fiscal year 2005, the OCC spent \$7.1 million on Basel II guidance, training, and supervision expenses. Applying our estimate of one third of Basel II related expenses; we estimate that OCC expenses for Basel IA will be approximately \$2.4 million through 2006. We also expect expenditures of \$1 million per year between 2007 and 2010. Applying a five percent discount rate to future expenditures, past expenses (\$2.4 million) plus the present value of future expenditures (\$3.6 million) equals total OCC expenditures of \$6 million on Basel IA.²⁰

²⁰ Using a discount rate of three percent or seven percent would yield the same result after rounding.

Total Cost Estimate of Proposed Rule

Because we do not expect the adoption or non-adoption of Basel IA to carry any social costs outside of the direct costs to banking organizations, the OCC's estimate of the total cost of the proposed rule includes expenditures by banking organizations and the OCC from the present through 2010. Based on our estimate that 46 national banks will adopt Basel IA at a cost to each institution of between \$100,000 and \$3 million depending on the size of the institution, we estimate that national banks will spend approximately \$78 million on Basel IA. Combining expenditures by banking organizations and the OCC provides an estimate of \$84 million for the total cost of the proposed rule.²¹

The Uncertainty of Costs and Benefits

As with any proposed rule change, there is bound to be some uncertainty regarding the actual extent of costs and benefits engendered by the new regulation. In addition to uncertainty surrounding costs and benefits that might arise from unanticipated effects of the regulation, there will also be varying degrees of uncertainty regarding fully anticipated costs and benefits. For instance, some costs are certain to occur, but the ultimate cost for each institution remains uncertain.

One area of particular uncertainty is the number of institutions that will choose to adopt the proposed rule. As pointed out in the discussion of costs above, the total cost of the proposed rule depends entirely on the number of institutions that adopt Basel IA and the size of those institutions. While we expect that 46 national banks or fewer will adopt the proposed rule, the actual number could fall anywhere between zero and 1,539 institutions. Corresponding costs could thus fall anywhere between zero and \$662 million. Because adoption of the rule is voluntary, each institution will weigh the benefits of adopting the rule against its costs. It is fairly certain, however, that regulated financial institutions will not incur expenses in order to voluntarily adopt a rule that would increase their minimum required capital levels. This understandable behavior combined with the fact that to achieve increased risk sensitivity, Basel IA would reduce risk weights for securities with high investment grade ratings and mortgages with low LTV ratios, suggests that institutions with portfolios more heavily weighted toward these types of assets would be more likely to adopt Basel IA than an institution with an asset portfolio that contains a significant proportion of below investment grade securities or mortgages with high LTV ratios.

Uncertainty also relates to the overall extent of changes in minimum capital requirements. For instance, because of changing risk weights, one might expect that institutions that elect to adopt Basel IA may be inclined to adjust their exposure in favor of lower risk weight assets. However, experience suggests that may not be the case. Current capital rules have different risk weights that would allow institutions to adjust their portfolio toward lower risk weight assets. Rather than clustering in any particular risk-weight category, banking organizations tend to hold a diversified portfolio of assets, suggesting that factors other than regulatory capital risk weights tend to dominate the asset allocation decision. Nevertheless, as

²¹ Spreading costs over two years and using three percent, five percent, and seven percent discount rates would yield total cost estimates of \$83 million, \$82 million, or \$81 million, respectively.

with the implementation of Basel II, the federal banking agencies intend to monitor the risk-based capital levels of those banking organizations that choose to voluntarily adopt Basel IA. Any significant decline in the aggregate minimum required risk-based capital for these banking organizations may warrant modifications to the proposed rule's risk-based capital requirements.

Another area of uncertainty with any regulatory change is the possibility that it might create a competitive advantage for some organizations relative to others. One of the principal motivations for developing the Basel IA proposal, however, was to help mitigate any potential competitive effects of the U.S. implementation of Basel II. Although the OCC's regulatory impact analysis of Basel II concluded that recent economic literature does not reveal any persuasive evidence of sizeable competitive effects, Basel IA serves to mitigate any potential distortions in minimum regulatory capital requirements between Basel II and non-Basel II institutions. Even so, the U.S. banking agencies recognize the need to closely monitor the competitive landscape subsequent to any regulatory change. In particular, the banking agencies intend to monitor and encourage research on competition in banking on an ongoing basis in order to fully assess the proposed rule's competitive implications. To the extent that undesirable competitive inequities emerge, the agencies have the power to respond to them through many channels, including but not limited to suitable changes to capital adequacy regulations.

IV. ANALYSIS OF BASELINE AND ALTERNATIVES

In order to place the costs and benefits of the proposed rule in context, Executive Order 12866 requires a comparison between the proposed rule, a baseline of what the world would look like without the proposed rule, and a reasonable alternative to the proposed rule. The baseline considers the possibility that the proposed Basel IA rule is not adopted and current capital standards continue to apply.

The baseline scenario appears in this analysis in order to estimate the effects of adopting the proposed rule relative to a hypothetical regulatory regime that might exist without Basel IA. Because the baseline scenario considers costs and benefits as if the proposed rule never existed, we set the costs and benefits of the baseline scenario to zero. Obviously, banking organizations face compliance costs and reap the benefits of a well-capitalized banking system even under the baseline. However, because we cannot quantify these costs and benefits, we normalize the baseline costs and benefits to zero and estimate the costs and benefits of the proposed rule and alternative as deviations from this zero baseline.

1. **Baseline Scenario: Current capital standards based on the 1988 Basel Accord continue to apply.**

Description of Baseline Scenario

Under the Baseline Scenario, current capital rules would continue to apply to all banks in the United States that are not Basel II banks. The United States would not adopt the proposed Basel IA rule but work towards adoption of the Basel II framework would continue. Because the U.S. implementation of Basel II allows institutions to opt in, there is some uncertainty in this

baseline scenario regarding the number of U.S. banking organizations that would not be subject to Basel II.

Change in Benefits: Baseline Scenario

Staying with current capital rules instead of adopting the Basel IA proposal would eliminate essentially all of the benefits of the proposed rule described earlier. Table 4 lists the benefits of the proposed rule and indicates whether the baseline scenario would capture these benefits. Under the baseline, banking organizations not subject to Basel II would not be able to voluntarily elect Basel IA capital rules. Institutions that would have adopted the proposed rule would not be able to take advantage of the enhanced risk sensitivity of Basel IA capital charges and the more efficient use of bank capital which that implies.

Table 4. Benefit Comparison of Proposed Rule with Baseline Scenario

Benefit	Proposed Rule	Baseline: No Basel IA
1. Enhances risk sensitivity of capital charges	Yes	No
2. More efficient use of required capital	Yes	No
3. Recognizes new developments in financial markets	Yes	No
4. Mitigates potential distortions in minimum regulatory capital requirements between large and small banking organizations	Yes	No
5. Ability to opt in offers long-term flexibility to banking organizations	Yes	No

One benefit that would remain under the baseline is that there would be no rule changes instead of just simple and voluntary rule changes. Without Basel IA as an option, an institution would have to choose between the advanced approaches of Basel II and the *status quo*. The baseline without Basel IA would leave a level playing field for all the non-Basel II banks. However, the absence of an opportunity to mitigate potential distortions in minimum required capital would likely diminish this benefit in the eyes of an institution concerned about potential distortions created by Basel II.

Changes in Costs: Baseline Scenario

Continuing to use current capital rules would eliminate the costs of adopting the proposed rule as well as the benefits. As discussed above, under the proposed rule we estimate that organizations would spend up to \$78 million on implementation-related expenditures if 46 national banks adopt Basel IA. Retaining current capital rules would eliminate any costs associated with adopting the proposed rule, even though banking organizations would only incur those costs if they elected to do so. Also, because the proposal would rely on data that is readily available, and imposes relatively modest changes in data reporting and information-maintenance requirements, those avoided costs are relatively modest.

Even if the proposed rule were dropped, the original concerns that led to the proposal would remain and likely could require some sort of policy response. In that case, costs could change depending on the eventual regulatory response.

2. Alternative: Require all U.S. banking organizations not subject to Basel II to adopt Basel IA.

Description of Alternative

The only change under the alternative is that adoption of the proposed rule would be mandatory rather than voluntary. Under this alternative, the provisions of the proposed rule would remain intact and apply to all national banks that are not subject to Basel II. Institutions subject to Basel II would include mandatory Basel II institutions and those institutions that elect to adopt Basel II according to the U.S. implementation of the Basel II framework.

Change in Benefits: Alternative

Because there are no changes to the elements of the proposed rule under the alternative, the list of benefits remains the same. Among these benefits, only one benefit is lost by making the proposed rule mandatory: the benefit derived from the fact that the proposed rule is voluntary. As for the benefits relating to the enhanced risk sensitivity of capital charges, because adoption of Basel IA is mandatory under the alternative more banks will be subject to Basel IA provisions and the aggregate level of benefits will be higher. Because we anticipate that only 46 national banks would adopt Basel IA voluntarily, this difference in the aggregate benefit level would be considerable. Table 5 summarizes the benefit comparison between the proposed rule and the alternative.

Table 5. Benefit Comparison of Proposed Rule with Alternative

Benefit	Proposed Rule	Alternative: Mandatory Basel IA
1. Enhances risk sensitivity of capital charges	Yes	Greater
2. More efficient use of required capital	Yes	Greater
3. Recognizes new developments in financial markets	Yes	Yes
4. Mitigates potential distortions in minimum regulatory capital requirements	Yes	Yes
5. Ability to opt in offers long-term flexibility to banking organizations	Yes	No

Changes in Costs: Alternative

Clearly the most significant drawback to the alternative is the dramatically increased cost of applying a new set of capital rules to all U.S. banking organizations. Under the alternative,

direct costs would increase for every U.S. banking organization that would have elected to continue to use current capital rules under the proposed rule. Referring back to table 3, the cost estimate for the alternative is the total cost estimate for a 100 percent adoption rate of Basel IA. With 1,539 national banking organizations eligible for Basel IA, the cost of the alternative to banking organizations is approximately \$662 million. This number may be somewhat less depending on the number of national banks that elect to adopt Basel II capital rules, but it is much greater than our cost estimate of \$78 million for the proposed rule.

Because of enhanced risk sensitivity, aggregate social benefits would increase by making Basel IA mandatory. However, private costs would increase considerably. For some riskier institutions, the benefits of increased risk sensitivity of capital charges would likely outweigh the private cost of Basel IA implementation. However, for the vast majority of well capitalized institutions with relatively balanced portfolios, the private cost of implementing Basel IA most likely exceeds the marginal social benefit of adopting its more risk sensitive approach to determining regulatory capital.

3. Overall Comparison of Proposed Rule with Baseline and Alternative

The objective of the proposed rule is to enhance the risk sensitivity of capital charges for institutions not subject to Basel II capital regulations. The proposal also seeks to mitigate any potential distortions in minimum regulatory capital requirements that the U.S. implementation of Basel II might create between large and small banking organizations. Like Basel II, the anticipated benefits of the Basel IA proposal are difficult to quantify in dollar terms. Nevertheless, the OCC believes that the proposed rule provides benefits without posing any threat to the safety and soundness of the banking industry or the security of the Federal Deposit Insurance system. To offset the costs of the proposed rule, its voluntary nature offers regulatory flexibility that will allow institutions to adopt Basel IA on a bank-by-bank basis when an institution's anticipated benefits exceed the anticipated costs of adopting this regulation.

The banking agencies are confident that the proposed rule could serve to strengthen institutions electing to adopt Basel IA while the safety and soundness of institutions electing to forgo Basel IA and Basel II will not diminish. On the basis of our analysis, we believe that the benefits of the proposed rule are sufficient to offset the costs of implementing the proposal. However, because there is no social cost to allowing non-Basel II institutions to remain subject to current capital rules, we believe it is best to make the proposed rule voluntary in order to let each national bank decide whether it is in that institution's best interest to adopt Basel IA. Because adoption is voluntary, the proposed rule offers an improvement over the baseline scenario and the alternative. The proposed rule offers an important degree of flexibility unavailable with either the baseline or the alternative. The baseline does not give banking organizations a way into Basel IA and the alternative does not offer them a way out. The alternative would compel most banking organizations to follow a new set of capital rules and require them to undertake the time and expense of adjusting to these new rules. The proposed rule offers a better balance between costs and benefits than either the baseline or the alternative. Overall, the OCC believes that the benefits of the proposed rule justify its costs.