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**TESTIMONY OF
JOHN C. LYONS
SENIOR DEPUTY COMPTROLLER BANK SUPERVISION POLICY
and
CHIEF NATIONAL BANK EXAMINER
OFFICE OF THE COMPTROLLER OF THE CURRENCY
Before the
SENATE COMMITTEE ON BANKING, HOUSING, AND URBAN AFFAIRS
November 14, 2012**

Statement Required by 12 U.S.C. § 250:

The views expressed herein are those of the Office of the Comptroller of the Currency and do not necessarily represent the views of the President.

Chairman Johnson, Ranking Member Shelby, and members of the Committee, thank you for your invitation to testify. I appreciate the opportunity to appear before you today to discuss the three proposed capital rules released by the federal banking agencies (the Office of the Comptroller of the Currency (OCC), the Federal Reserve Board, and the Federal Deposit Insurance Corporation) in June, and in particular, the impact of those proposed rules on national banks and federal savings associations and the stability of the U.S. financial system.

During the public comment period for these proposals that ended on October 22, 2012, the OCC and the other federal banking agencies received approximately 1,500 comment letters from banks and federal savings associations of all sizes. In light of the number of comments received and the important issues raised, the agencies announced last week that we do not expect to finalize the proposals by January 1, 2013. While we are still in the process of reading and assessing the comments, it appears that the most fundamental issues have been raised by small banks and federal savings associations (collectively, community banks) who have raised concerns about the applicability of the standards to them. Large banks have raised some of the same concerns as the community banks in terms of specific provisions contained in the proposals as well as additional concerns that are more technical in nature. Since our comment review process is in early stages, there are some limitations on the views I can express to avoid prejudging the outcome of the rulemaking process.

We are committed to carefully considering all the comments we received; however, my testimony today will focus on some of the overarching concerns raised, and in particular, those raised by community bankers. In this regard, I want to assure you that we are very cognizant of the special role that smaller banks play in our communities and in providing financing of our country's small businesses and families.

It's important to start by noting that the key reason that we issued the proposals was to improve the safety and soundness of our nation's banking system. Strong capital standards have played an important role in moderating downturns and positioning the banking system to serve as a catalyst for recovery by ensuring that financial institutions stand ready to lend throughout the economic cycle. Access to credit by businesses and consumers is critically important to

promoting and achieving financial stability. The recent crisis demonstrated the consequences of having insufficient capital in the banking system of the U.S. and around the world.

The international Basel III agreements embraced many of the lessons learned during the crisis relating to regulatory capital. As members of the Basel Committee on Banking Supervision, the agencies worked to develop these enhanced capital standards, and the elements contained in the Basel III international framework are reflected in much of what we have proposed to apply in the U.S. As the OCC has previously testified, many of the key provisions and objectives of Basel III complement key capital provisions of the Dodd-Frank Act.¹ However, in developing the U.S. capital proposals, we did not adopt a “one-size fits all approach.” We carefully evaluated each element of the Basel III framework and assessed to which banks it should be applied. In making these assessments, the agencies strove to calibrate the requirements to reflect the nature and complexity of the financial institutions involved. As a result, and consistent with the higher standards for larger banks required by section 165 of the Dodd-Frank Act, many of the provisions in the proposed rules are only for larger banks and those that engage in complex or risky activities; community banks with more basic balance sheets are largely or completely exempted. While the international Basel III agreements incorporate many of the lessons learned from the crisis, there were other key concerns that were not addressed in those standards, but which are important for promoting the resiliency and stability of the U.S. banking system – for example, the importance of better differentiating risks in mortgage lending. The U.S. proposed rules attempt to address these additional elements as well.

We recognize that the proposed changes represent a comprehensive reform of regulatory capital standards and that the burden of reviewing and assessing the impact of new regulatory proposals can weigh especially heavily on community banks. This is why we have taken several measures to reduce the burden of this rulemaking process for these banks – in the way we

¹ Testimony of John Walsh, Acting Comptroller of the Currency, before the Committee on Banking, Housing, and Urban Affairs, United States Senate (March 22, 2012).

organized the proposals, in outreach we have conducted, and by distributing a tool to help bankers assess the potential impact of the proposals on their capital requirements.

We also appreciate that the burden for community banks lies not only in reviewing and understanding the proposals, but also in complying with them. In this context, it is important to remember that these are proposed rules, not final rules, and we are very interested in feedback on all aspects of these proposals. We posed over 80 specific questions in the proposals, including questions related to regulatory burden, to elicit comments on all aspects of the proposals.

In my testimony today, I will review briefly the proposed capital rules and then discuss three of the major issues raised in the comments we have received. These issues are: (1) the overall complexity of the proposals and questions about their applicability to, and appropriateness for, community banks; (2) the proposed treatment of unrealized losses (and gains) in regulatory capital; and (3) the treatment of real estate lending, particularly residential mortgages.

The Proposed Capital Rules

In June, the agencies published three notices of proposed rulemaking (NPRs) – the Basel III NPR, the Standardized Approach NPR, and the Advanced Approaches NPR.² Many, but not all, of the provisions contained in two of these three NPRs – the Basel III NPR and the Standardized Approach NPR – would apply to all banks, including community banks.

The Basel III NPR would raise the quantity and quality of capital required to meet minimum regulatory standards. The Standardized Approach NPR seeks to address shortcomings in the way capital is aligned with risks in our current rules. The Advanced Approaches NPR would require the largest banks, when calculating regulatory capital, to take a more complete and accurate account of their risks, both on- and off-balance sheet. The Basel III and Advanced

² “Regulatory Capital Rules: Regulatory Capital, Implementation of Basel III, Minimum Regulatory Capital Ratios, Capital Adequacy, Transition Provisions, and Prompt Corrective Action” (Basel III NPR), 77 Fed. Reg. 52792; “Regulatory Capital Rules: Standardized Approach for Risk-weighted Assets; Market Discipline and Disclosure Requirements” (Standardized Approach NPR), 77 Fed. Reg. 52888; and “Regulatory Capital Rules: Advanced Approaches Risk-based Capital Rule; Market Risk Capital Rule” (Advanced Approaches NPR) 77 Fed. Reg. 52978.

Approaches NPRs would significantly raise capital standards for large banks. Taken together, the three NPRs address the risks that contributed to the recent financial crisis and aim to enhance the safety and soundness of the U.S. banking system.

Turning to the first of the three NPRs, the Basel III NPR concentrates largely on improving the reliability with which banks of all sizes can absorb future losses. It covers both the definition and the minimum required levels of capital. The NPR proposes a new measure for regulatory capital called Common Equity Tier 1 (CET1). This measure was introduced because some of the instruments that qualified under the broader existing definitions of regulatory capital did not dependably absorb losses during the crisis and the subsequent economic downturn.

The proposed minimum standard for CET1 is 4.5 percent of risk-weighted assets. On top of this, the NPR introduces two new capital buffers – the capital conservation buffer and the countercyclical buffer.

The proposed capital conservation buffer is 2.5 percent of risk-weighted assets, which would bring the effective CET1 requirement up to 7 percent of risk-weighted assets. If a bank's CET1 ratio were to fall below that level, capital distributions and discretionary bonus payments would be restricted. This buffer would apply to banks of all sizes. During the recent financial crisis and economic downturn, some banks continued to pay dividends and substantial discretionary bonuses even as their financial condition weakened; the capital conservation buffer is intended to limit such practices and conserve capital at individual banks and for the banking system as a whole.

The countercyclical capital buffer would apply only to the largest internationally-active banks with assets in excess of \$250 billion or foreign exposures of more than \$10 billion. If activated by the agencies during the expansionary stage of a credit cycle, it could increase the minimum CET1 buffer by as much as another 2.5 percent of risk-weighted assets. The intent of the countercyclical capital buffer is to increase capital requirements during periods of rapid economic growth to reduce the excesses in lending and to protect against the effects of weakened underwriting standards during subsequent contractions.

A separate surcharge on systemically important banks (the so-called “SIFI surcharge”), which is to be the subject of a separate rulemaking, could potentially add another 3.5 percent of risk-weighted assets to the risk-based capital requirements of the largest banks. The cumulative effect of the countercyclical buffer and the potential SIFI requirement is that during an upswing in the credit cycle, some large U.S. banks may be required to hold CET1 equal to as much as 13 percent of their risk-weighted assets. This difference in potential capital requirements – i.e., as much as 13 percent for large banks compared with 7 percent for small banks – is intended to appropriately distinguish between their relative riskiness.

In addition to risk-based capital standards, all U.S. financial institutions are subject to a leverage ratio that is designed to limit the overall amount that a bank can leverage its capital. In this regard, another way in which the proposals differentiate between banks of different sizes is the new supplementary leverage ratio introduced in the Basel III NPR. This ratio would be set at 3 percent of adjusted assets and would apply only to large internationally active banks. It is a more demanding standard than the existing 4 percent leverage requirement that already applies to all banks because it would include certain off-balance-sheet exposures. If this proposed change is implemented, small banks would be subject to only one leverage ratio requirement whereas large banks would have to meet two requirements.

While the Basel III NPR focuses on raising the quality and quantity of capital, the Standardized Approach NPR seeks to ensure that riskier activities require more capital. To accomplish this, the Standardized Approach NPR would revise the capital treatment for exposures to non-U.S. sovereigns, residential mortgages, commercial real estate, securitizations, and equities, and revise and expand the recognition of credit risk mitigation through collateral and guarantees. It also would introduce new disclosure requirements for banks over \$50 billion in assets, as a means to impose additional market discipline. This disclosure requirement would not apply to community banks. Finally, the Standardized Approach NPR would remove external credit ratings from the capital standards in accordance with section 939A of the Dodd-Frank Act.

The Advanced Approaches NPR applies only to the largest, internationally active banks. This NPR includes several changes to the calculation of risk-weighted assets for counterparty

exposures so that sufficient capital will be required for this source of risk that was found to be significant during the recent financial crisis.

In developing the June proposals, we were keenly aware of their potential impact, particularly on smaller banks throughout the country. The proposals include lengthy transition provisions and delayed effective dates to reduce the likelihood of adverse effects from increases in minimum required regulatory capital. For example, the revised risk weights included in the Standardized Approach NPR would not go into effect until 2015, and some of the transitional provisions related to capital instruments in the Basel III NPR extend out to 2022.

We assessed the potential effects of the proposed rules on banks by using regulatory reporting data and certain key assumptions, which we noted in the preamble to the proposals.³ Our assessments indicate that many community banks hold capital well above both the existing and the proposed regulatory minimums. Many of the largest, internationally active banks already have strengthened their regulatory capital levels to meet the proposed minimum standards, particularly the new CET1 standard, in order to meet market participants' expectations. Establishing higher minimum standards for all banks would reinforce the financial strength of the banking sector in the future and the stability of the U.S. financial system.

While we did consider the potential impact of the proposals on banks and the banking system as we were developing them, one of the key purposes of the notice and comment process is to gain a better understanding of the potential impact of the proposals on banks of all sizes. As previously noted, to foster feedback from community banks on potential effects of the proposals, the agencies developed and posted on their respective Web sites an estimator tool that allowed smaller banks to use bank-specific information to assess the likely impact on their individual institution.

³ See the attached impact assessment on OCC-regulated banks and thrifts pursuant to the Unfunded Mandates Reform Act.

Issues Raised in Comment Letters

1. Complexity and Applicability

Commenters have raised an overarching concern about the complexity of the rules. More specifically, many comments have stated that the residential mortgage provisions in the Standardized Approach NPR are too complex. The NPR would separate mortgages into two risk categories based on product and underwriting characteristics and then, within each category, assign several new risk weights based on loan-to-value ratios (LTVs). Commenters were concerned about the costs associated with reviewing the existing book of mortgages and creating new systems to accommodate the more granular treatment of risks under the proposed approach. Under today's standards, all mortgages are assigned just one of two weights based on criteria that are relatively simple to administer.

Commenters also raised concerns about complexities resulting from these capital proposals in combination with other regulatory initiatives. For example, banks of all sizes have raised concerns about the interactions between some of the provisions of the proposals and certain aspects of the Dodd-Frank Act. In particular, some commenters raised concerns about the interplay and overall effect that the proposed treatment for residential mortgages will have on the housing sector and availability of mortgage loans when combined with the pending regulations related to the definitions of "qualified mortgage" (QM) and "qualified residential mortgage" (QRM).⁴ In developing the treatment for residential mortgages, the agencies were mindful of the proposed definitions of QM and QRM and specifically requested comment on whether mortgages that meet the QM definition should be included in the lower risk category of residential mortgage.

Some commenters suggested that, given the complexity of the proposals, the best way to reduce regulatory burden on community banks would be to delay the implementation of the

⁴ Proposed regulations relate to the definition of "qualified mortgage" under regulations to be issued by the Consumer Financial Protection Bureau pursuant to the Truth in Lending Act (as revised by section 1412 of the Dodd-Frank Act), as well as the definition of "qualified residential mortgage" under the securitization risk retention regulations to be issued jointly by the federal banking agencies, FHFA, SEC, and HUD pursuant to section 941 of the Dodd-Frank Act.

Standardized Approach NPR or to exempt community banks altogether from any new capital rules. In this vein, many commenters observed that community banks did not cause the crisis, and therefore should be exempted. We will carefully consider these comments as well as suggestions for improving the NPR.

As noted earlier, we have taken steps to try to ease the burden of understanding the proposed set of rules for community banks. Nevertheless, we recognize that understanding and complying with the proposed rules could still be difficult for community banks. However, it is also important to recognize that the proposed rules are lengthy, in part, because they address banks of all shapes and sizes including banks involved in complex or risky activities, instruments, or lines of business. Banks engaged in these activities are not necessarily only the largest banks in the country but also can include smaller banks that engage in one or two complex or riskier activities. The proposed rules are comprehensive in their coverage and would therefore address such instances. The vast majority of community banks, however, will not need to consider many of these provisions.

Finally, it is important to remember that over 460 smaller banks have failed in the aftermath of the financial crisis for a variety of reasons but, ultimately, because they did not have enough capital in relation to the risks that they took. The future safety and soundness of community banks will depend on their having sufficient capital going forward.

2. Unrealized Losses

Another major issue raised by commenters is the inclusion of unrealized losses (and gains) on available-for-sale (AFS) debt securities in regulatory capital. Under our existing standards, such unrealized losses generally do not affect a bank's regulatory capital.⁵ In contrast,

⁵ Under the existing standards for national banks in 12 CFR Part 3, Appendix A, section 2, and for federal savings associations in 12 CFR 167.5, Tier 1 capital (national banks) and core capital (federal savings associations) include "common stockholders' equity." The definition of "common stockholders' equity" (listed at 12 CFR Part 3, Appendix A, section 1 for national banks and 12 CFR 167.1 for federal savings associations) does not include unrealized gains or losses on AFS debt securities, but it does include unrealized losses on AFS equity securities with readily determinable fair values. Additionally, at 12 CFR Part 3, Appendix A, section 2(b)(5) (national banks) and 12 CFR 167.5(b)(5) (federal savings associations), the current rules also provide that up to 45 percent of pretax net unrealized gains on AFS equity securities can be included in Tier 2 capital.

under the Basel III NPR, unrealized losses on AFS debt securities would directly impact a bank's regulatory capital.⁶ The rationale for the proposal is that ignoring unrealized losses has the potential to mask the true financial position of a bank. This is particularly true when a bank is under stress and when creditors are most likely to be concerned about unrealized losses that could inhibit a bank's ability to meet its obligations.

Many bankers have commented that the inclusion of unrealized gains and losses on AFS debt securities could result in large and volatile changes in capital levels and other measures tied to regulatory capital, such as legal lending limits, especially when interest rates rise from the current low levels. Because these gains and losses often result from changes in interest rates rather than changes in credit risk, commenters also noted that the value of these assets on any particular day might not be a good indicator of the value of a security to a bank, given that the bank could hold the security until its maturity and realize the amount due in full (assuming no credit related issues).

There are strategies available to banks to minimize some of these potential adverse effects on regulatory capital. Banks could increase their capital, hedge or reduce the maturities of their AFS securities, or shift securities into the held-to-maturity portfolio at the cost of reducing liquidity. However, commenters have stated that these strategies are all expensive and some strategies, such as hedging or raising additional capital, may be especially expensive and difficult for community banks. Commenters also have noted that under the proposed approach,

12 CFR Part 3, Appendix A, section 2(b)(5) (national banks) and 12 CFR 167.5(b)(5) (federal savings associations), further provide that unrealized gains and losses on other assets, including AFS debt securities, may be taken into account when considering a bank's overall capital adequacy, however, those gains and losses are not specifically included in the determination of a bank's regulatory capital ratios.

⁶ Section 20(a)(1) of the proposal defines the elements that make up common equity tier 1 capital. Those elements include accumulated other comprehensive income (AOCI). Under U.S. GAAP, AOCI is comprised of four elements: (1) unrealized gains and losses on AFS securities (ASC Topic 320, Investments—Debt and Equity Securities); (2) gains and losses on derivatives held as effective cash flow hedges (ASC Topic 815, Derivatives and Hedging); (3) recognized actuarial gains and losses on defined benefit plans (ASC Topic 715, Compensation—Retirement Benefits); and (4) gains and losses resulting from currency translation of foreign subsidiaries financial statements (ASC Topic 830, Foreign Currency Matters). Under the existing capital standards, items one through three of AOCI are not included in regulatory capital.

offsetting changes in the value of other items on a bank's balance sheet would not be recognized for regulatory capital purposes when interest rates change. As a result, they stated that the proposed treatment could greatly overstate the real impact of interest rate changes on the safety and soundness of the bank.

The agencies anticipated many of the concerns raised by commenters on this issue and included a discussion within the Basel III NPR requesting comment on potentially excluding from regulatory capital unrealized gains and losses associated with U.S. Treasury and GSE debt that can be expected to be driven solely by interest rates. Under such an approach, other unrealized losses and gains -- for example, those associated with a corporate bond -- would be recognized in regulatory capital. The OCC recognizes the importance of this issue and the challenges the proposed treatment could present to banks, particularly community banks, in managing their capital, liquidity, and interest rate risk positions and in affecting their ability to lend to their communities. We are committed to reviewing this issue carefully.

3. Real Estate Lending

Another major concern of commenters relates to the proposed treatment for residential mortgages, and, to a lesser extent, commercial real estate. These provisions in the Standardized Approach NPR attempt to address some of the causes of the crisis – the collapse in residential mortgage underwriting standards and the prevalence of higher risk commercial real estate loans in some banks. Under our current rules, residential mortgages within a broad spectrum of risk attributes receive identical capital treatment. The treatment of commercial real estate loans is even less risk sensitive in that all such loans receive the same capital treatment. The proposed standard would raise the capital requirement for the riskiest mortgages and commercial real estate loans while actually lowering the charge on relatively safer residential mortgage loans.

Some of the major issues that commenters have raised relate to: the treatment of residential balloon mortgages; recordkeeping issues associated with the proposed use of LTV ratios; the treatment of second liens and commercial real estate; and the potential impact on the housing market. With respect to residential balloon mortgages, the concentration of credit risk in

the final balloon payment presents more risk to the lender than a loan that is fully amortized over a number of years – especially in situations where housing prices are not increasing. Therefore, the NPR proposes a relatively high capital charge.⁷ Many community bankers have questioned this assumption and noted their good experience with balloons and their wide use in managing interest rate risk and providing credit to established customers.

On the recordkeeping that would be required for LTVs, while higher LTV ratios are closely associated with higher risks of default, many community bankers have stated that going back through their existing portfolios to determine each loan's LTV at origination would be a burdensome task. For this reason, some have suggested applying the proposed treatment prospectively.

Commenters have also raised concerns with the proposed treatments for second lien residential mortgages, such as home equity loans, and for certain commercial real estate loans. Similar to issues raised with balloon mortgages, commenters have expressed concern that the proposed rules do not adequately distinguish between prudent and more risky lending in such products.

With respect to broader implications for the housing market, while the proposal would actually lower capital requirements for the safest mortgages, it would also raise capital requirements for riskier mortgages, which could raise the incremental costs of such mortgages. Commenters have raised concerns about the impact this might have on recovery of the housing sector.

The OCC will pay attention to the unique and intimate knowledge that community banks possess of their customers and their lending relationships as we review the range of issues raised by commenters on our proposed treatment of real estate lending.

⁷ Under the proposals, balloon mortgages would receive risk weights between 100 and 200 percent, depending on the loan's LTV.

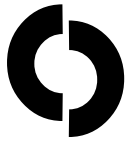
Conclusion

Given the attention that the regulatory capital proposals have received recently, let me conclude by taking a moment to put these proposals in a broader perspective. Specifically, regulatory capital standards are an important component in a larger and more comprehensive process of bank supervision. They cannot and should not be viewed as a substitute for other assessments of a bank's financial position, including banks' internal capital adequacy assessments. They should be viewed as complementary to strong supervision of institutions, which requires in-depth and bank-specific analysis.

With this as the context, I want to reemphasize that we are still in the process of reviewing the many comment letters that we have received. We will carefully assess the advantages and disadvantages of the alternatives suggested, including assessing regulatory burden against the value of more and better quality capital that is better aligned to actual risks. As the Comptroller said last month, "As we finalize the rules, we will be thinking broadly about ways to reduce regulatory burden. As well as considering the substance of each provision, we will be taking a fresh look at the possible scope for transition arrangements, including the potential for grandfathering, to evaluate what we can do to lighten burden without compromising our two key principles of raising the quantity and quality of capital and setting minimum standards that generally require more capital for more risk."⁸

Given the vital role that banks serve in our national economy and local communities, we are committed to helping ensure that the business model of banks, both large and small, remains vibrant and viable. But, as a foundation for their future success, their capital has to stay strong too. If we can help ensure that, then we will be well along the road in ensuring that there is a stable and competitive banking system meeting household and business credit needs across America in the years ahead.

⁸ Remarks by Thomas J. Curry, Comptroller of the Currency, before the American Bankers Association in San Diego, California, October 15, 2012.



MEMORANDUM

Comptroller of the Currency
Administrator of National Banks

Washington, DC 20219

To: Carl Kaminski, Legislative and Regulatory Activities

Thru: Gary Whalen, Director, Policy Analysis Division

From: Douglas Robertson, Senior Financial Economist, Policy Analysis Division

Date: May 30, 2012

Subject: Impact Assessment for the Basel III Rule: General Capital Rules, NPR1

This memorandum provides our assessment of the economic impact of the proposed rules that would implement the Basel III framework developed by the Basel committee on Banking Supervision. The Basel III framework would revise current general risk-based capital rules and would be applicable to all banking organizations. The federal banking agencies are implementing Basel III through three separate rules. The first rule would apply Basel III minimum capital requirements to all banking organizations (NPR1). The second rule would implement new alternative measures of creditworthiness for general banking organizations (NPR2). The third rule would apply Basel III enhancements to institutions subject to the advanced approaches capital rules (NPR3). Advanced approaches banking organizations are those institutions with total assets of at least \$250 billion or foreign exposures of at least \$10 billion, or institutions that have elected to adopt the advanced approaches.

1) Basel III NPR (NPR1)

This will include the changes to the numerator of the risk-based capital ratio, the new ratio requirements (common equity Tier 1 and the higher minimums), as well as the conservation and countercyclical buffers. It also will include the changes to the treatment of mortgage servicing assets and deferred tax assets (DTAs).

2) Standardized Approach NPR (NPR2)

This will include the changes to the calculation of risk-weighted assets (the denominator of the risk-based capital ratio), except for the treatment of mortgage servicing assets and DTAs discussed in the Basel III NPR).

3) Advanced Approaches NPR (NPR3)

The advanced approaches NPR will introduce enhancements to the advanced approaches rule, and it will include a proposal to expand the scope of the market risk rule to include thrifts.

We estimate that the first-year cost associated with higher minimum capital requirements in NPR1 will be approximately \$5.1 million. We estimate that the first-year cost associated with changes in risk-weighted assets and implementation of alternative measures of creditworthiness in NPR2 will be approximately \$93.2 million. We estimate that the first-year cost associated with changes in risk-weighted assets and simultaneously meeting new market risk capital requirements in NPR3 will be approximately \$46.8 million. Together, we estimate that the overall cost of the three Basel III rules will be approximately \$145.1 million in the first year. After introducing new systems for determining risk weighted assets in the first year, we estimate that the overall cost of Basel III in subsequent years will decrease to approximately \$98.6 million per year.

I. The Proposed Rule: Minimum Regulatory Capital Ratios (NPR1)

The proposed rule would implement Basel III and has the following major elements. The proposed rule would:

1. Introduce a new common equity Tier 1 capital ratio
2. Introduce a higher minimum Tier 1 capital ratio
3. Introduce a supplementary leverage ratio for advanced approaches banks
4. Introduce new capital conservation buffer
5. Introduce a countercyclical capital buffer for advanced approaches banks
6. Prompt Corrective Action thresholds: Introduce common equity Tier 1 thresholds and increase Tier 1 thresholds
7. Apply the proposed capital rules to savings and loan holding companies on a consolidated basis

The proposed rule also contains a reservation of authority that authorizes a banking organization's primary federal supervisor to require the banking organization to hold additional capital relative to what would be required under the proposed rule.

Section 1. Minimum Capital Requirements

Under the proposed rule, changes to minimum capital requirements include a new common equity Tier 1 capital ratio, a higher minimum Tier 1 capital ratio, a supplemental leverage ratio for advanced approaches banks, new thresholds for prompt corrective action purposes, a new capital conservation buffer, and a new countercyclical capital buffer for advanced approaches banks. All banking organizations would transition to the new minimum capital requirements between January 1, 2013, and January 1, 2019. Table 1 shows the transition table for minimum capital requirements under the proposed rule.

Although the proposed rule would also increase several prompt corrective action (PCA) thresholds, with the exception of the leverage ratio, the minimum capital conservation buffer in the proposal effectively requires all banking organizations in the United States to be well capitalized for PCA purposes by 2019. Adding the capital conservation buffer to minimum required capital ratios elevates the capital ratios above PCA well-capitalized thresholds beginning January 1, 2019.

Table 1.- Transition Schedule for Minimum Capital Requirements

	Jan. 1, 2013	Jan. 1, 2014	Jan. 1, 2015	Jan. 1, 2016	Jan. 1, 2017	Jan. 1, 2018	Jan. 1, 2019	PCA	
								Adq.	Well
Common Equity to Risk-Weighted Assets	3.5%	4.0%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	6.5%
Tier 1 to Risk-Weighted Assets	4.5%	5.5%	6.0%	6.0%	6.0%	6.0%	6.0%	6%	8%
Total Capital to Risk-Weighted Assets	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8%	10%
Conservation Buffer to Risk-Weighted Assets				0.625%	1.25%	1.875%	2.5%		
Maximum Advanced Approaches Countercyclical Buffer				0.625%	1.25%	1.875%	2.5%		
Minimum Common Equity + Conservation Buffer	3.5%	4.0%	4.5%	5.125%	5.75%	6.375%	7.0%		
Minimum Tier 1 + Conservation Buffer	4.5%	5.5%	6.0%	6.625%	7.25%	7.875%	8.5%		
Minimum Total Capital + Conservation Buffer	8.0%	8.0%	8.0%	8.625%	9.125%	9.875%	10.5%		
Leverage Ratio	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4%	5%
Advanced Approaches Supplemental Leverage Ratio			Start to Report			3.0%	3.0%		

Section 2. Eligibility Requirements for Regulatory Capital Instruments

In addition to changing minimum required capital ratios, the proposed rule would also change what counts as capital. For instance, the proposed rule would increase deductions from regulatory capital for deferred tax assets, it would limit the inclusion of minority interests in capital, and unrealized gains and losses on all available-for-sale securities would flow through to common equity tier one capital.

A. Common Equity Tier 1 Capital Ratio

The proposed rule would require banking organizations to maintain a minimum 4.5 percent ratio of common equity Tier 1 capital to total risk-weighted assets. To be a well-capitalized institution under Prompt Corrective Action (PCA) regulations, banking organizations would need to maintain a minimum ratio of 6.5 percent.

Under the proposed rule, common equity Tier 1 capital would equal the sum of common stock and related surplus (net of any Treasury stock), retained earnings, accumulated other comprehensive income (AOCI), and common equity Tier 1 minority interest subject to limits minus regulatory adjustments and deductions. Qualifying common stock instruments would have to satisfy certain criteria. The banking agencies expect that the vast majority of existing common stock will fully satisfy these criteria.

New deductions from common equity Tier 1 capital include the following:

- a. Mortgage Servicing Assets (MSAs)
- b. Deferred tax assets (DTAs)
- c. Investments in the capital of an unconsolidated financial institution above a threshold
- d. Changes in accumulated other comprehensive income (AOCI) without adjustments for gains and losses in available-for-sale debt securities
- e. Investments in hedge funds and private equity funds consistent with the Volcker Rule¹

B. Tier 1 Capital: Additional Tier 1

Under the proposed rule, total Tier 1 capital would equal the sum of common equity Tier 1 capital and additional Tier 1 capital. Additional Tier 1 capital equals the sum of noncumulative perpetual preferred, related surplus, other Tier 1 minority interest, and various SBLF and EESA qualifying instruments less certain adjustments and deductions. Trust preferred securities would no longer be eligible for inclusion in Tier 1 capital. Additional Tier 1 capital instruments must also satisfy certain criteria. In essence, these instruments must be subordinated, have fully discretionary non-cumulative dividends, have no maturity date, have no incentives to redeem, and must be able to absorb losses. Instruments currently included in Tier 1 capital that do not meet the new criteria will be phased out of the Tier 1 regulatory capital calculation beginning in January 1, 2014 and will be 100 percent phased out beginning January 1, 2018, except for trust-preferred securities, which must be phased out according to a different timeline set forth in section 171 of the Dodd-Frank Act.

C. Tier 2 Capital

¹ This deduction is consistent with the proposed Volcker Rule. In our impact assessment for that rule, we estimated that banking organizations could invest in hedge funds and private equity funds up to as much as three percent of Tier 1 capital. As this deduction depends on the still pending final Volcker Rule, we defer assessment of the cost of this deduction until we conduct our economic impact analysis of the final Volcker Rule.

The proposed rule will also adjust Tier 2 capital elements. Tier 2 capital instruments must satisfy eligibility criteria as well. In particular, the instrument must have an original maturity of at least 5 years. Under the proposed rule, banking organizations may include limited amounts of common equity of a consolidated depository institution subsidiary.

D. Leverage Ratio

The proposed rule would require advanced approaches banks to maintain a three percent minimum Basel 3 leverage ratio in addition to the current U.S. leverage ratio. The Basel 3 leverage ratio is defined as a ratio of Tier 1 capital to a sum of on-balance sheet and certain off-balance sheet assets. The Basel 3 leverage ratio would supplement the current U.S. leverage ratio, which only includes on-balance sheet items in the ratio's denominator.

E. Capital Conservation and Countercyclical Buffers

The proposed rule would require all banking organizations to hold common equity Tier 1 capital in the form of a capital conservation buffer. The capital conservation buffer would begin to phase-in on January 1, 2016 and be fully phased-in at 2.5 percent of risk-weighted assets on January 1, 2019. Combined with other minimum capital requirements, the capital conservation buffer effectively requires banks to maintain a 7 percent common equity Tier 1 ratio, an 8.5 percent Tier 1 ratio, and a 10.5 percent total risk-based capital ratio.

The proposed rule would also require advanced approaches banking organizations to hold additional common equity Tier 1 capital in a countercyclical buffer, which would range between zero and 2.5 percent of risk-weighted assets. The countercyclical buffer would apply when the primary federal regulator determines (using various guide variables) that a period of excessive credit growth is contributing to an increase in systemic risk. The regulator would generally announce the level of the buffer 12 months in advance of its implementation, but may give shorter notice if necessary.

Institutions that do not meet the capital conservation buffer or the countercyclical capital buffer requirements would be subject to limitations on capital distributions and incentive compensation payments proportional to the shortfall in the buffer. A banking organization that operates in multiple jurisdictions would have to calculate its countercyclical capital buffer as the weighted average of the countercyclical capital buffer for each jurisdiction.

II. Institutions Affected By the Proposed Rule

The proposed minimum capital requirements will apply to all banking organizations. According to December 31, 2011 Call Report data, there are 7,432 FDIC-insured institutions. After aggregating to the highest holding company, there are 6,744 bank holding companies, of which,

1,213 are national banking organizations.² Excluding several thrifts that are included as subsidiaries of national banking organizations, the proposed rule would also apply to 612 federally chartered private savings institutions. Thus, the proposed rule would apply to 1,825 financial institutions regulated by the OCC.

III. Estimated Costs and Benefits of the Proposed Rule

The various elements of the proposed rule will affect costs in three ways: (1) the cost of capital institutions will need to meet the higher minimum capital ratios and the new eligibility standards for capital, (2) compliance costs associated with establishing the infrastructure to determine correct risk weights using the new alternative measures of creditworthiness, and (3) compliance costs associated with new disclosure requirements. Some institutions will also incur costs associated with new capital requirements for exposures to central counterparties and changes to recognized collateral and eligible guarantors, but we subsume these expenses into our general cost of capital estimates. In this analysis of the proposed rule covering minimum capital requirements, we only estimate the cost of capital necessary to make up any projected shortfall between current capital levels and the proposed rule's new minimum capital requirements.

Benefits of the Proposed Rule

The proposed rule would produce the following benefits:

1. Improves the quality of regulatory capital by introducing a common equity Tier 1 regulatory capital requirement and tightening the standards for including non-common equity instruments in regulatory capital
2. Increases risk sensitivity of capital requirements and risk-weighted assets
3. Improves loss absorbency of regulatory capital
4. Improve transparency and market discipline through disclosure requirements.
5. Enhanced supervisory review process through the establishment of Pillar 2-based expectations for banking organizations
6. Enhances counterparty credit risk capital requirements that proved inadequate during the financial crisis

Costs of the Proposed Rule

To estimate the impact of the proposed rule on bank capital needs, we estimate the amount of capital banks will need to amass to meet the new minimum standards relative to the amount of capital they currently hold. To estimate new capital ratios and requirements, we use currently available data from banks' quarterly Consolidated Report of Condition and Income (Call Reports) to approximate capital under the proposed rule. We arrive at our estimates of the new numerators of the capital ratios by combining various Call Report items to reflect definitional changes to common equity capital, Tier 1 capital, and total capital as described in the proposed

² A national banking organization is any bank holding company with a subsidiary national bank. Two of the 16 organizations also include a federally chartered private savings institution, but both of these organizations also contain a national bank and are included in the 16 national banking organizations.

rule. The capital ratio denominator, risk-weighted assets, will also change under the proposed rule. However, because the idiosyncratic nature of each institution's asset portfolio will cause the direction and extent of the change in the denominator to vary from institution to institution, we are unable to estimate risk-weighted assets under the proposed rule. Instead, we use the current definition of risk-weighted assets and thus the amount reported by institutions in their most recent Call Report.

Using our estimates of the proposed capital ratio numerators and holding these capital levels constant through 2019, we estimate the capital shortfall each institution would encounter as the new capital ratios come into effect according to the schedule shown in table 1. Table 2 shows our estimates of the number of institutions that would not meet the transition schedule for minimum capital requirements using data as of December 31, 2011. Table 3 shows our estimates of the aggregate amount of capital shortfall over the transition period ending in 2019. While institutions must simultaneously meet all of the minimum capital requirements, the largest shortfall amount in any given year shows the most binding minimum capital requirement. The number of institutions and the capital shortfall amounts shown in the 2016 column reflect those institutions that show a shortfall with regard to the new PCA standards relative to current capital levels.

As shown in table 3, our estimate of the largest capital shortfall would be a \$1,111 million shortfall in total capital plus the capital conservation buffer in 2019. However, a slightly smaller shortfall of \$1,088 million arrives four years earlier when the new Tier 1 PCA standard for well-capitalized institutions takes effect on January 1, 2015. We view this new PCA Tier 1 standard as the earliest significant capital constraint in the proposed rule.

Because banks confronting a capital shortfall under the proposed rule will need to gradually increase their capital levels to meet the proposed transition schedule, the aggregate cost of increasing capital will be spread out over several years. We estimate that the largest shortfall for any given year will be approximately \$900 million to meet the new PCA Tier 1 standard for well-capitalized institutions when it takes effect in 2015. This estimate combines the capital needs for national banking organizations and federally chartered private savings institutions (together, OCC institutions).

To estimate the cost to banks of the new capital requirement, we examine the effect of this requirement on capital structure and the overall cost of capital.³ The cost of financing a bank or any firm is the weighted average cost of its various financing sources, which amounts to a weighted average cost of capital reflecting many different types of debt and equity financing. Because interest payments on debt are tax deductible, a more leveraged capital structure reduces corporate taxes, thereby lowering funding costs, and the weighted average cost of financing tends to decline as leverage increases. Thus, an increase in required equity capital would force a bank to deleverage and – all else equal – would increase the cost of capital for that bank.

³ See Merton H. Miller, (1995), "Do the M & M propositions apply to banks?" *Journal of Banking & Finance*, Vol. 19, pp. 483-489.

This increased cost would be tax benefits foregone: the capital requirement (\$900 million), multiplied by the interest rate on the debt displaced and by the effective marginal tax rate for the banks affected by the proposed rule. The effective marginal corporate tax rate is affected not only by the statutory federal and state rates, but also by the probability of positive earnings (since there is no tax benefit when earnings are negative), and for the offsetting effects of personal taxes on required bond yields. Graham (2000) considers these factors and estimates a median marginal tax benefit of \$9.40 per \$100 of interest. So, using an estimated interest rate on debt of 6 percent, we estimate that the annual tax benefits foregone on \$900 million of capital switching from debt to equity is approximately $\$900 \text{ million} * 0.06 \text{ (interest rate)} * 0.094 \text{ (median marginal tax savings)} = \$5.1 \text{ million per year}$.⁴

The banking agencies will also incur some modest costs associated with macro-prudential monitoring. Under the proposed rule, the agencies would need to monitor credit growth through the use of various guide variables such as credit default swap spreads, funding spreads, and asset prices. We estimate that this macro-prudential monitoring will involve approximately 192 hours per year per agency. This estimate assumes that the monitoring and reporting will involve two individuals for eight hours a month ($2 * 8 * 12 = 192$). Applying our wage estimate of \$85 per hour, we estimate that the total cost of macro-prudential monitoring and reporting will be approximately \$48,960 per year for all three banking agencies ($\$85 * 192 * 3 = \$48,960$).

Our overall estimate for this segment of the Basel III proposal is \$5.1 million per year.

⁴ See John R. Graham, (2000), [How Big Are the Tax Benefits of Debt?](#), *Journal of Finance*, Vol. 55, No. 5, pp. 1901-1941. Graham points out that ignoring the offsetting effects of personal taxes would increase the median marginal tax rate to \$31.5 per \$100 of interest.

Table 2. – Cumulative Number of OCC-Regulated Banking Organizations Short of the Transition Schedule for Minimum Capital Requirements, December 31, 2011

		Dec. 31, 2011	Jan. 1, 2013	Jan. 1, 2014	Jan. 1, 2015	Jan. 1, 2016 (PCA)	Jan. 1, 2017	Jan. 1, 2018	Jan. 1, 2019
Common Equity to Risk-Weighted Assets	NBOs	5	8	12	13	25			
	FCPSIs	7	12	12	12	18			
	Total	12	20	24	25	43			
Tier 1 to Risk- Weighted Assets	NBOs	10	10	12	16	30			
	FCPSIs	10	11	13	16	21			
	Total	20	21	25	32	51			
Minimum Total Capital + Conservation Buffer	NBOs	22				27	27	31	39
	FCPSIs	17				18	22	27	28
	Total	39				45	49	58	67
Advanced Approaches Countercyclical Buffer	NBOs								0
	FCPSIs								0
	Total								0
Advanced Approaches Leverage Ratio	NBOs							0	
	FCPSIs							0	
	Total							0	

**Table 3. – Capital Shortfall for Scheduled Minimum Capital Requirements, (\$ in millions)
December 31, 2011**

		Dec. 31, 2011	Jan. 1, 2013	Jan. 1, 2014	Jan. 1, 2015	Jan. 1, 2016 (PCA)	Jan. 1, 2017	Jan. 1, 2018	Jan. 1, 2019
Common Equity to Risk-Weighted Assets	NBOs	\$18	\$42	\$54	\$67	\$357			
	FCPSIs	\$51	\$83	\$100	\$117	\$202			
	Total	\$69	\$125	\$154	\$184	\$559			
Tier 1 to Risk- Weighted Assets	NBOs	\$25	\$32	\$62	\$79	\$849			
	FCPSIs	\$49	\$62	\$88	\$110	\$239			
	Total	\$74	\$94	\$150	\$189	\$1,088			
Minimum Total Capital + Conservation Buffer	NBOs	\$169				\$271	\$355	\$498	\$670
	FCPSIs	\$152				\$189	\$228	\$342	\$441
	Total	\$321				\$460	\$583	\$840	\$1,111
Advanced Approaches Countercyclical Buffer	NBOs								0
	FCPSIs								0
	Total								0
Advanced Approaches Leverage Ratio	NBOs							0	
	FCPSIs							0	
	Total							0	

Regulatory Flexibility Act (RFA) Analysis

As part of our analysis, we considered whether the proposed rule is likely to have a significant impact on a substantial number of small entities, pursuant to the RFA. The size threshold for small banks is \$175 million. Tables 4 and 5 show our estimates of the number and capital shortfall for small institutions under the proposed rule. We estimate that the cost of lost tax benefits associated with increasing total capital by \$82 million as shown in table 5 will be approximately \$0.5 million per year. Averaged across the 28 affected institutions, the cost is approximately \$18,000 per institution per year. Among the small institutions facing a potential capital shortfall over the transition period, this cost would only be significant for three of these institutions when measured against total noninterest expenses. Thus, we believe that this proposed rule will not have a significant impact on a substantial number of small entities.

Table 4. – Cumulative Number of Small OCC-Regulated Banking Organizations Short of the Transition Schedule for Minimum Capital Requirements, December 31, 2011

		Dec. 31, 2011	Jan. 1, 2013	Jan. 1, 2014	Jan. 1, 2015	Jan. 1, 2016 (PCA)	Jan. 1, 2017	Jan. 1, 2018	Jan. 1, 2019
Common Equity to Risk-Weighted Assets	NBOs	4	6	8	9	12			
	FCPSIs	2	3	3	3	6			
	Total	6	9	11	12	18			
Tier 1 to Risk- Weighted Assets	NBOs	7	7	8	10	14			
	FCPSIs	2	3	3	4	6			
	Total	9	10	11	14	20			
Minimum Total Capital + Conservation Buffer	NBOs	11				14	14	15	19
	FCPSIs	4				4	5	9	9
	Total	15				18	19	24	28

Table 5. – Capital Shortfall for Small OCC-Regulated Banking Organizations for Scheduled Minimum Capital Requirements, (\$ in millions) December 31, 2011

		Dec. 31, 2011	Jan. 1, 2013	Jan. 1, 2014	Jan. 1, 2015	Jan. 1, 2016 (PCA)	Jan. 1, 2017	Jan. 1, 2018	Jan. 1, 2019
Common Equity to Risk-Weighted Assets	NBOs	\$9	\$17	\$20	\$23	\$39			
	FCPSIs	\$1	\$2	\$2	\$2	\$5			
	Total	\$10	\$19	\$22	\$25	\$44			
Tier 1 to Risk- Weighted Assets	NBOs	\$21	\$24	\$30	\$33	\$54			
	FCPSIs	\$1	\$1	\$2	\$2	\$8			
	Total	\$22	\$25	\$32	\$35	\$62			
Minimum Total Capital + Conservation Buffer	NBOs	\$40				\$46	\$52	\$61	\$69
	FCPSIs	\$3				\$5	\$6	\$10	\$13
	Total	\$43				\$51	\$58	\$71	\$82



MEMORANDUM

Comptroller of the Currency
Administrator of National Banks

Washington, DC 20219

To: Carl Kaminski, Legislative and Regulatory Activities

Thru: Gary Whalen, Director, Policy Analysis Division

From: Douglas Robertson, Senior Financial Economist, Policy Analysis Division

Date: May 30, 2012

Subject: Impact Assessment for Basel III: Standardized Approaches to Risk-weighted Assets, NPR2

This memorandum provides our assessment of the economic impact of the proposed rules that would implement the Basel III framework developed by the Basel Committee on Banking Supervision. The Basel III framework would revise current general risk-based capital rules and would be applicable to all banking organizations. The federal banking agencies are implementing Basel III through three separate rules. The first rule would apply Basel III minimum capital requirements to all banking organizations (NPR1). The second rule would implement new alternative measures of creditworthiness for all banking organizations (NPR2).¹ The third rule would apply Basel III enhancements to the risk-weighted assets of institutions subject to the advanced approaches capital rules (NPR3).

1) Basel III NPR (NPR1)

This will include the changes to the numerator of the risk-based capital ratio, the new ratio requirements (common equity Tier 1 and the higher minimums), as well as the conservation and countercyclical buffers. It also will include the changes to the treatment of mortgage servicing assets and deferred tax assets (DTAs).

2) Standardized Approach NPR (NPR2)

This will include the changes to the calculation of risk-weighted assets (the denominator of the risk-based capital ratio), except for the treatment of mortgage servicing assets and DTAs discussed in the Basel III NPR.

3) Advanced Approaches NPR (NPR3)

The advanced approaches NPR will introduce enhancements to the advanced approaches rule, and it will include a proposal to expand the scope of the market risk rule to include thrifts.

¹ These rules would serve as the generally applicable capital rules and therefore would be a floor for the risk-based capital requirement for advanced approaches banks under Section 171 of the Dodd Frank Act.

We estimate that the first-year cost associated with higher minimum capital requirements in NPR1 will be approximately \$5.1 million. We estimate that the first-year cost associated with changes in risk-weighted assets and implementation of alternative measures of creditworthiness in NPR2 will be approximately \$93.2 million. We estimate that the first-year cost associated with changes in risk-weighted assets and simultaneously meeting new market risk capital requirements in NPR3 will be approximately \$46.8 million. Together, we estimate that the overall cost of the three Basel III rules will be approximately \$145.1 million in the first year. After introducing new systems for determining risk weighted assets in the first year, we estimate that the overall cost of Basel III in subsequent years will decrease to approximately \$98.6 million per year.

I. The Proposed Rule: Standardized Approach for Risk-weighted Assets (NPR2)

The proposed rule (NPR 2) includes changes to the general risk-based capital requirements that address the calculation of risk-weighted assets. The proposed rule would:

1. Revise the treatment of 1-4 family residential mortgages
2. Introduces a higher risk weight for certain past due exposures and acquisition and development real estate loans
3. Provides a more risk sensitive approach to exposures to non- U.S. sovereigns and non-U.S. public sector entities
4. Replace references to credit ratings with alternative measures of creditworthiness
5. Provides more comprehensive recognition of collateral and guarantees
6. Provides a more favorable capital treatment for transactions cleared through qualifying central counterparties
7. Introduces disclosure requirements for banking organizations with assets of \$50 billion or more

Calculating Risk-Weighted Assets

Section 939A of the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank) requires federal agencies to remove references to credit ratings from regulations and replace credit ratings with appropriate alternatives. The proposed rule would introduce alternative measures of creditworthiness for securitization positions and re-securitization positions. Table 1 summarizes changes in the proposed rule.

Table 1: Key Provisions of the Proposed Rule for Calculating Risk-weighted Assets

Aspect of Proposed Rule	Proposed Treatment
Risk-weighted Assets	
Credit exposures to: U.S. government and its agencies U.S. government-sponsored entities U.S. depository institutions and credit unions U.S. public sector entities, such as states and municipalities	Unchanged.
Credit exposures to: Foreign sovereigns Foreign banks Foreign public sector entities	Introduces a more risk-sensitive treatment using the Country Risk Classification measure produced by the Organization for Economic Cooperation and Development.
Corporate exposures	Assigns a 100 percent risk weight to corporate exposures, including exposures to securities firms.
Residential mortgage exposures	Introduces a more risk-sensitive treatment based on several criteria, including the loan-to-value-ratio of the exposure.
High volatility commercial real estate exposures	Applies a 150 percent risk weight to certain credit facilities that finance the acquisition, development or construction of real property.
Past due exposures	Applies a 150 percent risk weight to exposures that are not sovereign exposures or residential mortgage exposures and that are more than 90 days past due or on nonaccrual.
Securitization exposures	Maintains the gross-up approach for securitization exposures. Replaces the current ratings-based approach with a formula-based approach for determining a securitization exposure's risk weight based on the underlying assets and exposure's relative position in the securitization's structure.
Equity exposures	Introduces more risk-sensitive treatment for equity exposures.
Off-balance Sheet Items	Revises the measure of the counterparty credit risk of repo-style transactions. Raises the credit conversion factor for most short-term commitments from zero percent to 20 percent.
Derivative Contracts	Removes the 50 percent risk weight cap for

Aspect of Proposed Rule	Proposed Treatment
	derivative contracts.
Cleared Transactions	Provides preferential capital requirements for cleared derivative and repo-style transactions (as compared to requirements for non-cleared transactions) with central counterparties that meet specified standards. Also requires that a clearing member of a central counterparty calculate a capital requirement for its default fund contributions to that central counterparty.
Credit Risk Mitigation	Provides a more comprehensive recognition of collateral and guarantees.
Disclosure Requirements	Introduces qualitative and quantitative disclosure requirements, including regarding regulatory capital instruments, for banking organizations with total consolidated assets of \$50 billion or more that are not subject to the separate advanced approaches disclosure requirements.

Alternative Measure for Securitization Positions

The alternative measure for securitization positions is a simplified version of the Basel II advanced approaches supervisory formula approach. The simplified supervisory formula approach (SSFA) applies a 100 percent risk-weighting factor to the junior most portion of a securitization structure equal to the amount of capital a bank would have to hold if it retained the entire pool on its balance sheet. For the remaining portions of the securitization pool, the SSFA uses an exponential decay function to assign a marginal capital charge per dollar of a tranche. Securitization positions for which a bank does not use the SSFA would be subject to a 100 percent risk-weighting factor. The proposed rule would also apply minimum risk weights to securitization tranches that would increase as cumulative losses to the pool increase. The proposed rule would allow institutions other than advanced approaches banking organizations to use the gross-up approach, which is similar to an approach provided for under current risk-based capital rules.

Alternative Measure for Exposures to Sovereign Entities

The proposed rule would assign capital requirements to sovereign exposures based on OECD Country Risk Classifications (CRCs). Risk weights would range from zero percent to 150 percent based on CRCs, and sovereigns that have defaulted on any exposure during the previous five years would have a 150 percent risk weight. Default would include a restructure that results in a sovereign entity not servicing an obligation according to its terms prior to the restructuring.

Exposures to the United States government and its agencies would always carry a zero percent risk weight. Sovereign entities that have no CRC would carry a 100 percent risk weight.

The proposed rule would apply a zero percent risk weight to exposures to supranational entities and multilateral development banks. International organizations that would receive a zero percent risk weight include the Bank for International Settlements, the European Central Bank, the European Commission, and the International Monetary Fund. The proposed rule would also apply a zero percent risk weight to exposures to 13 named multilateral development banks and any multilateral lending institution or regional development bank in which the U.S. government is a shareholder or member, or if the bank's primary federal supervisor determines that the entity poses comparable credit risk.

Other Positions

Corporate Exposures: The proposed rule would maintain current practice under general risk-based capital rules and assign a 100 percent risk weight to all corporate exposures.

Government Sponsored Entities (GSEs): The proposal would apply a risk weight of 20 percent to non-equity exposures and a 100 percent risk weight to preferred stock issued by a GSE.

Depository Institutions, Foreign Banks, and Credit Unions: Generally, the proposal would link depository institution risk weights to the sovereign entity risk weight. Under the proposal, sovereign entity risk weights may take one of the following percentage values: (0, 20, 50, 100, 150). Generally, exposures to foreign depository institutions would receive a risk weight one category higher than the risk weight assigned to the home sovereign. For instance, a bank based in a country that carries a zero percent risk weight would carry a 20 percent risk weight. If a country does not have a CRC, a bank based in that country also carries a 100 percent risk weight. Banks in countries with 150 percent risk weights would also carry 150 percent risk weights.

Residential Mortgage Exposures: The proposed rule would maintain the current risk-based capital treatment for residential mortgage exposures that are guaranteed by the U.S. government or its agency. Residential mortgage exposures that are unconditionally guaranteed by the U.S. government or a U.S. agency would receive a zero percent risk weight, and residential mortgage exposures that are conditionally guaranteed by the U.S. government or a U.S. agency would receive a 20 percent risk weight. A banking organization would divide other residential mortgages into one of two categories based on various loan characteristics such as duration, amortization, performance, and underwriting standards. These loans would then receive risk weights based on the loan-to-value ratio at the origination of the loan or at the time of restructuring. Table 2 shows the risk weights for residential mortgages.

Table 2 – Risk Weights for Residential Mortgage Exposures

Loan-to-value ratio (in percent)	Category 1 residential mortgage exposure (in percent)	Category 2 residential mortgage exposure (in percent)
Less than or equal to 60	35	100
Greater than 60 and less than or equal to 80	50	100
Greater than 80 and less than or equal to 90	75	150
Greater than 90	100	200

High Volatility Commercial Real Estate Exposures: The proposed rule would assign a 150 percent risk weight to any high volatility commercial real estate exposure. The proposed rule would generally define such an exposure as a loan that finances the acquisition, development, or construction of real property that is not a one- to four-family residential property or certain commercial real estate projects.

Public Sector Entities (PSEs): A PSE is a state, local authority, or other governmental subdivision below the level of a sovereign entity. The proposed rule would apply the same risk weights to exposures for U.S. states and municipalities as current general risk-based capital rules. Under the proposal, a banking organization would assign a 20 percent risk weight to a general obligation exposure to a U.S. PSE and a 50 percent risk weight to a revenue obligation exposure to such a PSE. For non-U.S. PSEs, the proposed rule would assign a risk weights based on the sovereign’s CRC. One risk weight schedule would apply to general obligation claims and another schedule would apply to revenue obligations. Table 3 shows the risk-weight linkage for sovereigns and non-U.S. PSEs.

Table 3. Risk Weights for Exposures to Sovereigns and Public Sector Entities

Sovereign CRC	Sovereign Entity Risk Weights (in percent)	Non-U.S. PSE General Obligation Claim Risk Weights (in percent)	Non-U.S. PSE Revenue Obligation Risk Weights (in percent)
0-1	0	20	50
2	20	50	100
3	50	100	100
4-6	100	150	150
7	150	150	150
No CRC	100	100	100
Sovereign Default	150	150	150

Disclosure Requirements

The proposed rule would also introduce new disclosure requirements for banking organizations with \$50 billion or more in total assets. The proposed rule would also introduce a Pillar 2 supervisory review process for all banking organizations.

II. Institutions Affected By the Proposed Rule

According to December 31, 2011 Call Report data, there are 7,432 FDIC-insured institutions. After aggregating to the highest holding company, there are 6,744 bank holding companies, of which, 1,213 are national banking organizations.² Excluding several thrifts that are included as subsidiaries of national banking organizations, the proposed rule would also apply to 612 federally chartered private savings institutions. Thus, the proposed rule would apply to 1,825 financial institutions regulated by the OCC. Banking organizations using the advanced approaches would not be affected by major portions of the proposed rule.

III. Estimated Costs and Benefits of the Proposed Rule

The various elements of the proposed rule will affect costs in three ways: (1) the cost of capital institutions will need to meet the higher minimum capital ratios and the new eligibility standards for capital, (2) compliance costs associated with establishing the infrastructure to determine correct risk weights using the new alternative measures of creditworthiness, and (3) compliance costs associated with new disclosure requirements.

Benefits of the Proposed Rule

The proposed rule would produce the following benefits:

1. Improves the quality of regulatory capital by introducing a common equity Tier 1 regulatory capital requirement and tightening the standards for including non-common equity instruments in regulatory capital
2. Increases risk sensitivity of capital requirements and risk-weighted assets
3. Improves loss absorbency of regulatory capital
4. Improve transparency and market discipline through disclosure requirements.
5. Expanded list of eligible third-party guarantors (page 143)
6. Expanded array of collateral types
7. Enhanced supervisory review process through the establishment of Pillar 2-based expectations for banking organizations
8. Enhances counterparty credit risk capital requirements that proved inadequate during the financial crisis

² A national banking organization is any bank holding company with a subsidiary national bank. Two of the 16 organizations also include a federally chartered private savings institution, but both of these organizations also contain a national bank and are included in the 16 national banking organizations.

Costs of the Proposed Rule

1. Impact of Risk-weighted Assets on Capital Requirements

Minimum required capital levels are likely to change under the proposed rule. The increased risk sensitivity of the alternative measures of creditworthiness implies that capital requirements may go down for some assets and up for others. For those assets with a higher capital charge under the proposed rule, however, that increase may be large in some instances, e.g., requiring a dollar-for-dollar capital charge for some securitization exposures.

The Basel Committee on Banking Supervision has been conducting periodic reviews of the potential quantitative impact of the Basel III framework. The quantitative impact study working group reported that the average change in risk-weighted assets for a global sample of larger banks (including some U.S. banks) was approximately 20 percent.³ Although these reviews monitor the impact of implementing the Basel III framework rather than the provisions of the proposed rule, for the purposes of this analysis we consider the results of the Basel working group to be a best estimate and thus we increase risk-weighted assets by 20 percent to estimate the impact of the proposed rule on risk-weighted assets.

To estimate the impact of the proposed rule on bank capital needs, we estimate the amount of capital banks will need to amass to meet the new minimum standards described in our analysis of NPR1. As with that analysis, we estimate new capital ratios and requirements by combining various Call Report items to reflect definitional changes to common equity capital, Tier 1 capital, and total capital as described in NPR1. Because this proposed rule, NPR2, will change the capital ratio denominator, risk-weighted assets, we increase current risk-weighted assets by 20 percent. We use this 20 percent adjustment while recognizing that the idiosyncratic nature of each institution's asset portfolio will undoubtedly cause the direction and extent of the change in the denominator to vary considerably from institution to institution.

We thus construct new capital ratios reflecting the requirements of the proposed rules (NPR1 and NPR2) and estimate capital shortfalls as the difference between current capital levels and capital levels necessary to meet the new minimum standards. We estimate the capital shortfall each institution would encounter as the new capital ratios come into effect during the transition period from 2013 through 2019. Table 4 shows our estimates of the number of institutions that would not meet the transition schedule for proposed minimum capital requirements using data as of December 31, 2011. Table 5 shows our estimates of the aggregate amount of capital shortfall over the transition period ending in 2019. While institutions must simultaneously meet all of the minimum capital requirements, the largest shortfall amount in any given year shows the most binding minimum capital requirement. The number of institutions and the capital shortfall amounts shown in the 2016 column reflect those institutions that show a shortfall with regard to the new PCA standards relative to current capital levels.

³ The working group also reported an average change in risk-weighted assets for a global sample of smaller banks (those with Tier 1 capital less than €3 billion), but no U.S. banks participated in this sample. The reported average increase for this group was less than 10 percent, which suggests that our use of a 20 percent increase in risk-weighted assets for all institutions may overestimate the impact of the proposed rule.

As shown in table 4, our estimate of the largest capital shortfall would be an approximately \$27 billion shortfall in 2015 when the new Tier 1 PCA standard for well-capitalized institutions takes effect. We view this new PCA Tier 1 standard as the major capital constraint in the proposed rule.

Because banks confronting a capital shortfall under the proposed rule will need to at least increase their capital levels gradually to meet the transition schedule, we assume that the aggregate cost of increasing capital will be spread out over several years. We estimate that the largest shortfall for any given year will be approximately \$9.0 billion, or one third of the amount needed to meet the new PCA Tier 1 standard for well-capitalized institutions when it takes effect. This estimate combines the capital needs for national banking organizations and federally chartered private savings institutions (together, OCC institutions).

To estimate the cost to banks of the new capital requirement, we examine the effect of this requirement on capital structure and the overall cost of capital.⁴ As with our estimate in NPR1, we estimate that the cost of the increase in capital would be tax benefits foregone: the capital requirement (\$9.0 billion), multiplied by the interest rate on the debt displaced and by the effective marginal tax rate for the banks affected by the proposed rule. Graham (2000) estimates a median marginal tax benefit of \$9.40 per \$100 of interest. So, using an estimated interest rate on debt of 6 percent, we estimate that the annual tax benefits foregone on \$9.0 billion of capital switching from debt to equity is approximately $\$9.0 \text{ billion} * 0.06 \text{ (interest rate)} * 0.094 \text{ (median marginal tax savings)} = \$50.8 \text{ million per year}$.⁵ Approximately \$5.1 million per year is attributable to NPR1, leaving \$45.7 million per year as the capital cost of NPR2.

⁴ See Merton H. Miller, (1995), "Do the M & M propositions apply to banks?" *Journal of Banking & Finance*, Vol. 19, pp. 483-489.

⁵ See John R. Graham, (2000), "[How Big Are the Tax Benefits of Debt?](#)" *Journal of Finance*, Vol. 55, No. 5, pp. 1901-1941. Graham points out that ignoring the offsetting effects of personal taxes would increase the median marginal tax rate to \$31.5 per \$100 of interest.

Table 4. – Cumulative Number of OCC-Regulated Banking Organizations Short of the Transition Schedule for Minimum Capital Requirements and Estimated Risk-weighted Assets, December 31, 2011

		Dec. 31, 2011	Jan. 1, 2013	Jan. 1, 2014	Jan. 1, 2015	Jan. 1, 2016 (PCA)	Jan. 1, 2017	Jan. 1, 2018	Jan. 1, 2019
Common Equity to Risk-Weighted Assets	NBOs	7	12	15	16	32			
	FCPSIs	8	12	12	14	22			
	Total	15	24	27	30	54			
Tier 1 to Risk- Weighted Assets	NBOs	11	12	22	26	53			
	FCPSIs	11	13	18	18	33			
	Total	22	25	40	44	86			
Minimum Total Capital + Conservation Buffer	NBOs	30				34	47	82	130
	FCPSIs	26				28	37	51	60
	Total	56				62	84	133	190
Advanced Approaches Countercyclical Buffer	NBOs								0
	FCPSIs								0
	Total								0
Advanced Approaches Leverage Ratio	NBOs							0	
	FCPSIs							0	
	Total							0	

Table 5. – Capital Shortfall for Scheduled Minimum Capital Requirements and Estimated Risk-weighted Assets, (\$ in millions) December 31, 2011

		Dec. 31, 2011	Jan. 1, 2013	Jan. 1, 2014	Jan. 1, 2015	Jan. 1, 2016 (PCA)	Jan. 1, 2017	Jan. 1, 2018	Jan. 1, 2019
Common Equity to Risk-Weighted Assets	NBOs	\$17	\$59	\$96	\$186	\$924			
	FCPSIs	\$51	\$106	\$127	\$148	\$288			
	Total	\$68	\$165	\$223	\$334	\$1212			
Tier 1 to Risk- Weighted Assets	NBOs	\$41	\$59	\$107	\$142	\$26,192			
	FCPSIs	\$70	\$85	\$144	\$180	\$490			
	Total	\$111	\$144	\$251	\$322	\$26,682			
Minimum Total Capital + Conservation Buffer	NBOs	\$437				\$623	\$1,172	\$5,755	\$24,630
	FCPSIs	\$300				\$417	\$531	\$810	\$1,122
	Total	\$ 737				\$1040	\$1,703	\$6,565	\$25,752
Advanced Approaches Countercyclical Buffer	NBOs								0
	FCPSIs								0
	Total								0
Advanced Approaches Leverage Ratio	NBOs							0	
	FCPSIs							0	
	Total							0	

2. Alternative Measures of Creditworthiness

The proposed rule would require institutions to (1) establish systems to determine risk weights using the alternative measures of creditworthiness described in the proposal, and (2) apply these alternative measures to the bank's assets. We believe that this element of the proposed rule will involve costs associated with gathering and updating the information necessary to calculate the relevant risk weights, establishing procedures, and maintaining the programs that perform the calculations.

In particular, the proposed rule would require institutions with assets in each affected asset category to:

1. Establish and maintain a system to apply the gross-up approach or implement the simplified supervisory formula approach (SSFA) for securitization positions.
2. Establish and maintain a system to assign risk weights to sovereign exposures.
3. Establish and maintain systems to assign risk weights to non-U.S. public sector entities, depository institutions, and other foreign positions.
4. Assign 1-4 family residential mortgage exposures to one of two categories.

Listed below are the variables banks will need to gather to calculate risk weights under the proposed rule:

Securitization Positions:

1. Weighted average risk weight of assets in the securitized pool as determined under generally applicable risk-based capital rules
2. The attachment point of the relevant tranche
3. The detachment point of the relevant tranche
4. Cumulative losses

Residential Mortgage Exposures:

1. Mortgage category 1 or 2 determination
2. Loan-to-value ratio

Sovereign Entity Debt Positions:

1. Organization for Economic Co-operation and Development Country Risk Classifications (CRC) Score

Table 6 shows our estimate of the number of hours it will take small and large institutions to perform the activities necessary to meet the requirements of the proposed rule. We base these estimates on the scope of work required by the proposed rule and the extent to which these requirements extend current business practices. We have also taken into consideration observations from comment letters regarding the burden of similar measures in a proposed amendment to the market risk rule. These observations suggest that the securitization element of the proposed rule may involve some additional data gathering before an institution is able to accurately calculate risk weights using the SSFA approach.

Although the total cost of gathering the new variables will depend on the size of the institution's portfolio, we believe that the costs of establishing systems to match creditworthiness variables with exposures and calculate the appropriate risk weight will account for most of the expenses associated with the credit rating alternatives. Once a bank establishes a system, we expect the marginal cost of calculating the risk weight for each additional asset in a particular asset class will be relatively small. We also note that it is likely that a third-party will eventually emerge to provide risk weights for these assets. Our estimates do not reflect this cost-saving innovation, however, as we cannot be sure such a provider will emerge or be retained by institutions subject to the rule.

We estimate that large financial institutions, those with assets of \$10 billion or more, covered by the proposed rule will spend approximately 1,300 hours during the first year the rule is in effect. In subsequent years, we estimate that all financial institutions will spend approximately 180 hours per year on activities related to determining risk weights using the alternative measures of creditworthiness. For smaller institutions, those with total assets less than \$10 billion, we estimate that they will spend approximately 425 hours during the first year the rule is in effect. Most smaller institutions do not lend to foreign governments or banks in foreign countries, and they do not hold foreign debt securities. Thus, for smaller institutions, we include system and compliance costs related to sovereign debt in the system and compliance costs for other positions.

Table 7 shows our overall cost estimate related to the determination of risk weights using the measures of creditworthiness in the proposed rule. Our estimate of the compliance cost of the proposed rule is the product of our estimate of the hours required per institution, our estimate of the number of institutions affected by the rule, and an estimate of hourly wages. To estimate hours necessary per activity, we estimate the number of employees each activity is likely to need and the number of days necessary to assess, implement, and perfect the required activity. To estimate hourly wages, we reviewed data from May 2010 for wages (by industry and occupation) from the U.S. Bureau of Labor Statistics (BLS) for depository credit intermediation (NAICS 522100). To estimate compensation costs associated with the proposed rule, we use \$85 per hour, which is based on the average of the 90th percentile for seven occupations (i.e., accountants and auditors, compliance officers, financial analysts, lawyers, management occupations, software developers, and statisticians) plus an additional 33 percent to cover inflation and private sector benefits.⁶ As shown in table 7, we estimate that the cost of introducing alternative measures of creditworthiness is approximately \$46.5 million.

2. Disclosure Requirements

The proposed rule requires institutions with total assets of \$50 billion or more to disclose information on a somewhat lengthy list of structural and financial variables. We estimate that meeting the disclosure requirements will entail approximately 520 hours during the first year the proposed rule applies, and this will cost the affected institutions approximately \$44,200 in the first year. We estimate that the time necessary to meet the disclosure requirements in subsequent years will diminish substantially, to roughly 25 hours per quarter or 100 hours per year. We estimate that approximately 23 OCC-regulated institutions will be subject to the disclosure requirements in the proposed rule, resulting in a cost of \$1.0 million.

3. Overall Cost Estimate for Standardized Approaches for Risk-weighted Assets

Combining our estimates of capital costs (\$45.7 million), the cost of applying alternative measures of creditworthiness (\$46.5 million), and disclosure requirements (\$1.0 million), our overall estimate of the cost of the proposed rule (NPR2) is \$93.2 million.

⁶ According to the BLS' employer costs of employee benefits data, thirty percent represents the average private sector costs of employee benefits.

Table 6. Estimated Annual Hours for Creditworthiness Measurement Activities

Asset	Activity	Estimated hours per institution with total assets < \$10 bil.	Estimated hours per institution with total assets ≥ \$10 bil.
Securitization	System development	120	480
	Data acquisition & Due Diligence	80	240
	Calculation, verification, and training	60	120
Residential Mortgages	System development	60	60
	Data acquisition	30	50
	Calculation, verification, and training	10	10
Sovereign Debt	System development		80
	Data acquisition		30
	Calculation, verification, and training		60
Other Positions Combined ⁷	System development	40	80
	Data acquisition	20	30
	Calculation, verification, and training	5	60
Total Hours		425	1,300

⁷ Includes sovereign debt implementation costs for institutions with less than \$10 billion in assets.

Table 7.

Estimated Costs of Creditworthiness Measurement Activities, December 31, 2011

Institution	Number of institutions	Estimated hours per institution	Estimated cost per institution	Estimated cost
Small banking organizations (assets < \$10 bil.)	1,177	425	\$36,125	\$42,519,125
Large banking organizations (assets ≥ \$10 bil.)	36	1,300	\$110,500	\$3,978,000
Total	1,213			\$46,497,125

Regulatory Flexibility Act (RFA) Analysis

As part of our analysis, we considered whether the proposed rule is likely to have a significant impact on a substantial number of small entities, pursuant to the RFA. The size threshold for small banks is \$175 million. Tables 8 and 9 show our estimates of the number and capital shortfall for small institutions under the proposed rules (NPR1 and NPR2). We estimate that the cost of lost tax benefits associated with increasing total capital by \$143 million as shown in table 9 will be approximately \$0.8 million per year. Averaged across the 56 affected institutions, the cost is approximately \$14,000 per institution per year. From table 7, we estimate that the cost of implementing the alternative measures of creditworthiness will be approximately \$36,125 per institution. For the 56 institutions with a projected capital shortfall, we estimate that the cost of the standardized approaches for risk-weighted assets will be slightly more costly at approximately \$50,000 per institution.

To determine if the proposed rule has a significant economic impact on small entities we compared the estimated annual cost with annual noninterest expense and annual salaries and employee benefits for each small entity. If the estimated annual cost was greater than or equal to 2.5 percent of total noninterest expense or 5 percent of annual salaries and employee benefits we classified the impact as significant. The proposed rule will have a significant economic impact on 500 small national banks and 253 small federally chartered private savings institutions. Accordingly, the proposed rule appears to have a significant economic impact on a substantial number of small entities.

Table 8. – Cumulative Number of Small OCC-Regulated Banking Organizations Short of the Transition Schedule for Minimum Capital Requirements and Estimated Risk-weighted Assets, December 31, 2011

		Dec. 31, 2011	Jan. 1, 2013	Jan. 1, 2014	Jan. 1, 2015	Jan. 1, 2016 (PCA)	Jan. 1, 2017	Jan. 1, 2018	Jan. 1, 2019
Common Equity to Risk-Weighted Assets	NBOs	6	8	9	10	16			
	FCPSIs	2	3	3	3	7			
	Total	8	11	12	13	23			
Tier 1 to Risk-Weighted Assets	NBOs	7	8	11	13	22			
	FCPSIs	3	3	5	5	13			
	Total	10	11	16	18	35			
Minimum Total Capital + Conservation Buffer	NBOs	15				17	22	27	37
	FCPSIs	10				11	13	17	19
	Total	25				28	35	44	56

Table 9. – Capital Shortfall for Small OCC-Regulated Banking Organizations for Scheduled Minimum Capital Requirements and Estimated Risk-weighted Assets, (\$ in millions) December 31, 2011

		Dec. 31, 2011	Jan. 1, 2013	Jan. 1, 2014	Jan. 1, 2015	Jan. 1, 2016 (PCA)	Jan. 1, 2017	Jan. 1, 2018	Jan. 1, 2019
Common Equity to Risk-Weighted Assets	NBOs	\$8	\$21	\$25	\$30	\$54			
	FCPSIs	\$1	\$2	\$3	\$3	\$10			
	Total	\$9	\$23	\$28	\$33	\$64			
Tier 1 to Risk-Weighted Assets	NBOs	\$25	\$29	\$39	\$45	\$75			
	FCPSIs	\$1	\$2	\$4	\$5	\$16			
	Total	\$26	\$31	\$43	\$50	\$91			
Minimum Total Capital + Conservation Buffer	NBOs	\$58				\$67	\$76	\$94	\$111
	FCPSIs	\$9				\$13	\$17	\$25	\$32
	Total	\$67				\$80	\$93	\$119	\$143



MEMORANDUM

Comptroller of the Currency
Administrator of National Banks

Washington, DC 20219

To: Carl Kaminski, Legislative and Regulatory Activities

Thru: Gary Whalen, Director, Policy Analysis Division

From: Douglas Robertson, Senior Financial Economist, Policy Analysis Division

Date: May 30, 2012

Subject: Impact Assessment for the Basel III Rule: Advanced Approaches, NPR3

This memorandum provides our assessment of the economic impact of the proposed rules that would implement the Basel III framework developed by the Basel Committee on Banking Supervision. The Basel III framework would revise current general risk-based capital rules and would be applicable to all banking organizations. The federal banking agencies are implementing Basel III through three separate rules. The first rule would apply Basel III minimum capital requirements to all banking organizations (NPR1). The second rule would implement new alternative measures of creditworthiness for all banking organizations (NPR2).¹ The third rule would apply Basel III enhancements to the risk-weighted assets of institutions subject to the advanced approaches capital rules (NPR3). Advanced approaches banking organizations are those institutions with total assets of at least \$250 billion or foreign exposures of at least \$10 billion, or institutions that have elected to adopt the advanced approaches.

1) Basel III NPR (NPR1)

This will include the changes to the numerator of the risk-based capital ratio, the new ratio requirements (common equity Tier 1 and the higher minimums), as well as the conservation and countercyclical buffers. It also will include the changes to the treatment of mortgage servicing assets and deferred tax assets (DTAs).

2) Standardized Approach NPR (NPR2)

This will include the changes to the calculation of risk-weighted assets (the denominator of the risk-based capital ratio), except for the treatment of mortgage servicing assets and DTAs discussed in the Basel III NPR.

¹ These rules would serve as the generally applicable capital rules and therefore would be a floor for the risk-based capital requirement for advanced approaches banks under Section 171 of the Dodd Frank Act.

3) Advanced Approaches NPR (NPR3)

The advanced approaches NPR will introduce enhancements to the advanced approaches rule, and it will include a proposal to expand the scope of the market risk rule to include thrifts.

We estimate that the first-year cost associated with higher minimum capital requirements in NPR1 will be approximately \$5.1 million. We estimate that the first-year cost associated with changes in risk-weighted assets and implementation of alternative measures of creditworthiness in NPR2 will be approximately \$93.2 million. We estimate that the first-year cost associated with changes in risk-weighted assets and simultaneously meeting new market risk capital requirements in NPR3 will be approximately \$46.8 million. Together, we estimate that the overall cost of the three Basel III rules will be approximately \$145.1 million in the first year. After introducing new systems for determining risk weighted assets in the first year, we estimate that the overall cost of Basel III in subsequent years will decrease to approximately \$98.6 million per year.

I. The Proposed Rule: Advanced Approaches Risk-based Capital (NPR3)

The proposed rule would incorporate Basel Committee on Bank Supervision revisions to the Basel capital framework into the banking agencies' advanced approaches capital rules and remove references to credit ratings consistent with section 939A of the Dodd-Frank Act. The proposed rule would apply the market risk capital rule to certain savings associations.

The proposed rule would modify various elements of the advanced approached risk-based capital rules regarding the determination of risk-weighted assets. These changes would (1) modify treatment of counterparty credit risk, (2) remove references to credit ratings, (3) modify the treatment of securitization exposures, and (4) modify the treatment of exposures subject to deduction from capital. The proposed rule would also enhance disclosure requirements, especially with regard to securitizations.

The proposed rule would amend the advanced approaches so that capital requirements using the internal models methodology takes into consideration stress in calibration data, stress testing, initial validation, collateral management, and annual model review. The proposed rule would also require a banking organization to identify, monitor, and control wrong-way risk, which the proposed rule defines as the risk that arises when an exposure to a particular counterparty is positively correlated with the probability of default of such counterparty itself.

The proposed rule would also remove the ratings-based approach and the internal assessment approach for securitization exposures from the advanced approaches rule and require advanced approaches banking organizations to use either the supervisory formula approach (SFA) or a simplified version of the SFA when calculating capital requirements for securitization exposures.

Advanced approaches banking organizations would be required to calculate their risk-based and leverage capital requirements under the standardized approach (using the numerator and denominator in NPR 1 and NPR 2), as well as the under the revised advanced approaches, outlined in this proposal (NPR 3). Advanced approaches banking organizations would apply the

lower risk-based capital and leverage ratios for purposes of determining compliance with the proposed minimum regulatory capital requirements.

II. Institutions Affected By the Proposed Rule

The proposed rule (NPR3) will apply to advanced approaches banking organizations, i.e., banking organizations with total assets of at least \$250 billion or foreign exposures of at least \$10 billion, other banking organizations that have elected to adopt the advanced approaches, and banking organizations that are subsidiaries of banking organizations that must use the advanced approaches rules. The NPR also proposes to expand the scope of the market risk rule to apply to savings associations and savings and loan holding companies that meet the relevant trading activity thresholds – \$1 billion or more in trading activity or trading activity equal to 10 percent or more of the banking organization’s total assets.

III. Estimated Costs and Benefits of the Proposed Rule

Benefits of the Proposed Rule

The proposed rule would produce the following benefits:

1. Increases risk sensitivity of risk-weighted assets
2. Improves transparency and market discipline through disclosure requirements.
3. Enhances counterparty credit risk capital requirements that proved inadequate during the financial crisis

Costs of the Proposed Rule

1. Impact of Risk-weighted Assets on Capital Requirements

The modifications to risk-weighted assets in the proposed rule will affect overall risk-weighted assets and hence risk-based capital ratios for advanced approaches banks. Applying new risk weights implies that capital requirements may go down for some assets and up for others. As with NPR2, securitization exposures in particular may face higher capital charges under the proposed rule.

As with NPR2, we estimate the proposed rule’s impact on risk-weighted assets by applying the average change in risk-weighted assets reported by the Basel Committee on Banking Supervision quantitative impact study working group. For the analysis of NPR3, we first estimate the effect of increasing risk-weighted assets of advanced approaches banks by 20 percent. We also incorporate estimates of the effect of the market risk rule on institutions that are subject to both the advanced approaches rule and the market risk rule.

To estimate the impact of the proposed rule (NPR3) on bank capital needs, we estimate the amount of capital banks will need to gather to meet the new minimum standards described in our analyses of NPR1 and NPR2. As with those analyses, we estimate new capital ratios and

requirements by combining various Call Report items to reflect definitional changes to common equity capital, Tier 1 capital, and total capital as described in NPR1. We also increase current risk-weighted assets by 20 percent as described in NPR2.

We thus construct new capital ratios for advanced approaches banking organizations reflecting the requirements of the proposed rules (NPR1 and NPR2) and estimate capital shortfalls as the difference between current capital levels and capital levels necessary to meet the new minimum standards. We estimate the capital shortfall each institution would encounter as the new capital ratios come into effect during the transition period from 2013 through 2019. Table 1 shows our estimates of the number of advanced approaches institutions that would not meet the transition schedule for proposed minimum capital requirements using data as of December 31, 2011. Table 2 shows our estimates of the aggregate amount of capital shortfall over the transition period ending in 2019. While institutions must simultaneously meet all of the minimum capital requirements, the largest shortfall amount in any given year shows the most binding minimum capital requirement. The number of institutions and the capital shortfall amounts shown in the 2016 column reflect those institutions that show a shortfall with regard to the new PCA standards relative to current capital levels.

Table 2 shows that \$22 billion of our NPR2 estimate of a \$27 billion capital shortfall is attributable to 3 advanced approaches banks that would encounter a capital shortfall in 2015 when the new Tier 1 PCA standard for well-capitalized institutions takes effect.

Because many advanced approaches banks are also subject to the market risk rule, we repeat our capital shortfall estimate by adding estimated market risk assets to the capital ratios for these institutions. Table 3 shows our estimate of the number of institutions that would need to increase capital levels to meet new minimum capital requirements. Table 4 shows our estimate of the amount of capital needed to meet those capital requirements.

We assume that the aggregate cost of increasing capital will be spread out over several years. Table 2 reflects capital amounts already included in our analysis of NPR2. To estimate the amount of required capital not accounted for in NPR2, we subtract the capital amounts shown in table 2 from those shown in table 4. This comparison suggests that the earliest significant capital requirement for advanced approaches banks will be raising \$24.8 billion in capital to meet the new PCA Tier 1 standard for well-capitalized institutions when it takes effect. We estimate that the largest shortfall for any given year will be approximately \$8.3 billion, or one third of the amount needed to meet this new PCA Tier 1 standard.

To estimate the cost to banks of the new capital requirement, we examine the effect of this requirement on capital structure and the overall cost of capital.² As with our estimates in NPR1 and NPR2, we estimate that the cost of the increase in capital would be tax benefits foregone: the capital requirement (\$8.3 billion), multiplied by the interest rate on the debt displaced and by the effective marginal tax rate for the banks affected by the proposed rule. Graham (2000) estimates a median marginal tax benefit of \$9.40 per \$100 of interest. So, using an estimated interest rate on

² See Merton H. Miller, (1995), "Do the M & M propositions apply to banks?" *Journal of Banking & Finance*, Vol. 19, pp. 483-489.

debt of 6 percent, we estimate that the annual tax benefits foregone on \$8.3 billion of capital switching from debt to equity is approximately $\$8.3 \text{ billion} * 0.06 \text{ (interest rate)} * 0.094 \text{ (median marginal tax savings)} = \$46.8 \text{ million per year.}^3$

Table 1. – Cumulative Number of OCC-Regulated Advanced Approaches Banking Organizations Short of the Transition Schedule for Minimum Capital Requirements and Estimated Risk-weighted Assets, December 31, 2011

	Dec. 31, 2011	Jan. 1, 2013	Jan. 1, 2014	Jan. 1, 2015	Jan. 1, 2016 (PCA)	Jan. 1, 2017	Jan. 1, 2018	Jan. 1, 2019
Common Equity to Risk-Weighted Assets	0	0	0	0	0			
Tier 1 to Risk-Weighted Assets	0	0	0	0	3			
Minimum Total Capital + Conservation Buffer	0				0	0	1	3
Advanced Approaches Countercyclical Buffer								1
Advanced Approaches Leverage Ratio							0	

³ See John R. Graham, (2000), “[How Big Are the Tax Benefits of Debt?](#)” *Journal of Finance*, Vol. 55, No. 5, pp. 1901-1941. Graham points out that ignoring the offsetting effects of personal taxes would increase the median marginal tax rate to \$31.5 per \$100 of interest.

Table 2. – OCC-Regulated Advanced Approaches Banking Organizations Cumulative Capital Shortfall for Scheduled Minimum Capital Requirements and Estimated Risk-weighted Assets, (\$ in millions) December 31, 2011

	Jan. 1, 2013	Jan. 1, 2014	Jan. 1, 2015	Jan. 1, 2016 (PCA)	Jan. 1, 2017	Jan. 1, 2018	Jan. 1, 2019
Common Equity to Risk-Weighted Assets	0	0	0	0			
Tier 1 to Risk-Weighted Assets	0	0	0	\$22,175			
Minimum Total Capital + Conservation Buffer				0	0	\$2,501	\$18,586
Advanced Approaches Countercyclical Buffer							\$3,918
Advanced Approaches Leverage Ratio						0	

Table 3. – Cumulative Number of OCC-Regulated Advanced Approaches Banking Organizations Short of the Transition Schedule for Minimum Capital Requirements Including Estimated Risk-weighted & Market Risk Assets, December 31, 2011

	Dec. 31, 2011	Jan. 1, 2013	Jan. 1, 2014	Jan. 1, 2015	Jan. 1, 2016 (PCA)	Jan. 1, 2017	Jan. 1, 2018	Jan. 1, 2019
Common Equity to Risk-Weighted Assets	0	0	0	0	1			
Tier 1 to Risk-Weighted Assets	0	0	0	1	3			
Minimum Total Capital + Conservation Buffer	0				1	1	2	4
Advanced Approaches Countercyclical Buffer								1
Advanced Approaches Leverage Ratio							0	

Table 4. – OCC-Regulated Advanced Approaches Banking Organizations Cumulative Capital Shortfall for Scheduled Minimum Capital Requirements Including Estimated Risk-weighted & Market Risk Assets, (\$ in millions) December 31, 2011

	Jan. 1, 2013	Jan. 1, 2014	Jan. 1, 2015	Jan. 1, 2016 (PCA)	Jan. 1, 2017	Jan. 1, 2018	Jan. 1, 2019
Common Equity to Risk-Weighted Assets	0	0	0	\$15,061			
Tier 1 to Risk-Weighted Assets	0	0	\$6,689	\$46,937			
Minimum Total Capital + Conservation Buffer				\$9,101	\$17,473	\$31,516	\$57,430
Advanced Approaches Countercyclical Buffer							\$23,432
Advanced Approaches Leverage Ratio						0	

2. Cost of Disclosure Requirements

The proposed rule requires advanced approaches banking organizations to amend disclosures regarding securitizations to include the following:

- The nature of the risks inherent in a banking organization’s securitized assets,
- A description of the bank’s policies for monitoring changes in the credit and market risk of the organization’s securitization exposures,
- A description of a banking organization’s policy regarding the use of credit risk mitigation for securitization exposures,
- A list of the special purpose entities a banking organization uses to securitize exposures and the affiliated entities that a bank manages or advises and that invest in securitization exposures or the referenced SPEs, and
- A summary of the banking organization’s accounting policies for securitization activities.

As described in our analysis of NPR2, we estimate that meeting all disclosure requirements will entail approximately 520 hours during the first year the proposed rule applies, and this will cost the affected institutions approximately \$44,200 in the first year. We estimate that the time necessary to meet the disclosure requirements in subsequent years will diminish substantially, to roughly 25 hours per quarter or 100 hours per year.

Because we included these disclosure costs along with system implementation costs in our analysis of NPR2, we do not include these expenses in this analysis. Thus, our overall estimate of the cost of the proposed rule (NPR3) is \$46.8 million per year. This cost estimate reflects the

added capital burden of institutions that will be subject to both the advanced approaches capital rules and the revised market risk rule.

Regulatory Flexibility Act (RFA) Analysis

The proposed rule (NPR3) will apply to advanced approaches banking organizations, i.e., banking organizations with total assets of at least \$250 billion or foreign exposures of at least \$10 billion, other banking organizations that have elected to adopt the advanced approaches, and banking organizations that are subsidiaries of banking organizations that must use the advanced approaches rules. Our size threshold for small banks for RFA purposes is \$175 million in assets. The proposed rule will affect six small subsidiaries of advanced approaches organizations. We do not consider this a substantial number of small institutions, and thus we believe that the proposed rule will not have a significant effect on a substantial number of small entities.