Global Bank Risk Management and Capital Regulation

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Introduction

Good morning. I am very pleased to be here with you today at the Conference on Pacific Basin Finance, Economics and Accounting. I would like to thank Professor Lee for inviting me to speak today and for bringing together such a knowledgeable group of academics, scholars, educators and other experts to address pertinent issues in our various disciplines. After having served as President of the Philadelphia Fed for over a year now, it is refreshing to be back in an academic environment. Being here on campus is evocative of my many years spent at Wharton.

Today, I come to you not only as a long time student of banking, but also as a banking regulator. These are interesting times for those of us with these interests. Bankers and bank regulators face many challenges in today's growing global financial marketplace. Financial markets around the world are experiencing significant structural change. Capital markets are growing; new markets are emerging; risk profiles of financial institutions are changing - all as part of the globalization of the world economy. This evolution - some would define it as a revolution - has been spurred by the confluence of advances in financial theory and the technological revolution affecting all aspects of the economy. The changes in financial markets and financial institutions that have been precipitated by these two factors are well known to this audience. Participants here either teach, study or live the effects of these forces of change everyday.

My comments today will concentrate on the effect of the globalization on both domestic and international regulation of the financial sector - most specifically banking institutions. It is my expectation that, over time, the movement toward a global capital market will force greater integration in the global economy and result in even greater coordination and harmonization of national banking standards and regulatory regimes. To see why and how all this is occurring, allow me to begin at the beginning.

As trade between countries continued to expand in the post-War global economy, barriers to trade have continued to erode and the principle of comparative advantage has become more generally operative. People throughout the world have become accustomed to the idea of a single global marketplace.

Only recently, however, have they become comfortable with the idea that various services - such as transportation, communications, and banking - may also be best provided by firms headquartered elsewhere on the globe. But, this has been the unmistakable trend of the global economy over the last decade. This trend, of course, is reflective of the dramatic changes in information technologies that have brought ever-lower costs of comparing goods and services over larger regions. And, technology and telecommunications make the global delivery of services possible. These features of the market are relevant particularly in the realm of financial services, where increasing complexity and sophistication of operations have given rise to an influx of large and multifaceted international banking organizations.

As these organizations grow in number and diversity of function, the challenge of regulation and supervision increases. In financial services in particular maintaining public confidence in their integrity and reliability is of paramount importance. Regulators around the world recognize the need to develop new procedures, systems and operations to meet the challenge of larger more global firms. While a single approach is certainly not appropriate for all institutions in all countries, it is important for regulators to have a single framework in place - a benchmark, if you will - of common "best practices" in bank supervision. This is important for two distinct reasons. Firstly, by developing such approaches to regulation and supervision regulators prevent regulatory avoidance and a "race to the bottom" in international regulation. Secondly, the discussion itself improves the process and the regulatory infrastructure by forcing regulators around the world to learn from each other and from the industry that is entrusted to their care.

In my remarks today, I would like to focus on the new Basel Accord, the most recent step in a sustained effort by bank regulators around the world to define the best practices in bank capital and global risk management regulation. I will begin with an overview and brief history of the Accord, including such issues as its unique framework, how that framework has been applied and what challenges we have been encountering. Next, I will discuss the ongoing recent attempts to update the Accord, the so-called Basel II. And finally, I will cover a few implications of Basel II specific to the Pacific Basin.

Overview of the Attempt to Update the Basel Accord

The new proposal for coordinated bank regulation is a revised version of the 1988 Basel Accord and represents an attempt at the broadest possible agreement for the supervision of internationally active banks. The ambitious mandate of the proposed Basel Accord, sometimes referred to as Basel II, is to update the original Accord to account for recent advances in global risk management and bank capital management. But, it is a skeleton without flesh. This is because the unilateral application of detailed and specific regulations across international borders would be neither politically acceptable nor practical. Wisely and unavoidably, the Basel Committee left to individual nations the work of filling out this skeleton. In the United States, the Federal Reserve and Office of the Comptroller of the Currency are charged with establishing specific supervisory schemes for domestically chartered banks. A top goal for the Federal Reserve is developing detailed regulations to incorporate the premises of the Basel Accord that meet the needs of our myriad financial institutions. Reaching this goal will require ongoing dialogue and partnership between federal regulatory agencies and the banks. The proposal itself should be viewed more as a discussion draft than as a finished product.

History of the Basel Process

To provide a little background, I think it would be useful to review the history of the Accord, as well as a brief explanation regarding its influential founding body, the Basel Committee.

The Basel Committee was established in 1974 by the central bank governors of the "Group of Ten" countries in recognition of the fact that the financial marketplaces of the world were unifying into a single global financial marketplace. The Committee's members come from Belgium, Canada, France, Germany, Italy, Japan, Luxembourg, the Netherlands, Spain, Sweden, Switzerland, United Kingdom and the United States. My colleague, President McDonough of the Federal Reserve Bank of New York, currently serves as chairman of the Basel Committee. Countries are represented by their central bank and by the authority with formal responsibility for the prudential supervision of banking business in cases where this is not the sole pervue of the central bank. For the U.S. for example, both the Federal Reserve and the Comptroller of the Currency are represented in the Committee.

Since its inception, the Committee has fostered cooperation and understanding among the world's bank regulators by sharing global perspectives on industry and regulatory best practices. Through these discussions, it has acted to harmonize international bank regulation as necessary to keep unpleasant surprises from impacting the global economy.

While the world's most prominent central banks are represented on the Committee, as an intergovernmental organization, the Basel Committee possesses no formal authority and its conclusions have no legal force. But, because the Committee's recommendations carry the weight of global consensus, this lack of formal authority has had little effect on their implementation. A recounting of its earlier history makes this point well.

By the mid 1980s, bank supervisors on the Basel Committee concluded that many large banks needed to hold more capital and that some international standards for bank regulation were necessary. There were several reasons for their view. First, the simple capital ratio at large multinational institutions was on a downward path. Governors of the G-10 central banks were becoming concerned that the capital of the world's major banks had become dangerously low after persistent erosion through competition. Second, the capital requirements of virtually all nations were not sensitive to bank specific risk levels. Third, differences in regulatory requirements were placing some banks at a competitive disadvantage, and more liberally regulated institutions from some jurisdictions had the ability to grow market share by taking unadvisable risks. All of this was occurring while technology and financial innovation were creating a single global debt and credit marketplace. U.S. bank failures and problem Third World debt also contributed to the growing consensus favoring a change in regulation that focused on a new global risk management framework.

In 1988, the Committee introduced the original Basel Capital Accord. The purpose of the Accord was twofold: 1) to ensure an adequate level of capital in the international banking system, and 2) to create a more "level playing field" in competitive terms so that banks could no longer build business volume without adequate capital backing.

The original agreement featured new risk weights associated with different asset categories to reflect the riskiness of assets and recommended a risk-weighted minimum capital requirement for all international banks. Many countries, including the United States, also adopted the Basel guidelines for the regulation of smaller and domestic-only institutions, making it a universal national regulatory framework. Non-Basel countries followed the lead of the larger Committee-member nations in instituting Basel-based reform. Therefore, the Accord quickly became the world standard for measuring and regulating bank risk.

By all accounts the system was not perfect. Even advocates recognized that the risk weights were imprecise and the number of asset categories suggested by domestic regulators was arbitrary. Nonetheless, it was a beginning, and an improvement over the earlier system that had either no substantive capital regulation or a crude aggregate capital ratio requirement. Further, it recognized both the need to add off-balance sheet risk exposures to the regulatory framework - a first - and the growing international nature of banking and banking institutions.

From this perspective the 1988 Basel Accord was successful, but in the first decade following its implementation the rapid pace of change that fostered its adoption only accelerated. Bank innovation, new financial instruments, and complex banking practices have acted to disassociate actual risk from the capital requirements. Amendments to the original Accord, while broadly adopted, were ineffective to sufficiently counter these developments.

Technological innovations and changing business practices have accentuated some of the known critical shortcomings in the original Accord. As risk-measurement practices improved, capital markets became more tightly intertwined, and new instruments gained in importance, assumptions and shortcuts taken in the original Accord became more problematic by today's standards. Leading institutions routinely practiced regulatory avoidance to blunt the attempt of the Accord to limit risk taking activity. For example, if capital requirements for a certain type of asset happened to be higher than a bank would usually hold against such an asset class, a bank would rearrange its holdings to lower its capital requirements. By contrast, if rates were set too low they would aggressively add such assets to their balance sheet positions. This practice has been commonly called "capital arbitrage." Banks engaging in this practice can lower their capital requirements with little, if any, reduction to their reported risk. As a result, the capital ratios they report may - and do - overstate the bank's true financial strength. And it has become extensive enough, and inventive enough, for regulatory authorities to question the effectiveness of the original Basel framework.

It became clear that the framework needed more inherent flexibility to ensure that capital requirements are more closely aligned to actual risks. However, it was not always possible and the original agreement slowly drifted away from its goal of adequate risk regulation. By the late 1990s, the Basel Committee concluded that more substantial change was necessary. Seeking to ensure more accurate bank risk measurement and control, the Basel Committee agreed on a proposal for a new Accord in 1999.

The Three Pillars of Basel II

For ease of digestion, the Basel Committee describes the many changes in the new Accord in terms of "pillars." Pillar I refers to capitalization standards. Pillar II refers to the methods of supervision. Pillar III refers to disclosure and the involvement of markets. It is interesting to note that the entire 1988 Basel Accord focused on regulatory capital requirements. In the more extensive proposed Accord, so-called Basel II, the standards for capital are contained within the first pillar. It is also noteworthy that, realizing that the 1988 Accord became the de facto standard for banks of different sizes and business models, the Basel

Committee sought to better tailor the proposed Accord to all institutions regardless of size, resources, expertise, and risk profiles. As a result, the proposal affords banks options as to how regulatory capital is assessed.

In the view of the Committee, the three pillars to assess capital adequacy are mutually reinforcing. Each pillar is designed to address the challenge of aligning capital relative to risk, but each uses a different approach to achieve that end. The belief is that by combining the approaches of the three pillars, we can better achieve our overall objective of ensuring an adequate capital cushion across the banking system, and at the same time recognize and encourage prudent risk management.

Let me highlight briefly each of the three pillars and provide some perspective on the key challenges that each presents. As noted above, **Pillar I** has to do with minimum capital requirements. The 1988 Capital Accord allowed supervisors in the G-10 countries for the first time to use a common yardstick for measuring the capital adequacy of banks. The key here is that credit risk had to be related to capital in a more precise way.

To address the shortcomings in the 1988 Accord, the Basel Committee proposed two different approaches: 1) a standardized approach that ties risk weightings to external credit assessments, such as credit ratings, and 2) an internal-ratings-based approach (IRB) that would begin by mapping internal risk ratings into standardized risk weightings but might eventually evolve into something closer to the full use of banks' own credit risk models. Essentially, the IRB approach seeks to harness banks' own expertise and experience, as embodied in their risk models, to help determine the amount of regulatory capital a bank needs to hold.

Each approach treats the trade-off between simplicity versus accuracy somewhat differently, and thus one or the other is likely to be relevant to banks with different levels of sophistication. Most importantly, both proposed approaches attempt to introduce greater risk sensitivity into the minimum capital standards. Because the Committee realized that risk varies greatly within categories of assets, the proposed Accord would base risk weights on bond ratings, credit ratings, and other measurements of market sentiment when possible.

In addition, the proposal recognizes that computer failure, fraud, and other kinds of risks exist within banks, and it requires the quantification of these operational risks as well. However, this movement to include operational risk is its infancy and I will avoid further reference to it today.

Under Pillar I, the new Basel Accord was designed to produce a capital adequacy framework with a greater sensitivity to risk, and thus introduces a dynamic element into its standards. The capital requirement associated with individual loans would vary across loan types and also across borrowers of different creditworthiness. As a borrower's risk profile varied, so too would the required capital assessed against that outstanding credit. So, the capital requirements for loans to troubled borrowers would tend to increase at just the point when such trouble is becoming apparent.

It has long been suggested that the global financial system needs to be prepared to address potential credit problems pre-emptively, before these problems have time to grow from minor disturbances into major disruptions. Implementing capital standards that are more responsive to the dynamics of risk could help move us in this direction and away from a mindset that waits too long to address problems.

In addition, the first pillar establishes a path for banks to evolve and enhance their risk assessment systems. To sum it up in the simplest terms possible, enhancing risk sensitivity is the goal of Pillar I.

Pillar II has to do with the supervisory review of capital, a critical complement to minimum capital requirements. It describes a more extensive role for supervisors and examiners in assessing institutions' compliance with Pillar I. The Accord calls on supervisors to ensure that each bank has sound internal processes in place to assess the adequacy of its capital, based on a thorough evaluation of its risks and capital structure. This moves the Accord beyond a ratio-driven minimum capital standard to a comprehensive approach for assessing capital adequacy. In proposing this supervisory review of capital, the Basel Committee intends to foster a more active dialogue between banks and their supervisors with respect to the actual level of capital banks choose to hold. In general, supervisors expected and continue to expect banks to hold more than the regulatory minimum amount of capital.

There can be no doubt that implementing the supervisory review of capital demands considerable insight and flexibility on the part of supervisors. This approach requires that they tailor their efforts to the unique risk profiles of particular institutions. This can be seen as either an advantage or a disadvantage of the proposed model. On the positive side, this approach allows supervisors to draw on their cross-institutional knowledge as they assess the strengths and weaknesses of a bank's risk management and capital allocation processes relative to those of its peers. On the negative side, it adds a degree of subjectivity that makes some industry commentators uncomfortable.

The G-10 supervisors recognize the obvious implications that this approach will have for supervisory resources. In order to keep pace with industry innovation, it is clear that we will have to step up our training and consider effective ways for making the most use of our limited resources. The Basel Committee also recognizes the importance of these issues for the non-G-10 countries and has been working toward providing the training and other types of support needed to allow these countries and their supervisors to move in a positive direction.

Pillar III introduces market discipline to the capital adequacy framework - another critical component of a safer and more stable financial system. This pillar lays out the types of disclosures necessary for ratings agencies, analysts and investors to be able to effectively determine risks incurred by an institution and the creditworthiness of the corporations to which they lend or in which they invest. More extensive disclosure and greater dependence on market forces complement improvements in risk management, banking supervision, and minimum capital standards. Of course, to add value over and above the minimum capital standards, improved disclosure must go beyond the simple reporting of minimum capital ratios. It is expected that risk management systems, risk weighted capital and line of business risk and return will soon become common disclosures.

When banks disclose timely and accurate information about their capital structure and risk exposures, market participants can better evaluate risks and act accordingly. The disclosure of timely and accurate information, in turn, is an incentive for banks to ensure that the market perceives them not only as effectively managing their risks, but also as being adequately capitalized. Market reactions to the public disclosures of banks also can play an important signaling role for supervisors in assessing the adequacy of a bank's capital.

The timeliness and the quality of risk disclosure are of critical importance. The frequency of disclosure should reflect the nature of the risks involved. Moreover, as transactions that shift risk become more common and complex, disclosing the associated residual exposures takes on added importance. Such reporting, in turn, requires that banks have in place the appropriate systems to identify and measure these risks so that the risks can be documented for the marketplace. Finally, as we move toward improved disclosure, we must keep in mind that the goal is useful and reliable information--not simply a large volume of information. More is not necessarily better.

There are well-known risk management benefits that accrue from the discipline brought by informed stakeholders and counterparties. The intent of Pillar III is to harness the regulatory power of the marketplace by improving transparency and making more information about a bank publicly available. Information to be disclosed would include both quantitative and qualitative data. For example, information on holdings and portfolio quality, a bank's organizational structure, and risk management techniques would be made public. Disclosure of this kind of information is intended to buttress the decisions of bank regulators.

Basel II has been broken down into three pillars for ease of exposition. But it is vital to view each of them as parts of a cohesive plan for ensuring that individual banks, their supervisors, and the markets adequately comprehend bank risk. Dialogue between industry and regulators is critical in all cases and is but one example of how the pillars will work together to augment the effectiveness of the Accord. Effective implementation of all three pillars is essential for the Accord to fully achieve its goals.

Application of the Basel II Framework

So, how will this framework be applied? Basel II was formulated with large international banks in mind. Fortunately, many of these banks already have systems in place to classify their loans by risk. They also may have internal profit centers charged for equity allocations by risk category, as well as explicit risk adjustment procedures. In short, large, more sophisticated banks already have begun integrating the formal measurement and quantification of risk into their lending processes. To comply with Basel II, banking regulatory agencies are merely trying to generalize and institutionalize this internal process as part of the regulatory scheme.

This will not be easy. It is an inevitable fact that banks have different systems, while some apply less than state-of-the-art risk practices of risk management. For smaller institutions, the first pillar's revised standardized approach will allow them to maintain something close to their status quo. But, the expectation is that enhancing risk assessment will be essential for virtually all organizations to remain competitive.

The proposal will place new requirements on internal-ratings-based banks, with the emphasis on corporate credits to date. Supervisors will expect banks using the internal-ratings-based approaches to demonstrate that the risk assessment process is fully documented, that inputs are reliable, that representations of probabilities are accurate, and that assumptions are conservative. Banks should expect their models to be subject to comprehensive validation processes as well. For example, stress testing will be essential to ensure that the risk of such assets is accounted for.

Generally, the information technology currently in use by many banks should provide a quantitative basis for determining probability of default and other data. While most banks accumulate good core information on which to base internal-ratings-based indicators, more information will be necessary in some cases. Further data on the maturity of loans may have to be used. The mitigation of risk will have to be better quantified. More precise details on how past-due and poorly performing loans are managed will need to be made available to regulators. Default may need to be better defined. And, of course, more information will need to be made public for nearly all banks using the internal-ratings-based approach.

One issue that has become glaringly apparent is: "How can we ensure uniform implementation around the world?" The current proposal relies heavily on supervisory oversight and market discipline to promote consistency. National regulators will be responsible for validating banks' internal methodologies, ensuring ongoing compliance with sound practices, and providing oversight of the economic capital process. Carrying out this validation and overseeing compliance on an ongoing basis will be a considerable challenge everywhere, including in the U.S.

In the area of disclosure, the efforts will require a joint effort between the industry and local regulators. Here, I should mention the Multidisciplinary Working Group on Enhanced Disclosure, made up of representatives from the banking, securities and insurance industries. The Group was created in response to growing interest in the international regulatory and central banking community in how market discipline can play an important role in maintaining financial market stability. The changing structure of financial intermediation has strengthened the case for enhanced disclosure. We are seeing capital markets and traded securities playing a greater role in the allocation of capital and risks in the financial system.

The Working Group is a pilot effort to formulate a set of public disclosure guidelines for an increasingly global financial market. The pilot study focused on forty-four private sector financial institutions, comprising a broad cross section of financial firms from nine countries, which voluntarily provided confidential data from the second quarter of 2000 about a broad range of financial risks. From data collected, the Working Group was able to establish a meaningful basis for comparing risk management practices as well as the level and types of risk across institutions and across countries. Their conclusions are intended to encourage market discipline by developing a set of disclosure recommendations and requirements to provide market participants with key information to assess the adequacy of a bank's capital relative to its risk exposures. This pilot study, based on factual analyses and concrete data, is an important step toward advancing the state of financial institutions' disclosures of financial risks in order to enhance the role of market discipline.

This approach, supported by the Basel Committee, limits the burden on the banking industry and at the same time makes clear that the private sector has a key role to play in improving disclosure and enhancing market discipline. In addition, the firms participating in this program have the unique opportunity to shape the endeavor and influence the interpretation of its results. Through their participation, these firms send a clear signal about their willingness to improve market discipline.

The Challenges Going Forward

Overall, reactions of bankers to the perspective incorporated in Basel II have been positive. There appears to be broad backing for the concepts expressed in the three pillars and the Accord's overall emphasis on increasing risk sensitivity. Similarly, many bankers have expressed support for the use of their own internal processes to determine risk. In short, the core concepts of the Accord have widespread support. Of course, the real challenge lies in implementation, and many bankers have expressed concerns over how some provisions of the proposal would affect their business.

For example, some bankers, most notably in Europe, believe the calibration of the risk weights in Pillar I unfairly adversely affect middle market customers. Others have expressed concern over the subjectivity of Pillar II. And, there is some concern that Pillar III may require banks to publish highly proprietary information. Likewise, the new Accord's requirement to quantify operational risk has been viewed by many in the industry as highly disputable. And, while some smaller banks have expressed a desire to use the modified standard approach, others are wary of being competitively disadvantaged relative to larger banks if they are not permitted to use the internal-ratings-based framework.

But perhaps the most consistent refrain we have heard from the industry is a concern that they will not be able to implement necessary operational changes in the time allowed. This has led the deadline of the program to be delayed by an additional year to 2004.

However, it is important to stress that I do not look at these concerns as disagreements. Rather, I look at them as vital feedback that must be incorporated into the regulations to implement the broad Accord. Many issues must be resolved before the Basel Committee can fully implement the new Accord in its entirety. Regulators and the Basel Committee are working with bankers toward this end. The questions raised by bankers are among those the Fed will strive to answer over the coming months and years. Current discussions regarding the enhancement of credit risk management are focused on reducing the negative consequences of cyclicality. Other issues include the degree of power granted regulators, and whether it makes practical sense for them to exert more pressure on banks during good times and less pressure when times are tough.

And of course, there are logistical challenges as well. Basel II currently calls for implementation by 2004. President McDonough has stated his opinion that the new Accord will not require a large increase in the number of regulators working at the Fed. However, it will require the addition of new skill sets and expertise on the cutting edge of bank risk management practices.

Implications for the Pacific Basin

Now that I have provided you with a general overview of the new Basel Accord, I would like to offer some insight on how the new version of the Accord might impact the nations of the Pacific Basin. In my view the southern end of the Pacific Basin should not encounter significant implementation problems, as Australia and New Zealand are advanced well beyond Basel I requirements. However, even there, the tradition of on-site examination is absent.

Because Basel II requires more extensive analysis on the part of supervisors, increased knowledge of models of credit risk and economic capital will be a training mandate. And, educational resources in these nations are typically scarce and often cost-prohibitive.

A major challenge for the lesser-developed countries will be information systems in regulated entities and a general resistance to the tenants of Pillar III. In many Asian capital markets disclosure has been limited, at best.

On a more technical level, the proposed agreement generated a number of comment letters to the Basel Committee. Many Asian central banks or monetary authorities have submitted their views, and three common themes are apparent from their responses. These concerned 1) risk weights and credit risk measures for real estate loans, 2) use of external ratings agencies, and 3) the implementation date.

Most Asian banks reported that they would likely choose to implement the standardized approach to capital adequacy, rather than the internal-ratings-based approach. However, they are worried that under the standardized approach, their risk weights could be higher for banks domiciled in their jurisdiction. This appears to be a significant issue in the area of real estate lending. The main concern among the Pacific Basin banks is that real estate collateral is not recognized as a tool of credit risk mitigation under the standardized approach to capital standards. The commentators, while acknowledging the volatile nature of real estate values, suggested that a better approach might be to apply a discount to the collateral values of the real estate, rather than disregarding it entirely.

Asian bank supervisors reacted strongly on this issue because Asian banks have a heavy concentration in real estate lending. For example, Hong Kong banks have 40% of their entire loan portfolios in real estate. Further, Basel II requires that the risk weights for residential real estate loans must rise from 50% to 150% once the loans are past due for over 90 days. Since the real estate itself acts as collateral for these loans, the commentors thought these requirements were excessively stringent.

Another issue that came up repeatedly in comment letters regards ratings agencies. Basel II requires a standard risk weight of 100% for all unrated corporate loans, which means that the loan is included in the calculation of risk weighted assets at its full value. Only if a corporate loan is rated by an accredited ratings agency does the Accord not require the application of the standard risk weight. As such, the Accord encourages the use of ratings agencies in assessing risk. However, Asian regulators seem not to have much confidence in the validity of ratings supplied by ratings agencies, based on the agencies' past performance in Asia. The commentors questioned the agencies' full understanding of the Asian banking environment. Since many corporate borrowers in Asia are not rated, the commentors think that Asian banks would not benefit from the new approach of using ratings agencies in assessing risks.

Lastly, many commentors stated that it was doubtful they would be fully prepared for implementation by the proposed deadline in 2004. Even one of the most advanced banking institutions in the Pacific region, the Hong Kong Monetary Authority, commented that it would not be ready for the 2004 implementation date. Given the complexity of the proposal, the enhanced supervisory role, and the more extensive information requirements, Hong Kong's position is likely representative of the response of many other Pacific Basin banks.

Some Final Thoughts

These have not been easy times. As a regulator, I cannot help but underscore the essential role banks play in the global marketplace. By intermediating credit between savers and investors and providing liquidity to the financial sector, banks are the essential link in well-functioning economies.

Basel II is not simple, and it is not complete. There is much ground still to be covered. That said, there are several themes I hope you will take with you today. First, the work of the Basel Committee represents a shift from simple rules and ratios to a true risk based approach to regulation. Second, it is an evolution in the regulators' degree of cooperation and sophistication when it comes to preserving integrity and fair competition in the banking industry. The three pillars of the Basel Accord are key elements of appropriate regulation at a critical time. Remember that this evolution is taking place during an intense period of global integration, business sophistication and innovation in the financial services industry. And, third, the Accord also effectively takes into consideration the diverse and varied backgrounds and cultures of each country by allowing flexibility in how nations adapt and implement the three pillars.

As you have probably surmised, regulation and supervision policies in the banking industry are evolutionary processes. Such flexibility means the standard itself will improve as the dialogue continues and banking practices improve. With experience and better data, risk parameters will change, and the models will get stronger. Banks will no longer have the shelter of a static and uniform regulatory standard, but will be expected to defend their own assessments and procedures to their regulator and the market. The completion of the Accord involves the unusual, but highly effective, scenario of allowing open issues to be resolved by those who will live with the result on a daily basis - the bankers, and various industry experts.

As experts in our various disciplines, it is the responsibility of everyone here today to take up the challenge to formulate new ideas that will further our fields. As a regulator and policy-maker, I am constantly challenged to evolve in my thinking to develop new and innovative ways of keeping the banking and financial systems vibrant yet safe, innovative yet sound. Only by sharing the creativity we all have and by advancing the debate can we develop this new paradigm that will serve our shared purposes.

Thank you for attending the conference. I hope it challenges your thinking and presents you with many new ideas and much valuable information.