

The Rocky Road to Implementation of Basel II in the United States

by

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Abstract

This paper contends that the problems US officials have encountered in their efforts to implement Basel II reflect inherent weaknesses in the structure of the approach. It begins with a brief overview of the original Basel Accord on Capital Adequacy (Basel I) and a summary of the Basel II approach, with emphasis on the Pillar I weights on credit risk. Next an analysis of the Fed's bifurcated approach to implementation of Basel II is followed by an examination of three unanticipated obstacles: (1) perceived competitive inequities within the U.S.; (2) the surprisingly lower and variable capital charges revealed in the fourth quantitative impact study; and (3) the request by four leading banks for permission to implement the simpler, Standardized Approach rather than the Advanced Internal Ratings Approach (A-IRB). These reflect the erosion of several crucial predeal understandings as described by Kane (2007a, b). The paper concludes with a consideration of whether it may have been possible to achieve equivalent improvements in risk management with lower compliance costs and less uncertainty about the impact on financial stability.

JEL classification numbers: G18, G21

Keywords: Basel II, capital regulation, competitive equity

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The U.S. regulatory authorities have played a leading role in the development of Basel II, the proposal for strengthening risk- based capital requirements for internationally active banks.¹ The initiative began while William McDonough, then President of the Federal Reserve Bank of New York, was Chairman of the Basel Committee on Banking Supervision (Basel Committee).² Roger Ferguson, then Vice Chairman of the Federal Reserve Board and Chairman of the Financial Stability Forum in Basel, was one of the most forceful and articulate early advocates of the new approach. Moreover, researchers in the Federal Reserve System made significant contributions to the specification and calibration of the models that underlie the new approach. Nonetheless, the United States is playing a lagging role in implementing the new regime. Indeed, even though all of the other member countries of the Basel Committee and several additional countries have already begun to implement Basel II, the four U.S. regulatory agencies have just announced agreement on how to proceed in the United States as this paper is being written in July 2007.

In many respects this paper is an application of Kane's (2007a, b) contracting perspective on the negotiation of Basel II in which we examine how the erosion of several crucial predeal understandings threatened to derail the implementation process. This paper contends that the problems that US officials have encountered in their efforts to implement Basel II reflect inherent weaknesses in the structure of the approach. It

¹ See Basel Committee (2006) for a comprehensive statement of the revised framework.

² After the collapse of Bankhaus Herstatt in 1974, the governors of the Group of Ten established the Standing Committee on Banking Regulations and Supervisory Practices comprised of representatives of the supervisory authorities and central banks of the Group of Ten countries plus Switzerland and Luxembourg. The official name of the committee was subsequently shortened to "The Basel Committee on Banking Supervision," but for brevity, it is usually referred to as the Basel Committee. More recently Spain has joined the Basel Committee. See Herring and Litan (1995) for a more extensive discussion of the Basel Committee and the process that led to the Accord.

begins with a brief overview of the original Basel Accord on Capital Adequacy (Basel I) and a summary of the Basel II approach, with emphasis on the Pillar I weights to credit risk.³ Next an analysis of the Fed's bifurcated approach to implementation of Basel II is followed by an examination of three unanticipated obstacles: (1) perceived competitive inequities within the U.S.; (2) the surprisingly lower and variable capital charges revealed in the fourth quantitative impact study; and (3) the request by four leading banks for permission to implement the simpler, Standardized Approach rather than the Advanced Internal Ratings Approach (A-IRB). The paper concludes with a consideration of whether it may have been possible to achieve equivalent improvements in risk management with lower compliance costs and less uncertainty about the impact on financial stability.

Background: Basel I & Basel II

The 1987 Accord on Capital Adequacy (Basel I) established a framework for capital regulation of internationally active banks. Taking the existing accounting practices in the Group of Ten Countries (G-10) as given, it focused on: (1) defining regulatory capital; (2) measuring risk-weighted assets including off-balance sheet exposures; and (3) setting minimum acceptable ratios for regulatory capital to risk-weighted assets.

By far the most contentious issue, which took longest to resolve, concerned how to define regulatory capital. Although all of the Basel Committee members regulated capital, each employed a different definition. At one end of the spectrum, the German

³ For brevity, the regulation of operational risk will be largely ignored. Nonetheless, the Basel II approach to operational risk is less defensible than the approach to credit risk. For a critique of the capital charge for operational risk see Herring (2002). Also, Pillar 3, Market Discipline, will be given short shrift although it has many defects as well. For a critique of Pillar 3 see Herring (2004).

authorities regarded the inclusion of any financial instruments in addition to shareholders' equity as undermining the rigor of German capital regulation. At the other end of the spectrum, the French, having nationalized most of their major banks earlier in the 1980s, wished to minimize the role of shareholders' equity and favored long-term debt instruments. The resulting compromise was a remarkable feat of financial diplomacy, if not of analytical rigor. The definition of regulatory capital contained something to reflect the special circumstances of each of the key members of the Basel Committee.

The Committee defined two kinds of regulatory capital (Basel Committee, 1988).⁴ Tier 1 capital is mainly shareholders' equity (which satisfied the Germans). Tier 2 capital contains most of the compromises that facilitated agreement among the Group of Ten bank supervisors--most notably, generous use of long-term debt instruments (which pleased the French), limited acceptance of loan loss reserves (which pleased the Americans) and recognition of 45 percent of the unrealized capital gains on shareholdings (which satisfied the Japanese).⁵

Basel I focused on credit risk because, apart from fraud, credit risk has been the most frequent cause of bank failures. The architects of the Accord stressed two objectives: simplicity and the avoidance of micro-managing bank lending decisions.

⁴ With the adoption of the Market Risk Amendment in 1996, the Basel Committee (1996) recognized a third kind of regulatory capital, Tier 3, which consisted largely of shorter-term subordinated debt. The qualifying restrictions proved so onerous, however, that virtually no Tier 3 capital has been issued.

⁵ Subordinated debt was relegated to Tier 2 status. Internationally active banks are not currently required to issue subordinated debt and, if they should chose to do so, the amount that they can count as Tier 2 capital can be no more than 50 per cent of their Tier 1 capital. Thus subordinated debt has a distinctly second-class status under the Accord. The U.S. Shadow Financial Regulatory Committees has long argued that a suitably designed capital requirement, focused on the mandatory issuance of subordinated debt, provides a much simpler and more effective way to harness market discipline to strengthen the safety and soundness of internationally active banks. For more details see U.S. Shadow Financial Regulatory Committee (2000) and Herring (2004a)

They established four risk buckets based largely on the identity of the borrower and without regard for portfolio diversification effects. At one extreme, safe assets such as government bonds were assigned to the zero percent risk-weight bucket,⁶ while at the other extreme, traditional loans were assigned to a 100 percent risk-weight bucket. Off-balance sheet instruments were incorporated into risk-weighted assets in a two-stage procedure. First, the instrument was assigned a conversion coefficient that reflected the Basel Committee's judgment about the degree to which the credit risk of the instrument was similar to an on-balance-sheet loan. Second, a portion of the value of the instrument (the coefficient times the face value or notional principal) was placed into the appropriate risk bucket, based on the identity of the counterparty.

The Basel Committee defined minimum capital adequacy standards based on the ratio of regulatory capital to these risk-weighted assets. Internationally-active banks were expected to meet two ratios: (1) the ratio of Tier 1 capital to risk-adjusted assets should be at least 4 percent; and (2) the ratio of Tier 1 plus Tier 2 capital to risk-adjusted assets should be at least 8 percent.⁷

Over time regulators became increasingly dissatisfied with the effectiveness of the original Basel Accord because of concerns about regulatory capital arbitrage. The divergence between the Basel I risk weights and the actual economic risks associated with some exposures provided an opportunity for banks to unbundle and repackage risks in ways that increased the ratio of regulatory capital to risk-weighted assets. Indeed, some

⁶ This choice of safe asset is much more plausible in G-10 countries than in emerging markets such as Argentina, Russia, or Turkey.

⁷ Although Carey (2002) has provided an interesting empirical rationalization of these regulatory minimums, the Committee did not attempt to do so in the original Accord nor has it attempted to do so in Basel II.

observers believe that financial innovations such as securitization techniques and credit derivatives were devised partly to enable banks to maintain or even increase risk exposures with relative ease, while lowering regulatory measures of risk-adjusted assets.

Basel II is structured around three pillars: (1) minimum regulatory capital requirements, (2) the supervisory review process and (3) market discipline. Although Basel II also proposes to extend the scope of capital requirements to include operational risk and interest rate risk in the banking book, most of the detail focuses of the determination of risk weights for credit risk.⁸ Table 1 illustrates the principal differences in the total risk-weighted capital ratio between Basel I and Basel II.

The objectives of Basel II are to: (1) eliminate incentives for regulatory capital arbitrage by getting the risk weights right; (2) align regulation with best practices in credit risk management; and (3) provide banks with incentives to enhance risk measurement and management capabilities.

Basel II aims to eliminate incentives for regulatory capital arbitrage by adjusting regulatory risk weights so that they accurately reflect actual economic risks. More broadly, it attempts to align regulation with best practices in credit risk management and to provide banks with an incentive to invest in more sophisticated risk measurement and management capabilities. These regulatory “carrots” to encourage banks to adopt of more sophisticated risk management practices are the prospect of lower capital requirements as the bank qualifies for the use of increasingly complicated ways of measuring regulatory capital requirements: (1) the Standardized Approach (SA); (2) the

⁸ Oddly, interest rate risk, something that can be measured with relative precision, is relegated to supervisory discretion while operational risk, which is intrinsically very difficult to define, much less measure, is subject to quantitative capital requirements. See Shadow Financial Regulatory Committee (2002), Herring (2002) and Calomiris and Herring (2002) for additional discussion about the weaknesses of the framework for applying capital requirements to operational risk.

Foundation Internal Ratings-Based Approach (F-IRB); or (3) the Advanced Internal Ratings-Based Approach (A-IRB). For an average bank portfolio, the approaches are calibrated so that the F-IRB yields a lower capital requirement than the SA. The A-IRB should yield the lowest capital requirement. To avoid a reduction in the overall level of capital the Basel Committee has imposed a new capital charge for operational risk that is calibrated to offset, on average, the reduction in the capital charge for credit risk. This way of maintaining the average level of capital in the banking system rests uneasily with the commitment to greater precision in the risk weights.⁹

Although the Standardized Approach is simply a more complex version of Basel I--with more risk buckets, attention to external ratings of credit risk and credit enhancements--the internal ratings-based approaches include detailed specifications about how banks should measure their credit risk. Basel II has emphatically abandoned the original objectives of simplicity and avoidance of micro-managing lending decisions in favor of much more prescriptive regulatory standards. The most sophisticated approach, the A-IRB, would permit a bank to employ its own estimates of the probability of default (PD), the expected loss given default (LGD), the exposure at default (EAD) and maturity, as inputs in the regulatory model that determines the risk-weight.

Of course, risk at the portfolio level depends on the joint default distribution and this is an empirical challenge for many lines of business. Defaults are rare and joint defaults are even more unusual in most lines of business and so it is not possible to estimate default correlations at a high level of confidence. In principle, the correlation could be inferred from structural models of default, but there is no consensus on the

⁹ The Basel Committee (2004, June) has also proposed multiplying the IRB capital requirement by a single scaling factor (in principle, either greater or less than one) to maintain the overall level of minimum capital requirements.

“true” model of default, much less the magnitude of its parameters. The supervisory authorities have made an assumption about correlation in the internal ratings based approaches and will not permit banks to rely on their own estimates.

The internal ratings based approaches are close to an internal models approach, but differ in four important respects. First, the model determining the risk weights is the regulatory model, not the banks’ own models. The regulatory model reflects numerous political compromises and crystallizes a particular state of the art in an environment in which the state of the art is rapidly changing and so it is unlikely to produce the same risk weights as the banks’ own models. Hence there will still be scope for regulatory capital arbitrage. Second, compliance costs will not be reduced as much as in an internal models approach, because well-managed banks will need to run their own models alongside the regulatory models. Third, the incentives for diversification are reduced to the extent that the cross-correlations in internal models are not reflected in the regulatory model. Fourth, there is a greater danger that banks will tend to move the same way at the same time in credit markets than in an internal models approach because their capital charges are being determined by the same regulatory model, notwithstanding the individual inputs.

Basel II attempts to achieve at least three pairs of seemingly irreconcilable objectives: (1) to increase the risk-sensitivity of capital requirements *without exacerbating* the pro-cyclicality of lending; (2) to increase the safety and soundness of the banking system *without changing* the overall level of capital in the banking system; and (3) to provide capital reduction incentives for the adoption of more sophisticated techniques *while maintaining* a level playing field. The inclusion of all these objectives

was undoubtedly crucial for reaching agreement within the Basel Committee, but doubts remain about how effectively it has dealt with the inherent conflicts. The possibility that increasingly risk-sensitive capital requirements will exacerbate the pro-cyclicality of lending is one of the most serious concerns about Basel II. Apprehensions about the latter two pairs of objectives – concerns that implementation of Basel II will reduce regulatory capital charges for the largest US banks and that incentives for adoption of A-IRB will give the largest banks an unwarranted competitive advantage -- have delayed implementation of Basel II in the United States.

The bifurcated approach to implementation in the United States

The international banking community expressed surprise when Vice Chairman Ferguson (2003a) announced that the U.S. would adopt a bifurcated approach to the implementation of Basel II.¹⁰ Under this approach, large, internationally active US banks with more than \$250 billion in total assets or with foreign exposures greater than \$10 billion would be required to qualify for and implement the advanced approaches for calculating capital charges for credit risk and operational risk under Basel II.¹¹ These “core banks” are expected to include the eleven institutions listed in Table 1. Another ten or so large regional banks were originally expected to “opt-in”. All other U.S. banks would continue to apply the existing domestic regulatory capital rules unless they chose to meet the qualifications for adopting the advanced approaches.

¹⁰ Credit Suisse (2003, p. 36) wrote, “Although this approach initially surprised the international banking community we believe that it reflects the original objectives of Basel II...” Whether the international banking community should have been surprised is open to question. As early as 2000, Vice Chairman Ferguson had spoken of the possibility of a bifurcated approach to capital requirements (Ferguson 2000).

¹¹ US banks will not be permitted to adopt any of the less advanced alternatives for computing capital charges for credit risk and operational risk.

In recognition of its obligation to promote a level playing field for cross-border banks, the U.S. interpreted the Basel II framework as *standards that should apply to internationally active banks*.¹² The decision not to implement the full range of Basel II options was based on the conclusion (Ferguson, 2003b) that “the greatest potential benefit of Basel II was found in the most advanced versions – the Advanced IRB for credit risk and the AMA for operational risk. ...[C]oncentrating attention on the most advanced approaches could help reduce the complexity of Basel II.”¹³ Moreover, the elimination of implementation choices mitigated concerns about the temptation for institutions to engage in regulatory “cherry-picking” by choosing implementation options to minimize regulatory capital charges.

The decision not to implement Basel II for the thousands of other U.S. banks with less than \$250 billion in assets or less than 10% foreign assets was based on an assessment that the prospective benefits were meager relative to the costs. The Fed (Ferguson, 2003b) argued that the balance sheet and operational structure of these institutions is straightforward relative to the much larger, internationally active banks and does not need the sophisticated risk-management infrastructure required by the A-IRB. These banks, moreover, currently maintain far more capital than the Basel II regulatory minimum would produce, already benefit from the enhanced supervisory oversight envisioned under Pillar 2 and currently disclose considerable information comparable to

¹² See Ferguson (2003b). The European Union (EU) viewed Basel II as *internationally accepted standards that should apply to all banks*. It has incorporated the Basel II framework in the Capital Requirements Directive that applies to all depository institutions and most types of investment firms. Since EU-based institutions can generally choose from all three approaches, the EU is sometimes said to have adopted a trifurcated approach.

¹³ In contrast, institutions in the EU will be able to choose from more than 100 different implementation options.

the Pillar 3 standard. In short, the U.S. authorities argued that requiring these banks to bear the cost of shifting to Basel II was not justified by the probable benefits.

More importantly, banks in the U.S. are subject not only to Basel I, but also to the capital-based prompt corrective action measures established in the Federal Deposit Insurance Corporation Improvement Act of 1991 (FDICIA). FDICIA requires the regulators to define criteria to classify depository institutions in four different categories – well-capitalized, adequately capitalized, undercapitalized, and significantly undercapitalized.¹⁴ The four agencies jointly developed criteria for the categories. The criteria for a bank to be deemed “well-capitalized” – criteria which virtually all U.S. banks meet -- include a 5% Tier 1 leverage ratio, a 10% Tier 1 plus Tier 2 risk-based capital ratio and a 6% Tier 1 risk-based capital ratio. Banks that aspire to be considered “well-capitalized,” will thus need to hold more regulatory capital than the Basel I and Basel II minima. The leverage ratio criterion in particular may require substantially more capital for some kinds of low risk lending.

It is easy to imagine that the U.S. regulatory agencies may have believed that the bifurcated approach would minimize political obstacles to implementation of Basel II in the United States and facilitate completion of the implicit contracts with the core banks and members of the Basel Committee. The core banks that would be required to adopt Basel II already had risk management systems in place that were close to the infrastructure required to implement the advanced approaches and so they were expected to be able to comply at relatively small marginal cost. Moreover, these core banks might reasonably expect to experience a reduction in their regulatory capital charges for two

¹⁴ FDICIA requires regulators to set the threshold for a fifth category, critically undercapitalized, at no less than 2 percent of tangible equity capital.

reasons. First, the A-IRB was calibrated to yield lower capital charges than the SA, which had substantially lower risk weights than Basel I for high quality borrowers, residential mortgages and most retail business.¹⁵

Second, officials at the Federal Reserve Board (Fed) gave core banks reason to expect that over time the FDICIA leverage ratio would be relaxed. Alan Greenspan, the Chairman of the Federal Reserve Board, had testified (Sloan, 2006a) that Basel II and the leverage ratio were “mutually exclusive.” And Governor Bies was reported to have said (Paletta, 2005) “The leverage ratio down the road has got to disappear. I would say to the industry: If you work with us and be patient, we understand the concerns about leverage ratios, and as we get more confidence in the new risk-based approach, it will be easier for us to move away from the leverage ratio.”¹⁶

It may also have seemed plausible that other, non-core banks would not object to the bifurcated approach. First, non-core banks would be exempt from additional capital regulation and the associated compliance costs. Second, the competitive landscape should not be altered since the Basel Committee aimed to maintain the overall level of capital in the banking system and had calibrated the Basel II capital charge for operational risk to offset, on average, the potentially reduced charges for credit risk.¹⁷ Third, non-core banks could obtain approval to apply Basel II if they were willing to invest in the necessary risk management infrastructure. Kane (2007a, b) has characterized these assumptions as “predeal understandings.” He notes (Kane 2007b, p.

¹⁵ The reductions in capital charges for credit risk, however, would be offset by a new capital charge for operational risk.

¹⁶ Heller and Davenport (2005) who wrote that “Ms. Bies made it clear that the Fed still intends to jettison the straight capital-to-assets leverage rate eventually.”

¹⁷ See Calomiris and Herring (2002) for a discussion of the calibration of the operational risk capital charge.

4) that most inconsistencies in these understandings do not have “to be fully vetted ... until the implementation phase.” When the implementation phase began several banks began to question these predeal understandings.

Non-Core banks fear competitive disadvantage from bifurcated approach

Although the Basel Committee stated its intention to maintain the overall level of capital in the banking system, some non-core banks doubted that it had achieved this objective. In particular, several banks were concerned that the incentives to encourage banks to adopt the more advanced approaches, embedded in the risk weights, would place non-adopting banks at a competitive disadvantage. Since the advanced approaches are calibrated to produce the lowest capital charge for most exposures, some non-core banks feared that they would become takeover targets or be under-priced in key lines of business. The chairman of Zions Bankcorporation (Simmons 2003, p.2) highlighted these concerns in his public comment letter on Basel II: “Non A-IRB banks would have significant competitive advantages over other banks in that their loan officers would be able to allocate significantly less capital to most categories of loans. Over time, such advantages would lead to declining market share for community and regional banks and would increase the rate of mergers with larger banks.”

Vice Chairman Ferguson, speaking before the Institute for International Finance (Ferguson, 2003c) remarked on this “unexpected criticism” from banks that will not be required to apply Basel II --- and thus will not see their capital requirements change at all. He argued that “The extent to which regulatory capital requirements drive pricing or profitability is an empirical question. My own view is that in a world in which banks

hold capital buffers and can securitize and sell assets, and with bank management increasingly allocating resources and making decisions on the basis of internal economic capital measures, the answer must be: not very much if at all.”

Nonetheless, the Federal Reserve produced a series of white papers to address concerns regarding takeovers, loans to small and medium-sized enterprises (SME), and residential mortgage lending. The first white paper (Hannan and Pilloff) addressed the issue of whether lower capital charges may enable large, internationally-active banks to acquire smaller banks simply because they can fund them more cheaply. This could lead to consolidation of the financial sector motivated by regulatory advantage rather than value added to users of financial services. Hannan and Pilloff, presented two tests of the hypothesis that core banks would increase their acquisition activity. The first examined whether large banking organizations with greater excess regulatory capital exhibited a greater tendency to acquire other banks. The second investigated whether the large banks most severely constrained by the generally higher capital requirements that had resulted from adoption of the FDICIA prompt corrective action standards had experienced a relative reduction in merger activity. The results of both tests were generally statistically insignificant and the authors (Hannan & Pilloff, p. 44) conclude that “On the whole, we do not find convincing evidence either that past changes in excess regulatory capital or that past changes in capital standards had substantial effects on merger activity.”

The second white paper (Berger 2004) addressed SME lending. Berger examined whether the reduction in minimum regulatory capital for core banks (and the corresponding, potentially lower marginal cost of SME lending) might lead core banks to reduce the price and/or increase quantity of SME lending thus increasing their market

share relative to banks that do not adopt Basel II. He concluded that the impact on community banks (banks with under \$1 billion in assets) was likely to be minor because community banks have a strong comparative advantage in making relationship loans to informationally opaque SMEs. He reached a different conclusion, however, with regard to larger banks that do not adopt Basel II. These banks compete head-to-head with core banks for loans to relatively transparent SMEs and may find themselves at a disadvantage because of the higher risk-weights on SME lending in Basel I.

The third white paper (Lang et al, 2005) addressed credit card lending activities. The authors first considered whether the adoption of A-IRB is likely to have an adverse competitive impact on community and regional banks and then considered whether it may adversely affect the competitive position of nonbank issuers of credit cards. The authors concluded that core banks are likely to experience sizable increases in risk-based minimum capital requirements for their credit card portfolios, but that the increase is unlikely affect their competitive position because the capital market already requires banks to hold levels of capital for credit card portfolios that are far above the Basel I-based regulatory capital minimum. They are skeptical that the change in regulatory requirements will alter the competitive landscape in which credit card issuance is already highly concentrated among a few, large banks and not an important activity for community or most regional banks.

Finally, they argue that nonbank companies that are large credit card issuers will be in a similar competitive position to large bank issuers that do not adopt the A-IRB. Although the greater responsiveness of regulatory capital to risk under A-IRB would appear to place core banks at a competitive disadvantage in times of stress, the authors

argue that supervisory oversight would similarly constrain banks that do not adopt AIRB. Moreover, under such circumstances, capital markets are likely to constrain core and non-core banks equally.

The most contentious competitive issue turned out to be the impact of the bifurcated approach on the market for residential loans, the largest asset category in the U.S. banking system. The first study conducted at the Federal Reserve Board (Calem and Follain, 2005) concluded the bifurcated approach might have substantial impact on competition for residential mortgage lending. They conjectured (Calem and Follain 2005, p. 24) that “Nonadopting banking organizations may lose in the neighborhood of \$1 billion per year in net income due to a reduction in their share of the market and the reduced price they earn in such investments.” Core banks would gain a competitive advantage because the AIRB risk weight for high quality mortgages would be a small fraction of the Basel I risk weight. The Federal Reserve Board chose not to issue this study as a white paper, but did commission an additional study.

The second mortgage market study (Hancock et al, 2006) agreed that core banks would experience a substantial decrease in regulatory capital requirements, but reached strikingly different conclusions regarding the implications for the competitive landscape. The authors argued that the change in regulatory requirements was unlikely to have a substantial impact on mortgage rates and thus, would not adversely affect nonadopters. They concluded (Hancock et al, 2006, p. 1) “[A]dopters might have increased profits from some mortgages relative to nonadopters ... but nonadopters would likely retain their market shares.”

The banking agencies took the view that the bifurcated approach was unlikely to cause major shifts in competitive advantage. The series of white papers clarified several issues regarding the consequences of the bifurcated approach for domestic competition, but did not succeed in quelling the concerns of non-core banks. Their concerns were heightened by the results from the Fourth Quantitative Impact Study (QIS-4) conducted during the fall and winter of 2004-2005. The survey was designed to identify the potential effects of Basel II on 26 institutions that might be expected to adopt the new regime.

QIS-4 raises questions about safety and soundness as well as competitiveness

The results of QIS-4 (Joint Release, 2006) proved troubling to both banks and regulators. Aggregate minimum risk-based requirements would fall 15.5 percent. The median reduction in Tier 1 capital requirements was 31 percent. Moreover, banks that were thought to have similar risk profiles produced drastically different capital requirements.

Why were the QIS-4 capital charges lower than expected? One possibility was that the survey was conducted at an especially favorable stage in the business cycle in which defaults were well below historical averages. But this explanation implied that Basel II might be even more procyclical than feared. Although most discussion had focused on the possibility that risk-based capital requirements might rise sharply in an economic downturn, sharp reductions in risk-based capital in an upturn are equally troubling. It is axiomatic that most bad loans are made in good times. A regulatory system that encourages more lending in good times may inadvertently increase the volume of bad loans and thereby exacerbate the necessary restructuring when the

business cycle turns down. Moreover, the sharp reduction in the median risk-based capital requirement heightened concerns about competitive inequities that might arise between banks that adopt Basel II and those that do not.¹⁸

Why were the QIS-4 capital charges more diverse than expected? Some of the differences could be easily attributed to differences in underlying portfolios. But a worrisome amount of the dispersion was due to differences in data and methodologies used to make parameter estimates. Some banks were found to have used unsophisticated techniques for estimating PD, LGD and EAD and some banks lacked estimates of the LGD for stress periods.

A comparison (FDIC, 2006) of risk weights estimated by seven different banks for the same residential mortgage portfolio,¹⁹ however, produced the most perplexing results. Risk weights for this portfolio ranged from 74 percent to less than 1 percent. In addition to intensifying the concerns of non-core banks that they would be placed at a competitive disadvantage, this result raised concerns about competitive inequities among even the core banks. It also triggered two troubling, more fundamental questions: (1) If the state of the art in modeling credit risk is this unsettled, should regulatory capital requirements be based on this approach? (2) Would a shift to A-IRB lead to a sharp reduction in regulatory capital in some of the most systemically important banks in the U.S.?

¹⁸ The agencies also speculated that some of the decrease in required capital might be due to a recalibration of the regulatory model to focus exclusively on unexpected losses, with expected losses to be supervised under Pillar 2 (Federal Reserve Board, 2006b, p. 81).

¹⁹ Loans in the portfolio had the same underwriting characteristics with a FICO score of 660 and loan-to-value ratio of 80 percent.

The banking agencies (Joint Release, 2006, p. 18) stressed that “these results were provided on a best efforts basis and without benefit of either a definitive set of proposals or meaningful supervisory validation of institutions’ systems.” Nonetheless, the banking agencies agreed to delay the notice of proposed rule making for implementation of Basel II until the results of QIS4 were better understood (Joint Release, 2005).

In the meanwhile, the Fed emphasized that Basel II should not lead to a major reduction in regulatory capital. Governor Bies (Paletta, 2005) appeared to draw back from her earlier position and emphasized that the leverage ratio would remain relevant saying, “Even if supervisors don’t call for a minimum leverage ratio, I firmly believe that bankers, investors, and the rating agencies would demand it.” And the new head of banking supervision at the Federal Reserve Board proclaimed that maintaining capital levels is more important than increasing risk sensitivity of capital requirements or international competitive equity (Sloan, 2006b). When the draft Notice of Proposed Rulemaking (NPR) was published in March, 2006 the four federal agencies affirmed that the leverage ratio and prompt corrective action would be retained for all banks.²⁰

NPR Attempts to Maintain Momentum but with Incorporation of Safeguards

The draft NPR introduced additional safeguards designed to prevent actual declines in minimum regulatory capital of the magnitude suggested by the QIS-4. These safeguards included a one-year delay in the targeted effective date of the regulation to 2008, a longer transition period to the unconstrained use of the Basel II risk weights and limitations on the permissible decline of risk-based capital during the transition period.

²⁰ The Federal Reserve Board Staff (2006, p.4) published the draft NPR before the other banking agencies had completed their internal review and approval procedures because “Board staff believes it is important to move forward with the Basel II implementation process to further industry dialogue on the proposed framework....”

The right column of Table 3 displays the proposed transition period and floors on the permissible reduction in risk-based capital relative to the Basel I standard.

For some banks, the most unwelcome surprise in the draft NPR was the inclusion of a provision to ensure that the aggregate capital of adopting banks would not drop sharply. The Agencies (FDIC, 2006, p. 20) agreed to view a 10 percent or greater decline in aggregate minimum required risk-based capital, compared to minimum required risk-based capital under Basel I, “[A]s a material reduction warranting modification to the supervisory risk functions or other aspects of this framework.” A senior risk officer at Citibank complained (Sloan, 2007c) that “The 10 percent floor introduces uncertainty in long-term business planning and capital management strategies. Some banks will choose to manage this problem by holding additional excess capital that could otherwise support loans and investment that would contribute to economic growth.”

In addition, the Agencies attempted to address the competitiveness concerns of the non-adopting banks by publishing an Advanced Notice of Proposed Rule Making (ANPR) outlining a new version of Basel I, called Basel IA, which reduced capital charges against several kinds of exposures about which competitiveness concerns had been especially intense. Moreover, the Agencies promised to extend the comment period for the Basel II NPR so that the NPR for Basel IA could be compared to the NPR for Basel II in order to give industry participants the opportunity to evaluate and comment on any remaining competitive inequities.

Basel IA would increase the number of risk weight categories from 5 to 9 and permit the use of external ratings. Although this looked very much like the Standardized Approach, several differences were apparent. For example, Basel IA contemplated a

35% risk weight for A rated borrowers, versus a 50% risk weight under the SA. But Basel IA placed much higher risk weights on riskier borrowers, especially those rated below investment grade. Given the importance of mortgage lending and the controversy over how Basel II would affect the competition for mortgage loans it is not surprising that Basel IA proposed sharply lower risk weights for mortgages with loan-to-value ratios of 80 percent or less – 35 percent for loans with an LTV of 61 to 80 percent and 20 percent for loan with an LTV of 60 percent or less – well under the Basel I risk weight of 50 percent for such loans.

Given the similarities in risk weights between Basel IA and the SA, however, it is natural to ask why the Agencies did not simply permit banks to adopt the SA. The answer appears to be that in addition to a preference for some differences in risk weights (which may indicate American views of the appropriate risk weights that did not prevail within the Basel Committee), the regulators did not want to subject smaller banks to the capital charge for operational risk.

These proposed safeguards and the inclusion of the leverage ratio and prompt corrective action measures provided some reassurance to those who were concerned about a reduction of regulatory capital in the core institutions. The proposed changes to Basel I eased concerns about potential competitive disadvantages for banks that did not adopt Basel II. But these proposals overturned some of the predeal understandings that had led large banks to support – or at least not oppose – Basel II.²¹ The result was yet another unanticipated obstacle to the implementation of Basel II.

Unanticipated Opposition from Some Core Banks

²¹ An anonymous regulator told a reporter for the *American Banker* (Rehm, 2006) that “If the mandatory banks don’t support it, I don’t think you have any one supporting it – other than the Fed.”

Even before the draft ANPR, large banks that specialized in processing activities had expressed serious concerns about how the implementation of Basel II might affect their competitive positions. Because processing activities involve very little credit risk, but substantial amounts of operational risk, they feared that Basel II would substantially increase the amount of regulatory capital they would be required to hold. Although the operational risk capital charges were calibrated by the Basel Committee to roughly offset (on average) the decline in credit risk capital charges anticipated under Basel II, this was unlikely to be the case for banks that specialized in processing activities. Moreover, in several of these activities, U.S. banks compete directly against other kinds of institutions that would not be subject to Basel II regulatory capital requirements.

The Federal Reserve had addressed these issues in an earlier white paper (Fontnouvelle et al, 2005). The white paper examined five markets in which some core banks had concentrated their activities: securities custody, institutional asset management, mutual fund management, private wealth management, and general processing. The authors concluded that in most of these markets, the key competitors were foreign banks or large investment banks that would be subject to Basel II. The key exceptions were mutual funds management and some kinds of general processing activities where nonbank competitors have dominant market shares. The authors found these nonbank firms to be so well-capitalized that they would be unlikely to need to raise additional capital even if they were subject to Basel II.

Fontnouvelle et al (2005, p.4) conclude, “[T]he potential competitive effects of the Basel II operational risk charge will be, at most, modest.” By removing the near-term prospects for a significant decrease in regulatory capital requirements for credit risk,

however, the draft NPR made these potential competitive effects seem less modest than before. More broadly, the invalidation of the predeal understandings regarding the leverage ratio, the floors on permissible reductions in regulatory capital and the increasing complexity of the proposed Basel II implementation caused four core banks to attempt to renegotiate the implicit contract with the regulators.

During the summer of 2006, Citigroup, JPMorgan Chase, Wachovia and WAMU requested the option to implement the SA rather than the A-IRB. To justify their requests, the four banks deployed arguments strikingly similar to those used earlier by small banks concerned that they would be placed at a disadvantage relative to the large banks adopting Basel II.

The four banks argued that the requirement to implement the advanced approaches, the leverage ratio and the transitional floors would disadvantage U.S. banks relative to their counterparts abroad. They raised the specter of potential takeovers by foreign financial institutions that would be able to deploy their regulatory capital more efficiently. In addition, they argued that they would be placed at a competitive disadvantage vis-à-vis U.S. investment banks. Although the largest investment banks would be subject to a version of Basel II administered by the Securities and Exchange Commission, they were not expected to be subject to the leverage ratio or to the transitional floors. These concerns were summed up by State Street Bank in a comment letter on the NPR (Sloan, 2007c), “We believe these disparities may erode the benefits of Basel II, create competitive challenges for U.S. banks, introduce unnecessary complexity, and substantially increase banks’ cost of implementation and compliance burden.”

Without the prospect of lower capital requirements and with the threatened imposition of additional prudential safeguards, the core banks began to see the A-IRB as simply the imposition of deadweight costs. Most banks held that their current systems for identifying, managing and pricing risk are superior to the regulatory models imbedded in the A-IRB and so they were reluctant to incur the additional costs of implementing the A-IRB if there were to be no regulatory benefits. The four banks noted that the SA could be implemented at much lower cost and would be more transparent and much easier to understand than the A-IRB. The four banks urged that all U.S. banks be given the option to implement the SA instead of the A-IRB. This request was subsequently endorsed by the American Bankers Association, the Independent Community Bankers of America, America's Community Bankers and the Financial Services Roundtable (Sivon, 2006).

The Federal Reserve, which had insisted from the outset that only the A-IRB would be appropriate for core U.S. banks, was reluctant to reopen the question. Nonetheless, when the Agencies published the NPR in September 2006, they sought comment on whether the Standardized Approach should be available to U.S. banks.²² The Chairman of the FDIC and the Director of the Office Thrift Supervision supported the standardized approach in a joint letter sent to the GAO (GAO, 2007) writing, "Given the considerable costs and complexity of the advanced approach and its attendant uncertainties and risk, our agencies believe serious consideration should be given to the implementation of a U.S. version of the Basel II standardized approach as an option for all U.S. banks."

²² They also included an additional safeguard to limit reductions in capital charges by emphasizing that banks should employ LGDs based on economic downturns.

The Fed, however, remained opposed. Governor Bies (Sloan, 2007) argued that the use of the SA raised other troubling issues: “[W]hether it would provide adequate risk sensitivity; whether taking the time needed to develop an appropriate U.S. version of the standardized approach would unduly delay the Basel II implementation process; ... and, finally, whether the marketplace would find such an option those banks meaningful and acceptable.” She made it clear that she did not believe these questions could be answered in the affirmative. The Comptroller of the Currency supported the Fed’s view that the A-IRB should be mandatory for core U.S. banks.

The U.S. Congress had asked the General Accountability Office (GAO) to study the potential impacts of the proposed Basel II implementation. The GAO published its report in February 2007. The GAO noted that despite the subsequent issuance of 250 pages of administrative guidance,²³ the NPR remained vague on several critical details such as the treatment of bank portfolios that do not meet the data requirements for the A-IRB and how calculations of reductions in the minimum regulatory capital will be made or how the SA would be implemented in the U.S. It concluded that the proposal was too incomplete to assess costs for banks to implement and the Agencies to enforce. The GAO recommended that if the as-yet-to-be-determined rule differed materially from the NPR, another NPR with a new comment period would be necessary. It noted in particular that an additional NPR (with an associated comment period) would become necessary if the SA became part of the final rule.

At this point the implementation of Basel II in the U.S. lagged two years behind other advanced countries. (Table 3 summarizes the differences in the transition timetable

²³ The administrative guidance was notably prescriptive. The Director of the Office of Thrift Supervision noted (Sloan, 2007) that the document contained the word must 455 times and probably contained an equal number of "shoulds".

between the U.S. and the European Union.) Banks, the Fed and the Bush Administration expressed alarm at the prospect of the additional delays suggested in the GAO report. Because implementation of Basel II is already well underway in many other countries, internationally-active banks are faced with a compliance nightmare of increasing complexity. They must cope with differing definitions and validation requirements, differing rules, differing transition periods and differing transitional floors. These compliance costs mount as the U.S. implementation lag grows longer. Even so, negotiations among the Agencies continued until mid July.

In a terse statement released on July 20, 2007, the Agencies reported that they had reached broad agreement on the new rule to implement Basel II. Although details of the final rule remain to be specified, the broad outlines of the agreement were disclosed. The A-IRB will be mandatory for core banks. The leverage ratios and prompt corrective action will remain. The transitional floors will be retained, but the aggregate 10 percent floor will be omitted from the final rule. Instead, the Agencies have agreed to publish a study at the end of the second transitional year to evaluate whether the Basel II framework has material deficiencies. Banks will not be permitted to exit the third transitional period unless such deficiencies are first addressed by changes in regulation. In passage that betrays how difficult it must have been to reach consensus the Agencies (Joint Press Release, 2007) note that “[I]f a primary supervisor disagrees with a finding of material deficiency, it may authorize banks it supervises to exit the third transitional period, but only if it first provides a public report explaining its reasoning.” Basel IA was discarded, but the Agencies promised to prepare a version of the SA that will be “finalized” before the core banks begin the first transition period.

Concluding Comment

Apart from the additional prudential safeguards – the continuation of the leverage ratio and prompt corrective action measures, longer and more rigorous transition floors – it now appears that the implementation of Basel II in the U.S. will proceed very much as it has done in other countries, albeit with at least a two year lag. Why has agreement on implementation been so much more difficult in the United States than in most other leading nations? Some would argue that it is a reflection of the fragmented nature of banking regulation in the U.S. and the numerous checks and balances built into the legislative oversight process. It simply mirrors the inefficiency of the U.S. regulatory process relative to the streamlined decision-making possible in unified financial supervisory structures that have been adopted recently in most other advanced financial systems.²⁴

Yet this view ignores the very substantive prudential safeguards that were introduced in the process of developing a final rule. As Kane (2007) has observed, the U.S. regulatory system differs from that in most other countries because “U.S. regulators are not only empowered, but required to insist that managers of any deposit institution nearing insolvency either recapitalize ... or cede control ... to regulatory officials. In exercising this control, U.S. officials are accountable for resolving the capital shortage of firms over which they taken control at minimum cost to the deposit-insurance fund.” In the U.S., the FDIC is accountable for the costs of capital forbearance and it is surely no accident that the FDIC argued most forcefully for the additional prudential safeguards. None of the other members of the Basel Committee is explicitly responsible for the costs

²⁴ Herring and Carmassi (2006) note that over the last two decades, 30 countries have formed unified financial supervisory organizations.

inflicted on other financial institutions and/or taxpayers if the Basel II capital standards prove to be inadequate. As Kane (2007a,b) notes, this may help explain why implementation of Basel II has preceded so much more rapidly outside the U.S., but it also raises troubling questions about whether there was sufficient emphasis on prudential safeguards within the Basel Committee.

Regrettably, as implementation in the U.S. lagged further behind, the prospect of growing compliance costs truncated a debate which might have led to a better outcome. As supervisors who negotiated the original Basel II framework depart from the scene, new supervisors, less burdened by the sunk costs of a nearly decade long negotiation process, were increasingly willing to ask whether the same improvements in risk management could be achieved, with less uncertainty about the impact on financial stability and at lower cost.

Persuasive arguments can be made that it would have been better to set Pillar 1 capital charges using the SA, and oversee the implementation of state-of-art risk management systems – in the spirit of, but not identical to, the A-IRB and Advanced Approaches – under the Pillar 2 supervisory process. This would reduce compliance costs dramatically for both banks and regulators and limit the extent to which Basel II might reduce the average level of capital in the system. It would also reduce the risk of exacerbating business cycles and increase the transparency of capital charges and capital adequacy measures. Moreover, under Pillar 2 the supervisory authorities could continue to push for the adoption of advances in risk management without compromising the use of risk management models as a management tool or crystallizing a particular state of the art prematurely in regulatory standards. Regulators and banks began to explore this kind

of system during the comment period, but in the end, with the prospect of yet another lag associated with a new NPR and comment period, the clock simply ran out.

References

- Basel Committee on Banking Supervision, 1988, *International Convergence of Capital Measurement and Capital Standards*, Basel Committee Publications No.4 July.
- Basel Committee on Banking Supervision, 1996, *Amendment to the Capital Accord to Incorporate Market Risks*, Basel Committee Publications No. 24, January.
- Basel Committee on Banking Supervision, 2004, *Basel II: International Convergence of Capital Measurement and Capital Standards: a Revised Framework*, Bank for International Settlements, June.
- Basel Committee on Banking Supervision, 2006, *International Convergence of Capital Measurement and Capital Standards, A Revised Framework, Comprehensive Version*, Bank for International Settlements, June.
- Berger, Allen N., 2004, "Potential Competitive Effects of Basel II on Banks in SME Credit Markets in the United States," Working Paper Federal Reserve Board, February.
- Calem, Paul S. and James R. Follain, 2005, "An Examination of How the Proposed Bifurcated Implementation of Basel II in the U.S. May Affect Competition among Banking Organizations for Residential Mortgages," working paper presented at the AREUEA Meetings, January.
- Calomiris, Charles W. and Richard J. Herring, 2002, "The Regulation of Operational Risk in Investment Management companies," *Perspective*, Investment Company Institute, September, pp. 1-19.
- Carey, Mark, "A Guide to Choosing Absolute Bank Capital Requirements in *Ratings, Rating Agencies and the Global Financial System*, edited by Richard M. Levich, Giovanni Majnoni and Carmen Reinhart, Kluwer Academic Publishers, 2002, pp. 116-138.
- Credit Suisse Group, 2003, *The New Basel Capital Accord: Comments of Credit Suisse Group*, November 3.
- Federal Reserve Board Staff, 2006, "Memorandum on the Notice of Proposed Rulemaking Implementing New Risk-Based Capital Framework in the United States," March 22.
- Federal Reserve Board, 2006, "Draft Interagency Proposed Rulemaking to Implement Basel II Risk-Based Capital Standards for Large, Internationally Active Banking Organizations," draft Federal Register Notice, March 30.

Ferguson, Roger W., Jr., 2000, "Community Banks: Opportunities and Challenges in the 'Post Modernization Era'," Remarks before the Independent Community Bankers of America, May 2.

Ferguson, Roger W., Jr., 2003a, "Basel II," Testimony before the Subcommittee on Domestic and International Monetary Policy, Trade, and Technology, Committee on Financial Services, U.S. House of Representatives, February 27.

Ferguson, Roger W., Jr., 2003b, "Basel II: A Realist's Perspective," Remarks at the Risk Management Association's Conference on Capital Management, April 9.

Ferguson, Roger W., Jr., 2003c, "Basel II: Scope of Application in the United States," Remarks before the Institute of International Bankers, June 10.

FDIC, 2006, "Key Aspects of the Proposed Rule on Risk-Based Capital Standards: Advanced Capital Adequacy Framework," *Financial Institution Letters*, last updated September 25.

Fontnouvelle, Patrick, Victoria Garrity, Scott Chu and Eric Rosengren, 2005, "The Potential Impact of Explicit Basel II Operational Risk Capital Charges on the Competitive Environment of Processing Banks in the United States," working paper, Federal Reserve Bank of Boston, January 12.

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

Hancock, Diana, Andreas Lehnert, Wayne Passmore, and Shane Sherlund, 2006, "The Competitive Effects of Risk-Based Capital Regulation: An Example from U.S. Mortgage Markets," working paper Federal Reserve Board, August.

Hannan, Timothy H. and Steven J. Pilloff, 2004, "Will the Proposed Application of Basel II in the United States Encourage Increased Bank Merger Activity? Evidence from Past Merger Activity," Working Paper Federal Reserve Board, February 18.

Heller, Michele and Todd Davenport, 2005, "Congressional Pressure for Consensus on Basel II," *American Banker*, March 15.

Herring, Richard J., 2002, "The Basel 2 Approach to Bank Operational Risk: Regulation on the Wrong Track," *The Journal of Risk Finance*, vol. 4, no. 1, fall, pp. 42-45.

Herring, Richard J., 2004a, "The subordinated debt alternative to Basel II," *Journal of Financial Stability*, 1, pp. 137-155

- Herring, Richard J., 2004b, "How Can the Invisible Hand Strengthen Prudential Supervision?" in *Market Discipline: Evidence across Countries and Industries*, edited by Curt Hunter, George Kaufman, Claudio Borio, and Kostas Tsatsaronis, Cambridge: MIT Press, pp. 363-379.
- Herring, Richard J. and Jacopo Carmassi, 2007, "The Structure of Cross-Sector Financial Supervision," *Financial Markets, Institutions & Instruments*, forthcoming.
- Herring, Richard J. and Robert E. Litan, 1995, *Financial Regulation in the Global Economy*, Washington, D.C.: The Brookings Institution.
- Joint Release, 2005, "Banking Agencies to Perform Additional Analysis before Issuing Notice of Proposed Rulemaking Related to Basel II," Joint Release of the Office of the Comptroller of the Currency, Board of Governors of the Federal Reserve System, Federal Deposit Insurance Corporation and Office of Thrift Supervision, April 29.
- Joint Release, 2006, "Summary Findings of the Fourth Quantitative Impact Study," Joint Release of the Office of the Comptroller of the Currency, Board of Governors of the Federal Reserve System, Federal Deposit Insurance Corporation and Office of Thrift Supervision, February 24.
- Kane, Edward J., 2007a, "Basel II: A Contracting Perspective," *Journal of Financial Services Research*, forthcoming.
- Kane, Edward J., 2007b, "Connecting National Safety Nets: The Dialectics of the Basel II Contracting Process," working paper, August 1.
- Lang, William W., Loretta J. Mester, and Todd A. Vermilyea, 2005, "Potential Competitive Effects on U.S. Bank Credit Card Lending from the Proposed Bifurcated Application of Basel II," Working Paper Federal Reserve Bank of Philadelphia, December 5.
- Paletta, Damian, 2005, "Backlash on Basel Hits Fed – What Now?" *American Banker*, Thursday, October 6.
- Rehm, Barbara, 2006, "Settled Issue on Basel Now a Roadblock?" *American Banker*, Monday, July 31.
- Simmons, Harris H., 2003, "Zions Bancorporation Comment Letter on Proposal Relating to the New Basel Capital Accord," November 3.
- Sivon, James, 2006, "Letter to the Editor: Big Banks' Concerns Over Basel Warranted," *American Banker*, Friday, October 20.

- Sloan, Steven, 2006a “Why Big Banks’ Basel Tactics May Not Work,” *American Banker*, October 10.
- Sloan, Steven, 2006b “Fed Executive on Basel II: Preserving Capital Crucial,” *American Banker*, November 8.
- Sloan, Steven, 2007a “A Green Light, And a Yellow, for Basel II,” *American Banker*, February 16.
- Sloan, Steven, 2007b “Bies, Bair Diverge on Readiness of Basel II Proposal,” *American Banker*, February 27.
- Sloan, Steve, 2007c, “Bankers Maintain Criticisms of U.S. Version of Basel II,” *American Banker*, April 5.
- U. S. Shadow Financial Regulatory Committee, 2000, “Reforming Bank Capital Regulation,” Statement No. 160, March 2.
- U. S. Shadow Financial Regulatory Committee, 2002, “The Basel 2 Approach to Bank Operational Risk: Regulation on the Wrong Track,” Statement No. 179, May.

Table 1. Total Risk-Adjusted Capital Ratio under Basel II

Tier 1 + Tier 2 Capital*

Credit Risk Wtd Assets + Market Risk Equiv(x12.5) + Operational Risk Equiv(x12.5)

Major Revisions

- 2 Approaches
 - 1. SA
 - 2. Inter Ratings Based
 - a. F-IRB
 - b. A-IRB

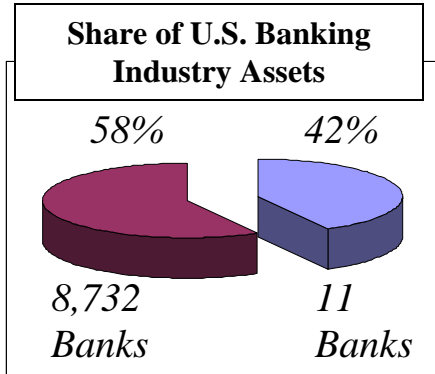
Newly Added

- 3 Approaches
 - 1. Basic Indicators Approach
 - 2. Standardized Approach
 - 3. Advanced Measurement Approaches

Features shaded in gray remain unchanged from Basel I

*Like Basel I, Basel II recognizes Tier 3 Capital and certain deductions from total capital

Table 2. Likely Basel II “Core Banks”



1. Bank of America
2. JP Morgan Chase
3. Citibank
4. Wachovia
5. Wells Fargo
6. Washington Mutual
7. HSBC*
8. State Street*
9. Bank of New York*
10. Northern Trust*
11. Deutsche Bank*

Source: GAO-07-253, p. 24

**Because of 10% foreign asset trigger*

Table 3. U.S. Transition Lags*

<u>International</u>		<u>US</u>
EU Capital Directive	2006	
Parallel run	2007	
1st transition floor (90%)	2008	Parallel run
2nd transition floor (80%)	2009	1st transition floor (95%)
Full implementation	2010	2nd transition floor (90%)
	2011	3rd transition floor (85%)
	2012	Full implementation with permission of primary supervisor

Source: GAO (2007, p. 28)