Financial Services and E-Commerce

Basel II Implementation: Rushing to a False Start

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For the past decade, a conference of banking supervisors from nations around the world that meets regularly in Basel, Switzerland (and thus has been informally referred to as the Basel Committee) has been formulating an extensive system drastically altering how national supervisors will evaluate banks. Because it follows an earlier system devised by the same group, the new system is called Basel II. Basel II is coming to the forefront as regulators begin the domestic rulemaking processes needed to implement the accord. As this process moves forward, the shape and identity of Basel II changes. Indeed, there are serious questions whether Basel II will be implemented at all. Because Basel II developments and changes occur rapidly and on many fronts, this paper has been updated several times during the drafting process to reflect recent developments. This paper is as current as possible at the time of publication and regardless of Basel II's status, this document serves as an excellent outline of the utter complexity that is Basel II.

Historically, one method of regulating banking and other depository institutions has been to mandate certain levels of capital they are to maintain. Capital is generally a measure of an organization's net worth, its assets minus its liabilities and is a measure of a bank's ability to absorb losses, protecting senior lenders, including depositors and the insurer of those deposits. By mandating higher levels of capital, regulators theoretically increase the size of the cushion available to absorb losses before a bank fails.

The 2004 Basel II Capital Accord will drastically alter all aspects of banking worldwide. Under Basel II, the nature of banking supervision will shift from general standards applicable to all banks, to a system that evaluates the soundness of each bank based upon its particular size, structure, portfolio, and risk exposure. The current plan to implement fully Basel II by 2008 is overly ambitious and risks sending tremors through the financial system, especially now that the U.S. rulemaking process has been significantly delayed. The systematic changes that are Basel II should occur gradually, if at all.

Then-Comptroller John D. Hawke, Jr. stated, "U.S. agencies should not foreclose consideration of alternative proposals that address the acknowledged deficiencies of the 1988 Accord but that do not constitute such a radical departure from our existing regulatory capital framework." We agree and propose that Basel II should be implemented sequentially. A bank that intends to adopt the most advanced approaches of the accord should first implement and transition through the more basic approaches. This ramping-up period would allow time for the implementing bank, its supervisor, Congress, and the financial markets to evaluate each step of the process. It will also ensure that problems that will inevitably arise will be smaller and more easily correctable. The banking system prides itself on soundness and stability. Basel II implementation is a sea change. It need not be a tsunami. The change should occur gradually in order to maintain a regulatory capital scheme that is workable and affordable for banks and regulators.

I. The Basel I Era (1988—Present)

Since 1988, banks in industrialized countries have been subject to an 8% risk-based regulatory capital floor.[1] These laws are rooted in the "International Convergence of Capital Measurement and Capital Standards" finalized by the Basel Committee on Banking Supervision (BCBS) at the Bank of International Settlement in Basel, Switzerland in 1988.[2] Under the original accord, a bank was required to maintain capital equivalent to 8% of its at-risk assets. The formula was simple and easy to apply. The principle was also sound, as evident by its near universal adoption by banking regulators worldwide and the very low rate of bank failures in countries that implemented Basel I.

Some observers have concluded that the Basel I framework is overly simplistic. Large banks complain that the 8% threshold is too high for very large, well-diversified banks. As the mutual fund industry frequently reminds us, diversification lowers risk. Large banks posit that the flat 8% capital floor does not account for the benefits of banking diversification. These banks conclude that their regulatory capital floors should be lowered significantly to reflect the benefits of diversification.

Banking supervisors, on the other hand, fault the Basel I Accord for not reflecting the risk- increasing effect of securitization. Securitization is, in effect, the bundling and selling of similar loans. Fannie Mae and Freddie Mac have created a very large market for securitized mortgages. Because mortgages are low-risk, a bank that divests itself of mortgages while retaining high-risk facilities, will have increased its risk exposure without a corresponding increase in the amount of capital it is required to keep on hand under Basel I.

These and similar concerns led the Basel Committee on Banking Supervision to frame a new accord: *The International Convergence of Capital Measurement and Capital Standards: A Revised Framework*, known as Basel II, which was adopted in June 2004.[3]

The original Basel Accord is not viewed as fatally flawed. Indeed, the original accord serves as the foundation for Basel II. Moreover, the stated intent of Basel II is to maintain the overall level of regulatory capital collectively held by banks under Basel I. Even after the implementation of Basel II, the original accord will not be dead. Some countries are not in a position to implement the new accord. The U.S., as a prime example, intends to apply Basel II to only a handful of banks. The vast majority of U.S. banks will continue to be regulated under a yet-to-be-determined modified version of the original accord.

II. A Basic Overview of Basel II

Basel II seeks to tweak each bank's capital requirement to more accurately reflect that bank's individual risk exposure. The concept is simple. Unfortunately, collecting and interpreting the data necessary to practice the concept is anything but simple. For the approximately ten to twenty U.S. banks that will initially fall under Basel II, the changes will be great and costly. "Some institutions estimate that implementation will cost approximately $70 million to $100 million to startup."[4]

The new accord consists of three pillars. Pillar One is designed to make the minimum capital requirements risk sensitive. Pillar Two outlines how supervisors should review capital adequacy. Pillar Three details the public disclosure of risk profile and regulatory capital information that should occur in a market economy. Pillar One bears the greatest weight. This is especially true in the United States, where supervisor scrutiny and public disclosure are already the norm. Pillar One will be the focus of this paper.

Pillar One is the foremost aspect of the new accord because it requires that a bank establish its own regulatory capital requirements based upon internal risk assessments. Through Pillar One, Basel II addresses three types of risk—credit, market, and operational.[5] Credit risk is the loss potential for a particular transaction or category of transactions. Market risk is the risk associated with changing economic conditions. Operational risk is the general loss potential associated with a banking enterprise. Whereas Basel I has a static capital requirement designed to collectively address all risk, the new accord treats each type of risk separately. Unfortunately, Basel II does not explicitly address interest-rate risk, which is much more a phenomenon of the U.S. banking system than is true in other countries where borrowers and bondholders shoulder most of the interest-rate risk.

A. Credit Risk

As approved by the BCBS, Basel II allows for a bank and its supervisor to select from between three methods of ascertaining the credit risk confronting the bank, the Standardized Approach, the Foundational Internal Ratings Based Approach, and the Advanced Internal Ratings Based Approach. The United States, for its part, has chosen to partially implement the new accord. It will require the 10 largest banks to adopt the Advanced Approach.[6] The remaining 7,840 banks and 1,365 savings institutions may choose to adopt the Advanced Approach or remain under a modified Basel I.[7] Neither the Standardized Approach nor the Foundational Internal Ratings Based Approach will be implemented in the United States. This paper will nevertheless discuss all available approaches under Basel II because a full understanding of the new accord is helpful in understanding what is occurring in the United States.

The Standardized Approach is similar to Basel I in that the Accord (or the supervisor) assigns a weight to the risk faced by a bank. The Standardized Approach adjusts Basel I by assigning more detailed risk weight for exposures by category. It also assigns a higher risk weight to past-due loans. Thus, the Standardized Approach intends to make regulatory capital more risk sensitive, and thereby more effective and less burdensome. The U.S. does not intend to permit banks to implement the Standardized Approach because it views Basel I sufficient to protect banks without large international exposures.

The Foundational Internal Ratings Based Approach (F-IRB) differs substantially from the Standardized Approach and the current accord. F-IRB utilizes a bank's internal risk assessments as key drivers for establishing the bank's capital requirement. For loans to a corporation or government, a bank will enter its own assessment of the probability of default for each particular exposure into a formula designed by the supervisor to ascertain regulatory capital requirements for that type of exposure. Additionally, the F-IRB allows for a partial offset of the capital required against these exposures for risk mitigation, *e.g.*, collateral and insurance. However, the F-IRB approach will not be available for retail exposures. U.S. banking supervisors do not intend to permit banks to implement F-IRB.

Banks with thorough internal rating systems can choose to operate under the Advanced Internal Ratings Based Approach (Advanced Approach). The Advanced Approach is more intricate than F-IRB. In addition to assessing the probability of default (PD), a bank operating under the Advanced Approach will supply estimates of the duration of the exposure, the amount that will be outstanding at the likely time of default, and the percentage of the outstanding exposure that will be lost. The Advanced Approach can be used for corporate, governmental, and retail exposures. Corporate and governmental loans will be assessed individually.[8] Retail exposures will be assessed in pools. Straying from the accord, the U.S. will also permit some corporate probabilities of default to be assessed in pools.

Under these three new approaches to credit risk, a bank will have a greater role in assessing its credit risk exposure, and thus in determining its regulatory capital requirement. This is especially true under the Advanced Approach, which will likely be adopted by the largest and most active international banks.[9] A bank operating under the Advanced Approach will be its own primary regulator. The bank will, within certain parameters, determine the risk associated with a particular loan and be expected to allocate capital reserves in accordance with its internal assessments. The role of the bank supervisor will be to review the bank's internal rating system to ensure that the bank honestly assesses the risk it faces.

The Advanced Approach is dynamic. It allows a bank's capital requirement to fluctuate depending upon the bank's view of the risk underlying its portfolio. The Advanced Approach is essentially a requirement that a bank continually evolve its credit risk assessment to reflect the current best practices. "Basel II, at least in its more advanced form, is as much a proposal for strengthening risk management as it is a proposal for improving capital standards; these considerations are, as they should be, inseparable."[10] Along with the latitude for self-assessment also come the risks of self-delusion and manipulation.

Theoretically, the more risk acceptant a bank is, the higher its regulatory capital requirement will be. The goal of Basel II is to ensure that a bank with a large concentration of low risk exposures will have an appropriately low regulatory capital requirement. Ideally, regulatory capital and economic capital will be aligned.[11] To take advantage of this benefit, a bank must be able to maintain a complicated internal rating system and to continually evolve that system to reflect best practices.

B. Market Risk

Market risk was not explicitly accounted for in the original 1988 Basel I accord. In 1996, Basel I was amended to include an explicit measure of market risk. This treatment will not be substantially modified under Basel II.

C. Operational Risk

Operational risk is the risk of loss resulting from inadequate or failed internal processes, people and systems, or external events. Unlike credit risk, banks have not developed complicated models to quantify operational risk. Basel II encourages banks to accurately quantify operational risk.

It does so by offering a bank three means of rating its operational risk. The simplest is the Basic Indicator Approach. A bank that chooses this approach will have an operational risk assessment of 15% of its average gross income over the previous three years. The second approach is the Standardized Approach, which also uses gross income as a proxy for operational risk. However, the Standardized Approach assigns a different risk factor for each business line. Thus, the capital requirement is more tailored to a bank's operational risk under the Standardized Approach than under the Basic Indicator Approach. Neither of these approaches will be available in the United States.

The final approach to operational risk is the Advanced Measurement Approach (AMA). A bank operating under the AMA may utilize any means to evaluate its operational risk, so long as the system is comprehensive and systematic. The AMA arbitrarily permits a bank only to offset up to 20% of its operational risk capital requirement with insurance. A bank will be able to adopt partially the AMA for only those business lines that the bank has adopted a sufficiently comprehensive analysis. The United States will require its ten largest banks to adopt the AMA.

The AMA is rather amorphous at this point because banks are just beginning to develop means of accurately measuring operational risk. BCBS wishes to encourage this development. "[O]ver time the regulatory capital functions we have hard-wired into Basel II, along with their embedded correlation assumptions, will give way to individual bank-developed models that are verifiable by supervisors," says Ferguson.[12] Thus, regulators promise that banks will be given the widest possible latitude to develop an effective measure of operational risk. However, one must question whether the safety and soundness of the banking industry is advanced by requiring banks to comply with a standard that has yet to be created.

Measuring operational risk is one of Basel II's highly questionable elements. Operational risk, the risk that a bank's operational activities might bankrupt it, is very much dependent on the diversity of the bank's activities and the absolute size of its capital base. The probability that a single operation risk, or even a set of operational risks, will render Citibank insolvent, given its pre-tax earnings of $3.3 billion and book equity capital of $55.2 billion to close the first-quarter of 2005, has to be less than the probability that operational shortcomings will render, say, Comerica insolvent. As big as Comerica is, its first-quarter 2005 pre-tax earnings of $316 million and its equity capital of $5.5 billion on 3-31-05, was just 10% of Citibank's capacity to absorb losses of any kind.

III. Analysis

Basel II promises much change and great uncertainty with a goal to modify only slightly regulatory capital. The regulatory capital requirement for most Basel II banks is supposedly expected to remain relatively unchanged. Basel II's benefits occur at the fringes of the banking industry with the banks that face either extremely high or extremely low risk. The burdens associated with adopting Basel II include 1) the system stress caused by adopting a complicated unknown regulatory structure; 2) the high economic costs of Basel II compliance; and most important to Congress, 3) the danger of unbalancing the competitive markets between the Basel I and Basel II banks and amongst Basel II banks themselves. These concepts and other concerns are discussed in this section.

A. Basel II, Leverage Ratios, & Well-Capitalized Banks

A distinctively American problem with Basel II is that it conflicts with other important regulatory standards. First, the U.S. has gone beyond Basel I by implementing the notion of "well-capitalized," which requires 6% Tier-1 capital and 10% total risk-based capital. Second, the U.S. has a unique-to-the-U.S. leverage capital requirement of 5% for a well-capitalized bank. A bank has to meet all three capital requirements—leverage ratio, Tier 1, and total risk-based capital in order to be well-capitalized. This powerfully overrides much of the impact of Basel I.

If the leverage ratio and "well capitalized" standards remain intact, many of the Basel II changes are meaningless. Thus, Basel II supporters advocate for either lowering or eliminating leverage ratios for Basel II banks. The FDIC, whose deposit Insurance Funds are indirectly protected by levels of bank capital as a practical matter, feverishly defends leverage ratios. On April 8, 2005, FDIC Chairman Don Powell stated that leverage ratios will remain in effect and will limit the downward impact of the Basel II.[13] It is increasingly recognized, though, that the leverage ratio requirement will have to be adjusted somewhat if there is a serious move to implement Basel II or to modify Basel I. This is particularly important for banks who have invested a substantial portion of their assets in home mortgages which are expected to be assigned a particularly low risk weighting. The battle over whether the leverage ratio or Basel II will reign supreme will be at the very heart of the U.S. implementation process.

B. Divided American Supervisors

The U.S. regulators' opinions on Basel II vary broadly. While they all see the Basel process as productive, they disagree over many details of the accord. The Federal Reserve is the most eager to implement Basel II. "The Federal Deposit Insurance Corp. and the Office of Thrift Supervision have argued for more than a year that banks that do not adopt Basel II could be at a competitive disadvantage if Basel II caused capital levels to drop."[14] The Federal Reserve, having two offices involved in the process, may have lead to its position being overstated. The absence of a unified position certainly weakened the stature of the U.S. in the negotiations, and might have resulted in an accord that does not adequately reflect the interests of American banks and banking customers.

Adding to the uncertainty is the changing composition of senior decision-makers at some of the banking agencies. Membership on the board of the Federal Deposit insurance Corporation has recently changed as has the identity of the Comptroller of the Currency. The views of new decision-makers at the agencies on Basel II are not entirely clear at this time.

C. Too much, too soon

The most ringing criticism of Basel II is that the target implementation dates are too ambitious. The target date for implementation of the Advanced Approaches is January 2008. However, U.S. regulators expect Basel II banks to run the Basel II approach internally for the year preceding implementation, making the effective implementation deadline January 2007. This timeframe is too short for the rulemaking process to occur in time to allow banks to create and implement Basel II compliant systems, especially now that QIS-5[15] will be conducted in late 2005. Discussion of the timeframe banks need to implement Basel II compliant programs presupposes a swift rulemaking process. However, QIS-5 and the concerns about the very detailed regulations undermine U.S. regulators' goal to finalize rules in 2005. On April 29, 2005, the U.S. Regulators provided additional evidence that the timeframe is unachievable when they announced that the NPR will not be released on schedule.[16] As of this publication, the NPR has not been unveiled. One must wonder with QIS-5 to be conducted from October until December, whether even the NPR will be published by year's end. The regulators' solution: shorten the parallel run time by 6 months.[17] This unnecessary rush to implementation leads to an ironic observation: it is strange to see the Federal Reserve, whose open market committee carefully measures every word in statements released in conjunction with federal funds rate announcement, be so eager to quickly initiate an unnecessarily drastic systematic overhaul.

The Advanced Approach requires five years of information for both credit risk evaluations and operational risk determinations. While some banks have been gathering credit risk information for sufficient time to theoretically implement Basel II by year end 2007, the information is not necessarily of the quality or type that will be required by the final rule. For example, the ANPR includes a broader definition of default than currently utilized. Thus, the information banks maintain on defaults is likely insufficient to meet the Basel II standards. Moreover, even the Federal Reserve admits that banks "do not yet have the systems for producing Basel II inputs that meet the standards set forth in the Basel II proposal."[18] Data collection and warehouse systems are just now being developed that enable the comprehensive risk assessment required under Basel II.[19] The first generation of these systems should be evaluated to ascertain the level of benefit they provide and any limitations they may have. It might be that the information generated from the systems is not as predictive as hoped. Moreover, the case has not been made that the banking supervisors can adequately supervise a full-blown Basel II calculation system.

The concept of collecting operational risk data is even newer. Only a very few banks collect this information in any form. The study of operational risk is so new that there is no consensus on how this aspect of Basel II should be implemented. The ANPR does not even try to choose an approach. It merely recognizes that the concept is in its infancy, while still requiring compliance with the standards that have not been created.

D. Level Playing Field / Bifurcated system

Under the current regulatory capital framework, banks of all sizes and risk exposures are required to keep the same level of regulatory capital. The playing field is unquestionably level, some would argue that it is also unjust. Once Basel II is implemented, the playing field will become infinitely granulated for Basel II banks, in an effort to cause each bank's risk capital to mirror its risk exposure. This system, while not level, has the potential to more accurately reflect economic realities. On the other hand, if calibrated improperly, Basel II could potentially wreak havoc on the financial markets.

There are several concerns unique to the United States because of its chosen manner of implementation. Basel II recommends abandoning Basel I in favor of a three-tiered system of advancing complexity. Under the full blown Basel II system, a bank can be required to operate at a level of regulatory sophistication that best reflects that bank's activities. Significant to full implementation of Basel II, is that, even under the Standardized Approach, a bank's regulatory capital will be based on the quality of risk it faces. A bank's capital adequacy level under the Standardized Approach may be determined more crudely than a bank operating under the F-IRB or Advanced Approach, but regulatory capital fluctuates with risk under all three. Thus, under Basel II, a bank is faced with the option of investing more into compliance systems to obtain a more accurate risk assessment. A bank will generally have the incentive to obtain a more accurate risk assessment because doing so will generally free up more capital because the more basic approaches have higher built-in capital buffers. This effect will be mitigated in the U.S. to the extent the leverage ratio and well-capitalized standard remain in effect. U.S. banks will be incented to game the system by adjusting the riskiness of asset mixes so that all three capital measures have approximately the same proportional amount of cushion above the minimum percentages to be considered to be well-capitalized.

Because of the unique way the U.S. has decided to implement Basel II, U.S. banks are faced with different incentives. Banks large enough to consider opting into Basel II compliance, but not large enough to be required to do so, might face market pressure to opt into Basel II. If the bank chooses not to opt in, it potentially faces negative market ratings and depressed share prices. If, however, the bank on the bubble succumbs to the market forces and opts in, it might face decreased performance due to the costs associated with Basel II implementation. Following QIS-4, one of the bubble banks, Capital One, opted to remain under Basel I after forecasting large regulatory capital increases under Basel II.

Small banks and other institutions that will not adopt Basel II believe Basel II will unfairly place them at a competitive disadvantage.[20] Basel II will permit implementing banks to decrease their regulatory capital for low-risk weighted assets. For small banks, implementing Basel II is cost prohibitive. Small banks will be forced to remain under Basel I, with its higher capital requirements. Thus, small banks will be forced to carry as much as 50% more regulatory capital than Basel II banks for identical facilities.[21] This will give Basel II banks more leverage and the option of issuing the facility at a lower rate. For their part, Basel II banks will demand lower regulatory capital levels than Basel I banks to recoup the tremendous expense of implementing and maintaining the Basel II systems. This could result in a market realignment as low risk banking migrates to Basel II banks, and high risk activities concentrate in Basel I banks where the regulatory capital will not increase as much relative to risk. If the leverage ratio remains intact, Basel II banks will supplement their very low-risk exposures with high-risk ones, in an effort to align regulatory capital with the leverage ratio. This would leave midlevel-risk exposures for small banks.

Unraveling the impact of Basel II is not easy. Then-Comptroller Hawke noted, "Realistically, we are not yet in a position to assess definitively the full range of consequences from the implementation of Basel II, including its effect on competitive equality in the global financial marketplace. There are risks that Basel II may create or exacerbate relative advantages between domestic banks and foreign banks; between banks and non-banks; and between large domestic banks and mid-size/small domestic banks."[22] Even though the Fed., the leading U.S. cheerleader for Basel II, denies that Basel II will impact mortgage rates, it admits that "adopters might have increased profits from some mortgages relative to nonadopters because they will capture some of the deadweight losses that occur under the current regulatory capital frameworks imposed on depositories and on securitizers. . . ."[23] Whether a competitive advantage results in lower market rates, profit disparities, or both, doesn't matter. The point is that Basel II banks will have a competitive advantage. Federal Reserve Chairman Alan Greenspan recently acknowledged that Basel II with result in competitive disadvantages for Basel I banks, "Where concerns appear valid, we and the other federal banking agencies will this summer propose some options for simple revisions to the current capital rules that would mitigate any unintended and undesired competitive distortions engendered by the new Accord."[24] Because of Congressional pressure, in addition to adopting the Advanced Approaches of Basel II, the Fed now intends to modify the existing Basel I rules in an effort to maintain a level playing field.

The unanswered question is whether the regulators will be able to fully anticipate the impact of bifurcated capital rules prior to roll out of Basel II. If not, there is risk that banks operating under one system will have significant and unfair competitive advantages over those under the other. QIS-4 is a wake-up call. Basel II should be rolled out only after these questions have been answered. The soundness of the banking system should be paramount.

E. Proper Weighting

Basel II demands an implementing bank pay close attention to the risk associated with its clients (probability of default) and its facilities (loss given default). The new accord establishes capital adequacy ranges for each class of facility and client. Commentators have suggested that many of these are misaligned.

For example, before being corrected recently, Basel II assigned a higher risk rate to home equity loans than it did to credit cards. It is certainly an oddity that a secured loan would have a higher risk weight than an unsecured loan. It appears this resulted from the low rate of use of home equity products outside the United States. This in turn may reflect weakness on the part of the U.S. regulators in Basel II's formation. Such misalignments show that the new Accord reflects the priorities of foreign financial markets over our own,[25] demonstrating the need for Congress to ensure that U.S. regulators carefully assess the impact Basel II upon all areas of our capital market.

A second example of weighting problems is co-signed or insured loans. Basel II does not account for the risk lowering affect of a guarantor on a loan, thus it over anticipates the risk of "double default." The Basel Committee may be in the process of rectifying this omission.[26]

Capital requirements for mortgages will fall significantly under Basel II to somewhere near 1% or below. "The irony, of course, is that the GSE capital levels will be required to be increased at the same time that Basel II banks' capital for the same mortgage assets will be allowed to decline to levels *below* what is currently held by Fannie Mae and Freddie Mac. Someone is not connecting the dots."[27]

U.S. regulators intend to require implementing banks to make their risk assessments based upon five (5) years of data that includes at least one stress period.[28] Core banks are required to implement the Advanced Approaches by 2007.[29] This means that they are required to have data on customers and facilities dating back until at least 2002. However, if there has not been a time of stress in that period (the last serious commercial real estate downturn in the U.S. occurred in the early 1990s), then even more historical data will be necessary. For example, while some areas of the economy have hit a rough patch, retail lending has not been recently stressed. Therefore, banks will need to look further back to a five-year period that included a stress when establishing retail credit risk. Banks will need to mine data from the recession of the early 1990s to find a sufficiently stressful period for the purpose of making this risk assessment. Of course, in many, if not most, cases, credit-loss data from that period is simply not available.

The quantitative impact studies that accompanied early drafts of Basel II were not sufficiently detailed to ascertain the precise impacts of the new accord.[30] "In many cases, existing bank systems were not able to produce the data requirements necessary for inputs required by the new Accord. In some areas, the QIS-3 instructions were not sufficiently clear or were misinterpreted, and in other cases, the proposals were still in flux as banks were completing the survey."[31] The United States and a handful of other countries independently conducted a fourth quantitative impact study (QIS-4). The U.S. survey was distributed in late 2004. Banks returned the survey by mid-January 2005. In addition to QIS-4, the U.S. conducted a case study focusing on Citigroup. The U.S. regulators will recalibrate the framework based upon the results of QIS-4 and the Citigroup case study.[32] QIS-4 results were not reassuring. Then-Acting Comptroller Williams recently told a House Subcommittee,

> [T]he dispersion in results—both across institutions and across portfolios—was much wider than we anticipated or than we can readily explain. Changes in effective minimum required capital for individual institutions ranged from a decrease of 47 percent to an increase of 56 percent. While some dispersion of results in a truly more risk-sensitive framework would be expected, we are not convinced that the wide ranges indicated by QIS-4 can be fully explained by relative differences in risk among institutions; it appears that comparability of QIS-4 results among different institutions may be severely lacking.[33]

Further highlighting the uncertainty inherent to Basel II, the BCBS recently reversed course and decided that an additional QIS is necessary for proper calibration. QIS-5 will be conducted in late 2005. Whether the recalibration will resolve some of the above concerns without creating more, is yet to be seen.

F. Operational risk

Assessing operational risk is original to Basel II. As with credit risk, the ANPR requires operational risk be assessed from data obtained over a five-year period that includes a time of stress. This means tracking data on internal and external fraud, employment practices and workplace safety, physical asset values, business disruptions, and internal and external system failures.[34] This task is more complicated than in the credit risk area because there is virtually no history of collecting this information. Unfortunately, the ANPR does little to frame how operational risk data should be obtained or how it should be used. Operational risk standards are virtually nonexistent.

There is a heated dispute over the 20 percent offset to operational risk for risk mitigation techniques. Large banks label the 20% cap arbitrary and call for the AMA to allow for banks to offset the actual percentage of operational risk that is insured against. Banks that will not adopt the AMA warn that competitive inequities will result if AMA banks are permitted to offset for insurance, while non-AMA banks are not.

Concern has also been expressed regarding the simpler operational risk approaches. Because both the Basic Indicator Approach and the Standardized Approach utilize percentage of gross income as a proxy for operational risk, a bank's credit risk is being double counted to the extent that profit margins increase with credit risk.

The new operational risk assessment tools create calibration problems of their own. Operational risk, the inherent risk of doing business, is today implicitly built into the current 8% capital floor. Thus, if operational risk is to be assessed separately from market risk, it is important that market risk capital be reduced to reflect the independent operational risk capital requirement.

G. Home/Host Supervisor Conflicts

The most important aspect of Basel I was its uniform application in every implementing country. The complexity of Basel II makes uniform implementation impossible. "[E]ach jurisdiction may offer several methodologies for the calculation of capital requirement."[35] A bank that operates under F-IRB in one country might be required to operate under the Advanced Approach in another country and remain under Basel I in a third. These differences render Basel II more costly, and less optimal than it is intended to be. For example, when a host country determines that a bank needs to maintain more capital for its operations in that country than the home country supervisor would require, the excess capital retained in the host country often is not allowed to offset capital shortfalls at home.[36] Even where a bank operates under the same approach in its home and host countries, banks could be "forced to implement conflicting risk calculations by different regulators, making compliance a difficult 'Catch-22.'"[37]

A seemingly unavoidable consequence of Basel II is that each implementing country will modify the accord to reflect the particular needs and biases of its domestic market. This results in the disintegration of a unified global capital standard, the lodestone of Basel I. It must be emphasized that Basel II in its current form dismantles Basel I more than it modifies it. The inconsistencies in international adaptation of Basel II combine with its complexity to make the international money markets inefficient and less integrated. While the U.S. implementation of Basel II will be undertaken to match capital and risk, it must be assumed that in some countries Basel II will be treated as deregulation. These countries can expect a greater risk of bank failure. U.S. regulators must work diligently in both the host and home supervisor roles to ensure that the U.S. financial markets are insulated from unsound foreign practices.

H. Increases Arbitrage

The choice for banks in the United States is stark. With the exception of the approximately 10 banks that are required to opt-in, every bank is faced with the decision of whether to implement the Basel II advanced approaches or remain in Basel I. Under Basel I, risk taking is rewarded in a sense because a bank is not required to increase its regulatory capital to reflect risk. Under Basel II, banks operating under a low risk environment are rewarded. The banks that are the most likely to opt in are those with the lowest risk exposure because these banks have the most incentive to opt in. Of course, a bank that specializes in high-risk activities will most likely elect to remain under Basel I, in order avoid tailoring its regulatory capital position to its above- average risk exposure. This, in turn, has the potential to lead to systematic under-capitalization, as banks will choose to operate under the regulatory structure that most benefits them. Regulatory arbitrage will be increased as capital moves to follow the path of least resistance. High-risk banking activities can be expected to migrate toward Basel I banks because, all else being equal, Basel I banks will have lower regulatory costs associated with high-risk lending. In turn, U.S. banks operating under the Advanced Approaches will attract low risk clients and facilities because those banks can more economically finance low-risk clients and facilities.

I. Procyclicality

Federal Reserve Board Chairman Greenspan made the concept of procyclicality in the equities markets famous when he warned of "irrational exuberance" at the close of the booming '90s. Basel II attempts to limit the procyclical effects of its ratings systems by basing risk assessments on extended periods of data including a time of stress. Nevertheless, if not carefully monitored, there is a chance that the subjective elements of risk weighting will cause risk assessments to be lightened during boom times and steepened during downturns, thereby amplifying current market trends, increasing volatility, and accentuating economic cycles. Basel II's requirement that defaults be weighted at 150% certainly could increase procyclicality.

Unfortunately, Basel II leaves it up to each country to decide whether to have a capital adequacy standard that shifts with market conditions. In a recently released working paper, the Basel Committee asked and answered, "What properties should obligor-specific PDs possess? . . . The revised Framework does not explicitly discuss the characteristics that obligor-specific PDs should posses, so the answer to the. . .question listed above may well differ from country to country depending on national supervisors' assessments of the tradeoffs between the benefits of credit-risk capital requirements that are sensitive to changing economic conditions versus the benefits of capital requirements that are relatively stable over the business cycle."[38] Any system that allows regulatory capital to decrease with a market boom risks unnecessary financial calamity when a downturn occurs.

According to BCBS, "banks tend to focus more narrowly on current conditions in setting ratings than do public rating agencies. This suggests that many bank rating systems may conform more closely to a PIT philosophy."[39] "PIT" stands for Point-in-Time and is "Basel Talk" for a system that bases an obligor's PD on current economic conditions rather than a stress period. "[O]ne can think of a PIT rating system as a system designed to ensure that all obligors within a grade share roughly the same unstressed PD."[40] BCBS claims that a PIT rating system that utilizes unstressed PDs is stable. This assertion is based upon assigning obligors to pools—"risk buckets" in "Basel Talk." The average PD of a bucket will remain constant because when an individual obligor's PD moves up or down, the obligor will be reassigned to a different bucket. However, a rating system should focus upon the stability of capital ratios, not a bucket's risk weight. Under PIT, even a bucket that has been emptied is considered stable because it is still assigned a constant PD. Regulatory capital will fluctuate with market conditions as obligors migrate into low-risk buckets during economic highs and into high-risk buckets during downturns. Calling PIT stable is akin to measuring the temperature of a watering bucket when the focus should be on the amount of water in the bucket. Basel II should not be used to adopt a regulatory capital regime that parallels market conditions. If a PIT approach is used, adequate capital will not be available to balance the obligors being dumped into high PD buckets when a downturn occurs.

J. Statistical Models

Because there is not much reliable data available to perform the calculations required under Basel II, the New Accord encourages banks to utilize statistical models to predict PD, Exposure at Default (EAD), and Loss Given Default (LGD). A problem with using statistical models is that the models are based on guesses and predictions.[41] It is very difficult to see how switching from a stable uniform 8% capital floor to a dynamic system based upon predictions advances the safety and soundness of the banking system. Advocates for statistical models claim that the models perform better than analyzing past data. "The reason is that the unstressed pooled PD will tend to be lower than the long-run average default frequency during cyclical peaks and higher than the long-run average default frequency during cyclical troughs. The statistical models approach is potentially more flexible. . . ."[42] A cyclically flexible capital floor is unsafe and unsound and is a surefire procyclical roller coaster. While adjusting a bank's capital requirement based upon its risk exposure relative to other banks is a legitimate goal of Basel II, permitting capital to mirror market conditions is not.

K. QIS-4

Preliminary results from QIS-4 were released in May 2005. Of the 26 participating institutions, two projected significant regulatory capital increases; two remained nearly unchanged; and 22 saw significant reductions. The median change was a decrease of 26%, which equates to maintaining just under 6% liquidity. Approximately five institutions saw a 40% decrease, equating to a 4.8% capital requirement. Upon reviewing these results, FDIC Director Thomas Curry sounded the alarm:

> This is without fully factoring in the benefits of credit risk hedging and guarantees that are likely to reduce capital requirements significantly more. For individual loan types at individual banks, over one third of the reductions in capital requirements were in the range of 50 to almost 100 percent. Numbers like this do [sic] not provide comfort that the Basel framework will require capital adequate for the risks of individual activities.[43]

The two institutions that saw a significant capital increase will face difficulty competing with Basel I banks. These institutions will likely either not opt into Basel II (if they have the option), modify their risk assessment techniques to produce a lower capital requirement, or sell the high risk lines to Basel I banks. The identities of the banks remains confidential. However, the ever useful anonymous sources have indicated that the banks with significant increases were Capital One and MBNA.[44] This is no surprise since each carries heavy loads of revolving accounts. Capital One recently announced that it will opt-out of Basel II. MBNA would have had to dump half of its foreign exposures if it wished to also opt out. If MBNA implemented Basel II, it would have been be forced to significantly modify its portfolio or structure to avoid crushing regulatory capital requirements. Thus, with MBNA as the possible lone exception, the sole effect of U.S. Basel II implementation would have been a significant decrease of regulatory capital for large banks. The Bank of America organization now plans to acquire MBNA, and it is conceivable that there will be no exception. It is also believed by some that Capital One's recent announcement to buy Hibernia was in some way related to Basel II pressures.

The QIS-4 results make clear that the above-mentioned risks of Basel II are very real. Non-adopting banks will find it difficult to compete with adopters for low risk business and will be forced to focus on the high-risk businesses where they will face lower capital requirements than adopters.

Basel II's complexity and lack of clear channel markers led to extremely disparate results for participating banks. As mentioned above, then-Acting Comptroller Williams cautioned, "it appears that comparability of QIS-4 results among different institutions may be severely lacking."[45] Director Curry echoed, "Achieving consistency in Basel II depends on the idea that best practices, and best data, will lead to convergence in the capital treatment of similar loan portfolios across banks. At present, however, at least as indicated by QIS-4, there is little commonality in the approaches the various banks used to estimate their risk inputs."[46] These results are unfortunate, but unsurprising. Each bank has been told to develop its own system for determining PD, EAD, and LGD. Different systems will produce different results. Moreover, the advanced approaches rely heavily upon a bank's judgment of its risk. Judgment is another term for discretion. When each institution is given broad leeway to assess its risk, we can only expect widely divergent results. Predictability and equal treatment are sacrificed.

The QIS-4 weighting of home equity loans is particularly notable, dropping 74%. The OTS is particularly concerned about this decrease because, "the imbedded potential risks of home equity lending exceed what the results from the last few years have shown." FDIC Director Curry agreed, "The example of home equity lending suggests to us that Basel II has not solved the problem of finding the 'right' level of capital for such emerging activities, and that further thought is needed about the appropriate prudential approaches in this area."[47] QIS-4's treatment of home equity loans is important because the home equity market is both new and potentially susceptible to interest rate increases. The reason for developing Basel II was Basel I's failure to adequately address new banking practices. Now it appears Basel II might have the same problem.

QIS-4 should serve as an eye-opening exercise. Its results show that our banking system is not prepared to leap into the Advanced Approaches. We must slow down and smoothly transition into a risk sensitive regulatory capital system.

IV. Recommendation

The future of banking under Basel II is uncertain. The soundness of banking under Basel I is clear. Banks have operated under Basel I for the past 17 years. While there is general criticism that Basel I has not kept up with banking innovations, such as securitization, Basel I has not lead to any crisis in the banking industry. Nor is there an impending crisis that calls for immediate action. In fact, the merits of Basel I are demonstrated by the U.S. regulators' decision to retain Basel I for all but a handful of banks.

U.S. banks uniformly maintain capital greatly in excess of the current capital adequacy requirements. Thus, even if the current regulatory capital levels are too low, the high levels of economic capital offset any shortfalls in the regulatory scheme. Furthermore, the uniform maintenance of high levels of economic capital undercuts any argument that banks are being forced by regulators to hold too much cash. If this really were the case, I would expect economic capital to parallel the regulatory minimums.[48] Basel II brings chaos and high costs and undercuts the integration of international capital markets, but it might not change the economic capital banks keep on hand. There is no reason that the regulatory changes being thrust upon that handful of banks should be drastic and abrupt.

I wish to reiterate that the goals behind Basel II are worthwhile. Any change that causes regulatory capital to better reflect economic capital must be seen as a positive. However, implementing any change too swiftly carries great risk. As the Basel Committee and U.S. regulators admit, the Advanced Approaches are untested and complex. There is great uncertainty regarding the precise effects Basel II will have upon individual banks and the banking system as a whole.

This uncertainty manifests itself in the eagerness of both regulators and some large banks to implement Basel II. Regulators argue that Basel II is needed because regulatory capital is lower than the risk faced by large banks. The large banks, for their part, believe that implementing the advanced approaches will permit them to *lower* their regulatory capital. Both of these contentions cannot be true. There is too much uncertainty involved in Basel II. The differences between the Advanced Approaches and Basel I are simply too great for all of the kinks to be worked out in theory.

As recently as May, 2005, then-Acting Comptroller Williams hinted that Basel II might need a major overhaul: "If we [U.S. Regulators] believe that changes in the Basel II framework are necessary, we will seek to have those changes made by the Basel Committee. While some might argue that the Committee is too far down the path of 'finalizing' Basel II to accept any changes at this stage, I do not believe that most Basel Committee members would find their interests best served if the U.S. agencies were compelled to deviate significantly from Basel II in order to fulfill our supervisory responsibilities."[49] If significant deviation from or revision to Basel II is necessary, why are we rushing toward implementation?

The Advanced Approaches are dramatically different than Basel I. The very foundational principles conflict. Basel I was designed to provide a safe, sound, and level playing field for all banks. The Advanced Approaches create a unique playing field for each institution. Doing so requires a detailed understanding of the risk faced by a particular bank. This means assessing each facility and customer to document the risk level of every transaction at any given point in time. This assessment must be dynamic. The credit risk of each customer fluctuates regularly. The Advanced Approaches also require a bank to monitor the value of collateral to assess the loss given default of a transaction. The bank must also monitor the economic cycles to prepare for unexpected downturns, system wide or for particular sectors, and predict the impact such changes on its portfolio. A bank must also assess risks to its continued operation and assess its mitigation programs to determine how much risk it has distributed to others. In short, the Advanced Approach calls for total risk awareness. Total risk awareness is not achievable overnight.

For its part, a supervisor will be required to become familiar with the operational and risk assessment programs of each of its client banks. Achieving the level of oversight necessary to ensure that a bank is properly risk weighting its banking activities and operations will be difficult. The Basel Committee acknowledges,

> In addition to an evaluation of the rating system, validation comprises an evaluation of the rating process. This involves important issues like data quality, the internal reporting, how problems are handled and how the rating system is used by the credit officers. It also entails the training of credit officers and a uniform application of the rating system across different branches. Although quantitative techniques are useful, especially for the assessment of data quality, *the validation of the rating process is mainly qualitative in nature and should rely on the skills and experience of typical banking supervisors*.[50]

Banking supervisors will be required to exercise a great deal of judgment to determine, essentially, if a bank's internal models "feel right." The supervisor will be required to assess many of a bank's loans individually to verify that each was properly weighted. This process is complicated by the subjective nature of risk weighting. The supervisor must distinguish a legitimate risk assignment with which it disagrees from one that is unacceptable or is indicative of systematic bias within the bank's assessment program. Even when operating smoothly, the Advanced Approaches will be onerous and expensive for banks, supervisors, and in turn, banking customers.

Unfortunately, there is no guarantee that the Advanced Approaches will operate smoothly. The regulators have yet to articulate how operational risk will be calculated. There are significant disagreements over the treatment of loss mitigation techniques. The definitions of certain terms under Basel II, such as "default," are distinct enough from the current definitions to diminish the usefulness of current credit risk assessment programs in predicting capital requirements under Basel II. Former Acting OTS Director Richard M. Riccobono admits, "Significant uncertainty is inherent in the most advanced approaches of Basel II, as well as with the uneven state of readiness at our largest banking organizations—and the regulatory and supervisory framework we have developed for them."[51]

A significant allure of the Advanced Approaches is the perceived benefit to a bank's operations and profitability. If a bank is able to accurately assess the risk of each potential transaction, it will be able to price its products appropriately to minimize or avoid loss. This benefit seems great enough to make adaptation of the Advanced Approaches beneficial to a bank regardless of whether the programs are used to set regulatory capital. Thus we should expect to see similar programs in use at banks already. A survey indicates that banks are beginning to transform their internal credit assessment programs in directions consistent with Basel II. However, these programs are in their infancy. Herein lies the Achilles heel of Basel II: the accord seeks to set compliance with leading edge developments as the floor for acceptable banking standards. The ambitious standards articulated as Basel II's Advanced Approaches are so early in their development that they are too new to constitute best practices. Yet, Basel II seeks to make them the standard for minimum compliance. The time has not yet arrived for banks to be held to the Advanced Approaches. Nevertheless under the ANPR, core banks will be expected to have an advanced approach-compliant system fully operational by January 2007, even though much of the regulatory details have not been proposed.

Rather than rushing to implement the Advanced Approaches of Basel II as quickly as possible, *the U.S. should implement Basel II incrementally*. This would allow an extended period for the transition from the general 8% capital standard to individual determinations. The best use of Basel II is to treat it as a journey in which each bank that intends to adopt the Advanced Approaches must first pass through the basic approaches. Treating the Basel II framework as a roadmap for achieving a more risk sensitive regulatory regime will quell most of the concerns that have been expressed regarding Basel II.

The time banks spend in the Standardized Approach to credit risk and Basic Indicator Approach to operational risk will inform the banks and supervisors on the steps necessary to properly calibrate and implement the F-IRB and Standardized Approach to operational risk, which in turn will inform the Advanced Approaches. Incrementally moving towards the Advanced Approaches is the only means by which to allow the necessary internal systems to develop for banks to comply with the regulations. It would be important to pause at each phase of implementation to assess whether risk is sufficiently assessed and whether the added costs of a more complex supervisory structure are justified by the benefits of the more advanced approaches.

A long transition into the Advanced Approaches will best resolve the concerns over proper risk weighting, operational risk, arbitrage between Basel I and II, procyclicality, cross-boarder implementation, and a level playing field. In fact, many of these issues are only resolvable over time. Time is necessary to capture the data necessary to properly weight risk and to determine the best means of assessing operational risk. There is no question that, if the Advanced Approaches are to be achieved within the ambitious timeframe outlined in the ANPR, there will be little time for many serious issues to be resolved.

I am cognizant of the U.S. regulators' stated intent to implement only the Advanced Approaches and not utilize the more basic approaches because they believe Basel I is sufficient for the majority of U.S. banks. This decision is baffling. At first blush, it would appear that if all three Basel II approaches were needed in any country, it would be the United States. It would be naïve to suggest that there are only two groups of banks in the U.S., the 10 or 20 largest banks, operating on an ultra-complex level, and seven thousand other banks with only basic operations. Certainly there are hundreds of banks in the middle. If it is worth adopting A-IRB for 20 banks, it ought to be worth adopting F-IRB for 1000 banks. I am pleased to see our sentiments reflected on Capitol Hill and are happy that the regulators admitted that the current system needs to be modified so that implementing banks will not have an unfair advantage over Basel II banks.

I am not alone in my criticism that Basel II should not be fully rolled out in 2008. The House Financial Services Committee expressed suspicion of the timeframe.[52] Former Comptroller Hawke stated, "[B]asic principles of safety and soundness demand that the banking agencies have a more complete understanding of the consequences of this proposal on the overall capital levels of affected institutions, the competitive effects on our financial system, and associated compliance costs and burdens before moving forward to finalize this proposal."[53] Basel II can improve the financial system. However, it is dangerously unrealistic to expect the transition to Basel II to occur in a short period of time.

Other commentors have expressed the view that Basel II implementation should occur incrementally. The World Bank, for example, proposed that Basel II should be rolled out for international banking activities before domestic ones, and for commercial activities before retail ones. This idea, while different than mine, is a good one and parallels my concern that Basel II is too complex to be fully implemented at its startup. A gradual, sound transition is necessary for Basel II to be successful.

V. Conclusion

I agree with the premise of Basel II: "[S]upervisors, to the extent possible, should shift their emphasis towards the quality of a bank's risk management process and ability to assess risk exposures properly."[54] However, as then Comptroller Hawke said, "We need to reach an appropriate accommodation where we try to make our basic system of regulatory capital rules more risk-sensitive, but we shouldn't do that at the price of dismantling or significantly impairing the basis for our supervision of U.S. banks."[55]

Basel II is ambitious and should be treated with caution.[56] The nature of the banking industry is conservative. Changes to the banking regulatory framework should be conservative and sound. Mandatory compliance with the advanced approaches should be targeted for a date near 2015. This extended implementation timeframe would allow for testing and revising the many assumptions Basel II's most advanced approaches rely upon *prior to implementation*. There is no need to expedite this process. All affected banks maintain capital in excess of regulatory minimums, calling into question the benefits of any adjustment, either raised or lowered, to regulatory capital.

Jumping headlong into the Advanced Approaches demands too much of all involved. Banks are commanded, with limited guidance, to suddenly produce methods to accurately predict each loan's PD, EAD, and LGD. Meanwhile, Banking Supervisors are told, basically, to sit back and watch unless there is a truly egregious violation.[57] This is a recipe for disaster.

Basel II's Advanced Approaches may not be achievable. They are certainly not instantaneously achievable. Banks should be required to transition through the Standardized Approach and the F-IRB before regulators decide to adopt the A-IRB. On the operational side, banks should transition through the Basic Indicator Approach and the Standardized Approach before regulators decide to adopt the Advanced Measurement Approach. This conservative step-by-step process will prevent the chaos of instant implementation of the Advanced Approaches. This will lessen the jeopardy to the banking system and the credibility of its regulators. The current Basel I regulatory environment is not cataclysmic. It is better to slowly transition to Basel II than to risk unforeseen setbacks in an abrupt transition.

I am pleased to see that the OTS apparently agrees with our recommendation. Then-Acting Director Riccobono testified,

> Among the issues for consideration are whether Basel II should be modified to allow for other available options, including the creation of transitional steps before proceeding to full Basel II implementation. This includes preserving flexibility to change existing timeframes to allow for supervisory qualification and validation, and to permit institutions more time to operate under parallel standards as well as to implement Basel II at their own pace.[58]

Even if my main recommendation is ignored, it is clear that the date of Basel II implementation should be postponed. It will be well into 2005 before QIS-4 is fully digested and the results internalized into a NPR. QIS-5 surveys were released on July 13, 2005. QIS-5 delays final calibration until 2006. The means of operational risk assessment remain unknown. Additional time is needed to evaluate the market realignments that will result from competitive advantages caused by Basel II. Proper implementation of Basel II requires extensive cooperation between U.S. regulators, implementing banks, non-implementing banks, Congress, host country supervisors, and rating agencies. More time is needed for all of these institutions to prepare for Basel II. A rush to implementation is unwarranted and will cause much greater stress to the financial system than quick implementation would alleviate.

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Footnotes

1 The U.S. has gone beyond these requirements by requiring a 10% total risk-based capital requirement for "well-capitalized" status which is highly desirable for a number of regulatory reasons, including, among others, the authority to engage in a broader range of activities and the availability of expedited procedures. The U.S. also has a one-of-a-kind "leverage capital" requirement., which, regardless of the level of risk in a bank's assets, sets a minimum level of capital as a percentage of total assets.

2 The Basel Committee was established at the end of 1974 and is comprised of members from Belgium, Canada, France, Germany, Italy, Japan, Luxembourg, the Netherlands, Spain, Sweden, Switzerland, United Kingdom and United States.

3 http://www.bis.org/publ/bcbs107.htm.

4 House Financial Services Committee Letter to U.S. Banking Regulators, at 8 (November 3, 2003) *at* http://financialservices.house .gov/media/pdf/ANPR%20Comment_001.pdf.

5 When Basel II was first proposed, interest rate risk was a fourth focus of concern. Basel II treats interest rate risk as a part of operational risk for those institutions positioned to be harmed by interest rate swings.

[6] U.S. banks with assets greater than $250 billion or foreign exposures greater than $10 billion are required to adopt Basel II's advanced approaches and are referred to as "core banks." OCC BULLETIN 2003-32 (August 4, 2003).

[7] The number of banks comes from the FDIC QUARTERLY BANKING PROFILE, STATISTICS AT A GLANCE, THIRD QUARTER, 2004. http://www.fdic.gov/bank/statistical/stats/2004sep/industry.pdf.

[8] Five categories of specialized lending are treated separately under both IRB approaches. These specialized lending exposures include equity exposures, highly volatile commercial real estate, and other exposures where a bank's return is based on income generated by the loan recipient.

[9] The United States will require its 10 largest banks to utilize the A-IRB approach. Additionally, many large non-American banks have indicated their intent to adopt the A-IRB approach.

[10] Vice Chairman Roger W. Ferguson, Jr., Concerns and Considerations for the Practical Implementation of the New Basel Accord, Address at the ICBI Risk Management 2003 Conference, Geneva, Switzerland (December 2, 2003) *at* http://www.federalreserve.gov/BoardDocs/Speeches/2003/20031202/default.htm.

[11] "[I]ncreased alignment between regulatory and economic capital measures can create real incentives for all banks to improve their internal risk management systems while contributing to the development of more resilient financial systems. The combination of more risk-sensitive quantitative capital requirements (Pillar One), more robust supervisory approaches tailored to focus on risk characteristics within individual institutions (Pillar Two), and increased transparency (Pillar Three) can accomplish these goals if the new framework is adequately designed and implemented in a pragmatic and commercially sensible manner." Response from the Institute of International Finance to the Third Consultative Paper of BCBS, pg 21. *Available at* http://www.bis.org/bcbs/cp3/inofinfi.pdf.

[12] Ferguson, Concerns and Considerations for the Practical Implementation of the New Basel Accord, Address at the ICBI Risk Management 2003 Conference, Geneva, Switzerland (December 2, 2003) *at* http://www.federalreserve.gov/BoardDocs/Speeches/2003/20031202/default.htm.

[13] "U.S. law and regulation require FDIC-insured banks to meet certain leverage ratio requirements. . . . [A] leverage ratio is, and should remain, an integral part of our overall system of capital regulation. . . . [T]here should be limits on regulators' discretion about the level of capital at which banks are permitted to operate. The FDIC continues to support that position. Any risk-based capital framework that addresses the risks and uncertainties of the real world must include a straightforward capital floor." Press Release, FDIC, FDIC Chairman Powell Discusses Minimum Capital Requirements for U.S. Banks, *available at* http://www.fdic.gov/news/news/press/2005/pr3305.html.

[14] Paletta, Damian, *A Tale of Two Fed Staffers and a Paper on Basel II*, AMERICAN BANKER, Jan. 14, 2005.

[15] In order to gain a more certain understanding of the effects of adoption of Basel II, bank regulators in the U.S. have undertaken, with the help of individual banks, so-called Quantitative Impact Studies. QIS-5 would be the fifth such study. The U.S. bank regulators have expressed surprise at the results of QIS-4 and, therefore, postponed the schedule for implementation of Basel II in the U.S..

[16] "Based on the preliminary assessment of QIS-4 results, however, we concluded that a delay was the only responsible course of action available to us." Testimony of Julie L. Williams, Action Comptroller of the Currency before the Subcommittee on Financial Institutions and Consumer Credit and the Subcommittee on Domestic and International Monetary Policy, Trade and Technology of the Committee on Financial Services of the U.S. House of Representatives, at 9 (May 11, 2005).

[17] David Keefe, *U.S. Could Shorten Parallel Running to Save Basel II Timetable, Say Regulators*, GLOBAL RISK REGULATOR (June 24, 2005) *at* http://www.globalriskregulator.com/grrnews9.htm.

[18] Statement of Susan S. Bies Member Board of Governors of the Federal Reserve System before the Subcommittee on Financial Institutions and Consumer Credit and the Subcommittee on Domestic and International Monetary Policy, Trade, and Technology of the Committee on Financial Services U.S. House of Representatives, at 3 (May 11, 2005).

[19] *IBM Rolls Out System For Basel II Compliance*, YAHOO NEWS (Apr 8, 2005) *at* http://news.yahoo.com/news?tmpl=story&u=/cmp/20050409/tc_cmp/160503416.

[20] Benton E. Gup, Testimony before the U.S. House of Representatives, Committee on Financial Services, Subcommittee on Financial Institutions and Consumer Credit (June 19, 2003).

[21] Paletta, Damian., *supra* n. 24.

[22] Testimony of Comptroller Hawke before the Subcommittee on Financial Institutions and Consumer Credit of the Committee on Financial Services of the U.S. House of Representatives at 11 (June 19, 2003).

[23] FED. RES. BD., AN ANALYSIS OF THE POTENTIAL COMPETITIVE IMPACTS OF BASEL II CAPITAL STANDARDS ON U.S. MORTGAGE RATES AND MORTGAGE SECURITIZATION, at 1 (Apr., 2005) http://www.federalreserve.gov/../generalinfo/basel2/docs2005/potentialimpact.pdf.

[24] Chairman Alan Greenspan, remarks before the Independent Community Bankers of America National Convention, San Antonio, Texas (March 11, 2005), *at* http://www.federalreserve.gov/boarddocs/speeches/2005/20050311/default.htm.

[25] Nowhere is the priority Basel II gives to foreign financial markets more graphically illustrated than in its treatment of small business credit, which receives a particularly favorably low risk weighting. It is said that it is the strong policy of the German government to promote small business growth and that, without such a favorable low risk weighting for small business credit, German bank regulators would have declined to participate in Basel II. Thus, as currently contemplated, Basel II will encourage small business lending worldwide in order to placate the policy preferences of a single foreign government.

[26] BSBE, THE APPLICATION OF BASEL II TO TRADING ACTIVITIES AND THE TREATMENT OF DOUBLE DEFAULT EFFECTS (July 2005) http://www.bis.org/publ/bcbs116.pdf.

[27] World Savings comment letter to U.S. regulators (January 25, 2005).

[28] 68 Fed. Reg. 45960.

[29] NR 2004-52.

[30] "Unfortunately, the QIS-3 data do not provide a reliable estimate of the likely regulatory capital requirements for banks subject to Basel II. Banks encountered several practical impediments to providing accurate estimate of the effect of the proposals on their measured ratios: thus, the estimated risk-based capital ratios were subject to a substantial margin of error." House Testimony of Comptroller Hawke at 14.

[31] *Id*.

[32] We trust that the agencies will take appropriate action to ensure that lessons learned from the Citigroup case study will not be biased in favor of Citigroup and against other core banks.

[33] Williams, May 11, 2005 Testimony at 9-10.

[34] Bleier, Michael E., *Operational Risk in Basel II*, 8 N.C. Banking Inst. 101, 109 (Apr. 2004).

[35] BCBS, Implementation of Basel II: Practical Considerations, at 7.

[36] "Host countries charged with ensuring the strength of the legal entities operating in the host countries charged with ensuring the strength of the legal entities operating in their jurisdictions will not be inclined to recognize an allocation of group-wide diversification benefits, given that capital among legal entities is simply not freely transferable, especially in times of stress." Bernanke, Ben S., Remarks given at the Institute of International Bankers' Annual Breakfast Dialogue (Oct. 4, 2004). *available at* http://www.federalreserve.gov/boarddocs/speeches/2004/20041004/.

[37] D.Wilson Envin, Credit Suisse First Boston.

[38] *Studies on the Validation of Internal Rating Systems,* BSCS Working Paper No. 14, at 11 (Feb. 2005) http://www.bis.org/publ/bcbs_wp14.pdf.

[39] BSCS Working Paper No. 14, at 16 (internal citation omitted).

[40] *Id*.

[41] Statisticians' "talents are unlikely to include an appreciation of the practical risks of running a bank. These modelers will not speak the same language as those charged with oversight of risk management . . . ." World Savings comment letter to U.S. regulators.

[42] BSCS Working Paper No. 14, at 2.

[43] Thomas J. Curry, Remarks before the Subcommittee on Financial Institutions and Consumer Credit and the Subcommittee on Domestic and International Monetary Policy, Trade and Technology of the House Financial Services Committee, at 4 (May 11, 2005).

[44] Damian Paletta, *In Focus: Card Banks' Divergent Conclusions on Basel II*, American Banker, June 27, 2005, *available at* http://www.americanbanker.com/article.html?id=200506241UQVMP3L&from=home&e=y. Ironically, both organizations are at this writing in the midst of acquisitions of or by other banking organizations. It is conceivable that the very prospect of Basel II is encouraging consolidation in the banking industry.

[45] Williams, May 11, 2005 Testimony at 10.

[46] Curry, May 11, 2005 Testimony at 4.

[47] Curry at 11.

[48] Keep in mind that a regulatory capital requirement is the *minimum* level of capital a bank must maintain in order to be sound. There are many reasons for a bank to elect to maintain economic capital greatly in excess of the regulatory floor. There are unquestionable benefits of being well capitalized.

[49] Williams May 11, 2005 Testimony, at 12.

[50] BSCS, Working Paper No. 14, at 9 (emphasis added).

[51] Testimony of Richard M. Riccobono Acting Director, Office of Thrift Supervision before the Subcommittee on Financial Institutions and Consumer Credit and the Subcommittee on Domestic and International Monetary Policy, Trade and Technology of the House Financial Services Committee, at 12 (May 11, 2005).

[52] Letter from House Financial Services Committee to U.S. Banking Regulators (November 3, 2003).

[53] House Testimony of Comptroller Hawke.

[54] BCBS, Implementation of Basel II: Practical Considerations, at 4.

[55] Testimony before the Senate Banking Committee (April 20, 2004).

[56] "We believe that, as a matter of good public policy, the Basel II timeframes should be viewed as guidelines, not hard targets." Riccobono Testimony, at 12 (May 11, 2005).

[57] BSCS Working Paper No. 14, at 10. "Although this flexibility allows banks to make maximum use of their own internal rating and credit data systems in quantifying PDs, it also raises important challenges for PD validation. Supervisors and bank risk managers will not be able to apply a single formulaic approach to PD validation because dynamic properties of pooled PDs depend on each bank's particular approach to rating obligors. Supervisors and risk managers will have to exercise considerable skill to verify that a bank's approach to PD quantification is consistent with its rating philosophy."

[58] Riccobono Testimony, at 15 (May 11, 2005).