Jaime Caruana: Basel II - back to the future

Speech by Mr Jaime Caruana, Governor of the Bank of Spain and Chairman of the Basel Committee on Banking Supervision, at the 7th HKMA Distinguished Lecture, "Basel II - Back to the Future", Hong Kong, 4 February 2005.

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1. Introduction

Let me begin by expressing my gratitude for this invitation to participate in the "Hong Kong Monetary Authority Distinguished Lecture". I am honoured to join the list of prestigious speakers who have discussed critical issues in economics and finance in this forum, issues made especially prominent by the important role that the Hong Kong Monetary Authority plays in promoting financial stability under the leadership of Joseph Yam. From my perspective as Chairman of the Basel Committee on Banking Supervision, I am indebted to Mr Yam for his support and initiative in contributing to the development, and now the implementation, of the new bank capital framework, or "Basel II".

"Nothing endures but change," wrote the ancient Greek philosopher Heraclitus more than two thousand years ago. In a world where change is the only constant, success depends on the depth of our awareness of the risks and rewards on the horizon and on the quality of our preparations to respond to them appropriately. That is true not just in the banking industry, but certainly also in the formulation of public policies geared to promoting more sustainable economic growth through greater financial stability.

Today I would like to address the importance of adopting a forward-looking approach in our framework for financial stability. At the same time, following the advice of the Italian statesman and philosopher Machiavelli that "whoever wishes to foresee the future might consult the past", I would like to make the case that, to ensure a sound regulatory system for the future, we must look carefully back at the lessons of the past.

It seems especially appropriate to discuss, here in Asia, the important relationship between financial stability and sound growth. After enduring a period of regional financial distress in the late 1990s, Asia's re-emerging dynamism and growing stature can be seen in many indicators: for example, in its capacity as an importer of raw materials and foreign direct investment, and as an exporter of manufactures, financial capital, etc. Asia is a central partner with the rest of the world through its roles both in trade and finance.

Indeed, in a recent address at the Centre for Banking and Monetary Studies in Geneva, Mr Yam offered an accurate overview of Asia's vibrant potential. He set out some impressive figures such as the amount of foreign reserves held by Asian economies, the amount of portfolio and direct investment going into and coming out of the region, and the high level of rates of private-sector saving, which is increasingly institutionalised and professionally managed. Certainly, Hong Kong is a prime example of the enormous potential that is being realised in Asia. Because of the openness of its economy and the vitality of its business environment, Hong Kong serves as an important reference point for the world.

Hong Kong has captured the world's attention artistically as well, especially through the recent work of the screenwriter and director Wong Kar-wai. His recent film, 2046, has rightly enjoyed acclaim, but it is the film's unique perspective on time that might be interesting to contemplate today. In his film, as many of you may know, an author writes a book about the future, but gradually we realise that he is actually exploring his past. With apologies to Mr Wong and with deep respect for his beautiful film, I might venture to say that we can draw some parallels with our discussion today. As I have just suggested, I believe that in order to secure financial stability in the future, we must explore and understand the risks that have endured since the past.

If I may draw on my own artistic license, I'd like to reinterpret the premise of Mr Wong's film slightly. Let's consider an author, perhaps a central banker or a supervisor, who lives in the year 2046 and has the benefit of the perspective provided by the passage of the first half of this century. What might such an author write about the main determinants and evolution of financial stability during the first five decades of the twenty-first century?

It is my hope that in that book of the future, the Basel II framework would be portrayed as a revolution in our approach to financial regulation. It would represent the introduction of a new regulatory and supervisory paradigm, one premised on the need to begin to depart from blunt requirements and instead to develop rules that incorporate nuance, rules that align capital requirements more closely to the actual degree of economic risk a bank faces. Our author might write that Basel II represented an important step forward in continuing to replace static rules with rules that offer incentives for firms to improve constantly their internal governance and management of risk. And that it marked a milestone in the trend toward leveraging the power of the market place to exert discipline over firms' decisions and strategies, such that other marketplace participants can better serve as effective allies of regulation and supervision to achieve financial stability.

Yet I must confess that, with the evolution in practices and technology that can reasonably be expected by the year 2046, the Basel II capital framework released in June 2004 might well be judged to be excessively simple. Still, its greatest virtues might be considered its forward-looking nature and its flexibility, and its ability to adapt to new circumstances and to the emergence of better risk management practices.

I was tempted by this flight of the imagination to frame my remarks today as the views of that author looking back at the work we are undertaking in 2005. In truth, though, I thought it might depart too much from the usual field of play of central bankers and supervisors. Instead, I'd like to share my views on how the elements of Basel II take us "back to the future," not unlike the journey of Mr Wong's author in 2046 from the future to the past. In many ways, Basel II brings us back to a traditional focus on risk, but with the benefit of the most advanced techniques emerging today and into the future.

2. Overview

Specifically, I would like to try to address four key points.

Firstly, I would like to consider the current framework for promoting financial stability. I will argue that, despite significant progress, our policy and decision-making framework for financial stability is still incomplete, especially if we draw a comparison with the framework for monetary stability. That said, there are a number of lessons we have learned in recent years that can be useful for the future, and which we have taken into account in designing the new Basel II capital framework. One of the most important of these is the very real and positive contribution that sound risk management practices can make to promoting financial stability.

Therefore, in the second part of my intervention, I would like to explore in more detail some of the most important recent trends and developments in risk management theory and practices, and also the impact that these developments can have both on individual firms and on the economy as a whole. I will cover three trends in particular: firm-wide assessment of risk, risk aggregation and risk transfer.

This will lead me to the third part of my intervention: the challenge of devising a supervisory response which harnesses these developments for the benefit of financial stability. As I will argue, it is critical to ensure that our supervisory and regulatory structures are compatible with the best practices in risk management today. But I believe that our structures must go beyond that and actually encourage firms to continue to improve their measures of risk exposures and their approaches to mitigating them in the future. This forward-looking approach forms the basis of Basel II.

In the final part of my intervention, I will explore some of the implications of Basel II that received some attention in recent times: namely, the potential impact of the new framework, both on capital flows and on global competition.

My purpose today is not to describe Basel II in detail, but rather to highlight the dynamic processes that it stimulates. I do not claim that Basel II covers all the areas and refinements needed to complete the framework for financial stability, but it does make a landmark contribution by incorporating a new forward-looking approach, to banking regulation and supervision, which is, at the same time, consistent with the lessons of the past.

3. Framework for financial stability.

Beginning with my first topic - the framework for financial stability - allow me to make a final reference to the hypothetical book that might be written in 2046. I would not be surprised if the author of that future book noted an interesting contrast that existed at the beginning of the twenty first century. Although we have a well-developed framework for debating and conducting monetary policy, our thinking on financial stability is less advanced.

As an example, in the monetary field we have agreed on a definition of monetary stability – namely price stability. We have a framework of analysis that allows the causes and consequences of price instability to be studied. And, moreover, we have a highly developed decision-making framework for pursuing monetary policy, which has almost universally adopted the principles of central bank independence and primacy of price stability as the goal of monetary policy.

In comparison, and despite significant progress during the last decades, we are not nearly as far along with financial stability, and there are areas where we still have something to learn. We don't have a clear and measurable definition of the term financial stability and, in most cases, nor do we have a clear policy or decision-making structure for pursuing financial stability, unlike in the field of monetary policy, in which many central banks follow well-defined strategies which in one form or another respect the principle of "constrained discretion".

Achieving a coherent approach to financial stability may be challenging, if only because it requires a consistent combination of macro and micro elements and because of the large number of interested and participating parties. Also, it should foster financial innovation, and ensure a level playing field.

However, I think that our future author might take some comfort from the fact that supervisors, central bankers, policymakers and others learned valuable lessons in the late 20th and early 21st centuries, which will remain valid for the rest of the century. Let me outline four of those lessons.

First, we have learned of the need for businesses and consumers to have access to credit on fair and reasonable terms, through all stages of the business cycle, so that the economy can grow through the financing of the best opportunities.

We have learned that we need an efficient and resilient payments system to maintain the flow of funds through the economy at all times. We need financial markets to remain active, liquid and trusted, regardless of events in the economy. And we know that, for all these things to occur, our financial institutions must be led by responsible individuals, must operate transparently, and must serve the interests of depositors and shareholders alike.

Second, we have identified some characteristics of financial instability. For example, financial instability may reveal itself via excessive volatility in asset prices, which can move substantially away from the value which, in principle, their fundamentals would warrant. To be sure, a certain degree of volatility in asset prices is simply the reflection of the normal workings of markets. Likewise, poor results posted by a specific financial institution, even its bankruptcy, may not have systemic implications. However, financial instability may be very costly if it is on such a scale as to cause harm in the real economy.

These considerations allow us to draw a relevant conclusion: the pursuit of financial stability calls for increased attention to a combination of micro and macro factors and must be based on a broad range of tools which we should all seek to strengthen.

Third, we have learned the importance of sound macroeconomic policies and an appropriate institutional framework, as well as of prudential regulation and supervision, and consumer awareness and understanding. This is an extremely important point and even though it is not my main subject today, I would like to briefly underline two elements.

Firstly, there is a broad consensus about the importance of promoting the implementation of appropriate macroeconomic policies. Nobody has any doubts today about the need to promote price stability. However, this is not a sufficient condition for ensuring financial stability, which demands other additional measures.

These include, for instance, fiscal discipline, and the design of exchange rate policies that ensure the consistency of the exchange rate system chosen with domestic policies, and that contain vulnerabilities associated with exchange rate instability in the different sectors of the economy. Macroeconomic policies must also be consistent and sustainable over time. Indeed, unstable macroeconomic settings are one of the main causes of excessive volatility on financial markets.

Secondly, an appropriate institutional framework is also needed. In particular, a set of mercantile and civil laws must be in place, including the treatment of bankruptcy situations; accounting obligations that ensure the uniform representation of economic events; external auditing requirements; guarantee funds providing appropriate safeguards; independent supervisors with operational capacity, etc. The legal structure and its application by the judiciary should ensure the respect of property rights and equality before the law; in sum, legal security.

The need for this set of minimum prerequisites is reinforced by the "Core Principles for Effective Banking Supervision", which are invaluable as a tool for the evaluation of supervisory systems. In this respect, let me mention also the excellent work of the Financial Stability Forum over the last years in bringing together various standards issued by a number of bodies.

In summary, even though the framework for financial stability is not as comprehensive as in the case of price stability, significant progress has been made in all of these areas in recent years.

There is a fourth lesson that is particularly relevant for this presentation, and it is a lesson that we have learned from periods of bank resilience in times of stress. During the past few years, financial markets have experienced a series of significant shocks. However, the banking system has been able to cope with them successfully. Financial innovation, the existence of deeper financial markets with a great variety and availability of instruments to transfer risks, and the improvement of the capacity of financial institutions to understand and manage their risks are key ingredients in explaining the resilience of the financial system during the period of shocks. And that leads me to my next point: important trends in risk management.

4. Recent trends in risk management

Financial stability is a key precondition for sustained growth. It is crucial, therefore, to find reliable ways of identifying risks to financial stability and, in particular, to banking stability, and to try to manage these risks in the most effective way. Indeed, as experience has repeatedly shown, both inside Asia and elsewhere, having a solid and well-run banking system not only greatly reduces the likelihood of shocks originating inside the banking system but also makes it less likely that shocks arising elsewhere in the economy are amplified through the banking system.

Financial service providers have long competed on their ability to provide products and services tailored to each customer's needs and profile. Traditionally, a bank's balance sheet and earnings offered insight into the quality and results of its transactions with customers, but those historical measures reflect only the outcome of past decisions. A bank's ability to thrive in the future – and the ability of the banking sector to act as a source of credit to businesses and consumers alike – depends instead more on the kinds and levels of risk that its transactions entail. For most of the history of banking, banks could assess those risks only in a highly subjective manner and without significant confidence in the quality of such assessments.

However, financial innovation and advances in the measurement and management of risk have fundamentally changed how banks and other financial service providers approach their businesses. Three trends are particularly prominent and have been analysed by the Joint Forum.

First, one of the most notable advances in risk management is the growing emphasis on developing a firm-wide assessment of risk.

Firm-wide risk assessment

Improvements in technology and telecommunications have made it easier for firms to gather, collect and analyse large amounts of data on their exposures and business activities efficiently and increasingly in near "real time." To make the best use of firm-wide data, many organisations have established a dedicated risk management function to foster more highly integrated and systematic approaches to risk measurement and management. The risk management function typically promotes the use of common risk measures across business lines. It can then report the firm-wide risk data to senior management.

Even though no single model for organising an integrated risk management function has become dominant, all firms that establish integrated risk management units are highly dependent on the quality of their information technology to collect, analyse and report firm-wide data efficiently and effectively. Some participants have found that the greatest challenge in developing a centralised risk management structure lies in constructing compatible and efficient management information systems across all of their businesses. As a result, they devote substantial resources in terms of personnel and expenditures to the maintenance and enhancement of their management information systems.

This trend is important for two reasons.

For one thing, comprehensive firm-wide assessment of risk and consistent reporting helps to ensure that the firm is aware of the wide range of risks to which it is exposed, that it understands the relative importance of various risks and how they may interact, and that the firm is less likely to ignore material sources of risk. This facilitates early detection and resolution of problems.

For another, this integrated risk management function requires a balance between the centralisation of some functions within the group as a whole, and the need to be close to local markets to incorporate better knowledge of local needs, risks, sensitivities and regulations. This, in turn, raises issues of co-ordination and communication for both internationally active banks and also supervisors, about which I will say more later.

Risk aggregation and quantification

Collecting risk data across many business lines has catalysed further efforts to aggregate those measures of risk by quantifying them in a more rigorous and more consistent fashion. This quantification of risk is the second major risk management trend identified in the Joint Forum report. It is not a new concept. In the insurance industry, for instance, actuaries have long sought to estimate the likelihood of various events taking place. What is new is that, in recent years, financial risk managers and researchers apply mathematics, statistics and modelling to many risk exposures that were previously not thought to be readily quantifiable.

In the banking industry, for example, statistical and computational analyses developed for evaluating exposures to market risk led, over the past decade or so, to the application of similar techniques to credit risk. The introduction of increasingly reliable estimates of the drivers of credit risk, such as the probability of default, led to many of the proposals that form the basis for the new Basel II bank capital framework.

The Joint Forum found that the "ultimate expression" of risk aggregation is the summation of many types of risk into a single risk measure. This measure, often called "economic capital," estimates the amount of capital a firm requires to protect itself against all risks with a certain degree of confidence. The benefits of developing more aggregated measures of risk across diverse business lines are especially appealing to complex financial organisations whose activities span many kinds of activities. As a result, it is not surprising that large, mixed financial conglomerates have tended to invest most in the development of economic capital estimates.

Using the concept of economic capital and its elements, banks can develop sound policies for monitoring exposure limits, risk-adjusted pricing policies and sound provisioning practices based on the inherent risks of the portfolios. They can also measure returns and assign capital on a risk-adjusted basis.

Let me add a word of caution. Despite the significant progress made in the banking industry in the use of models and new technologies, banks still depend largely on risk managers' expert judgement. Quantifying risk involves making assumptions and judgements. And no model, and no software package, no matter how sophisticated, can ever replace the skills of a trained, experienced and conscientious risk manager. That is why we have made sure that the Basel II framework is much more than numbers and models. Such judgement should be reinforced, however, with the best possible information, techniques and tools for processing that information. To the extent that risk assessment and control methods become more formalised and rigorous, this will lessen the likelihood of making bad decisions. It will also contribute to the prompt detection of errors and deviations from targets, allowing banks to implement corrective measures at an early stage.

The first two trends that I have cited relate to the internal efforts firms undertake to identify and measure their risks. The third trend I'd like to highlight concerns the dramatic increase in the use of transactions designed to transfer exposures to risk, especially to credit risk, to outside counterparties and even to investors.

Credit risk transfer

This past autumn, the Joint Forum released for public comment a study on the current use of credit risk transfer activities among financial service providers, along with a series of recommendations on how to promote sound risk management practices in this area. In recent years, the markets for credit derivatives, credit default swaps, collateralised debt obligations and other products have grown tremendously, providing financial service providers with new mechanisms through which they can reduce their direct exposure to credit risk. Such tools may also help to reduce concentrations of risks in particular firms.

I think that the emergence of these new channels for re-packaging and selling off credit risk serves as another means of looking forward to the future to manage risk. In this sense, the rapidly expanding secondary market for new credit-risk related instruments bears witness to the innovation and the search for new ways of managing risk that is so vital to the continued evolution of the financial sector.

However, we must remember to look back at the fundamental risks involved in these practices. The sale to outside parties of credit risk packaged into new instruments helps, of course, to transfer the risk, but the credit risk still exists.

While the transfer of risks to institutions or households that are better able to withstand them is a positive factor, and one of the structural explanations for the resilience of the banking sector during recent periods of stress, we should be conscious that this development may introduce some new risks into the system, such as operational risks, which require adequate treatment. Sellers of credit-related instruments face some degree of legal risk, for example, when new instruments are issued and their enforceability in courts has not yet been tested. Likewise, the creation and management of the new products can put strains on legacy risk measurement and management systems that were not intended to handle them, creating new possibilities for operations to fall short or even to fail in some way, creating losses.

These advances in the technology and practice of risk management introduce unique opportunities for public authorities to promote greater stability. I'd like now to turn to the efforts that banking supervisors are undertaking to respond to these recent trends. This represents the next topic I'd like to address today.

5. The supervisory response: Basel II

Against this background of increasingly sophisticated risk management practices, heightened complexity in the financial markets and stronger interaction between the real and the financial economy, the Basel II process started more than 5 years ago. Rather than simply resetting the quantitative standards, we sought to develop a new forward-looking approach that would be more sensitive to the actual risks that banks take on, one that would ensure a level playing field for banks that compete globally, one that would be better able to evolve with, and indeed encourage, future improvements in the measurement and management of risk, and one that would be well-anchored on a solid corporate governance structure and a sound risk culture.

If you allow me, I will draw one more parallel between monetary stability and financial stability. I would say that Basel II incorporates some of the key basic principles that are also built in modern approaches to monetary policy and which have successfully resolved the debate between rules and discretion: a flexible and forward-looking approach, anticipatory rather than reactive behaviour to risk, and the need to take into account market views.

The new capital framework is much more comprehensive than the 1988 Accord for many reasons: it applies to a wider scope of entities within banking groups; it offers a menu of different alternatives to fit different circumstances; it encompasses additional risks, in particular operational risk; it widens the recognition of credit risk mitigation techniques; it sets out a thorough framework for securitisation transactions; and, most importantly, it is based on three mutually reinforcing pillars.

The first pillar aligns the minimum capital requirements more closely to banks' actual underlying risks. Qualifying banks will rely partly on their own measures of those risks, a rule that helps to create economic incentives for banks to improve those measures.

The second pillar, supervisory review, captures the view that capital supervision requires banks to enter into a dialogue with their supervisors on the processes and internal estimates that they develop to determine how best to navigate the risks and rewards that they encounter. That includes making decisions on how much capital beyond the minimum requirement a firms should hold.

The third pillar, market discipline, strengthens external incentives for prudent management. It strengthens the ability of marketplace participants to reward well-managed banks and to penalise poorly managed ones by enhancing transparency in banks' financial reporting

By relying on an "efficient frontier" of three very different policy approaches, Basel II is intended to help supervisors to promote the adoption of sound practices today, to support efforts to improve those practices tomorrow, and to nurture a stronger risk management culture overall. In many ways, Basel II brings us back to a traditional focus on risk, but with the benefit of the most advanced techniques emerging today and into the future.

As I noted at the beginning of my intervention, my purpose today is not to describe Basel II, but rather to highlight those elements of the framework that set in motion dynamic processes that will enhance banks' safety, efficiency and soundness, thereby strengthening the stability of the financial system as a whole and ensuring that it can better serve as a source for credit and growth for the economy.

The comprehensive framework of Basel II provides four transmission channels for influencing financial stability: first, by setting more risk-sensitive minimum regulatory capital requirements, so that regulatory capital is both adequate and closer to economic capital; second, by providing incentives to encourage improvements in banks' internal risk management processes; third, the enhanced mechanisms to encourage the marketplace to exert external discipline on banks and the banking sector; and fourth, the necessary greater co-operation among supervisors across jurisdictions.

Through these channels, Basel II should remove distortions potentially hindering capital flows, improve the efficiency of the allocation process, and increase the stability and resilience of the financial system. The way I see this improved dynamic "risk-based efficiency", as I would call it, is that, given the same situation of an economy in terms of risk appetite and risk absorption capacity, the financial system will be able to provide more and better allocated financing flows, something that may help to increase the potential growth of the economy, without reducing the safety and soundness of the system.

All in all the potential impacts of this new regulatory approach may be profound and wide-ranging. I would like to explore some of these implications that have received some attention.

6. How Basel II will affect the flow of capital across borders.

Let me start reflecting on how Basel II will affect the flow of capital across borders. Some observers suggested that the new capital framework's heightened sensitivity to risk may reduce the flow of foreign investment in developing economies, since exposures to those economies might typically be considered of higher risk.

I believe that, in the short run, Basel II will not have a material effect on the flow of capital, whereas in the medium and long term Basel II's forward-looking elements will probably take over and higher risk efficiency will improve the financing of all kinds of economies.

The first part of this comment, the lack of any short-term material effect on capital flows, is based on the notion that Basel II seeks to align capital regulations more closely to banks' current practices, which today are already risk-sensitive. Therefore, it will not change the way that banks actually evaluate risk to decide whether to invest in emerging market economies.

Yet some observers have assumed that a more risk-sensitive approach might drive up not just capital requirements, but also the pricing of credit to emerging market countries. This argument assumes that regulatory capital drives individual loan pricing decisions. However, while regulatory capital is important and may represent an overall constraint, research and discussions with banks actually suggest that, when determining the price of a loan, banks consider all of the economic risks associated with a particular borrower. It seems that factors such as "economic capital" and the level of competition are much more influential in individual loan pricing than regulatory capital.

That finding should be no surprise to any banker or supervisor – banks that are managing their risks appropriately are already considering the risks that they face when they lend to higher-risk borrowers, and thus lower credit quality is already priced into a loan, even under the existing less risk-sensitive capital rules today.

Furthermore, there are additional elements in Basel II that can contribute to alleviating concerns about the impact on capital flows to emerging markets. Let me mention the reduction in capital charges for retail lending, residential mortgages, small and medium enterprises (exposures below € 1 million) and well-provisioned past-due loans. Also, the recognition of credit risk mitigants, such as collateral and guarantees, is significantly better in the new framework of Basel II.

If we take a medium or longer-term perspective, the different channels that I mentioned before will ensure better access to financial flows for the same risk. Furthermore, market dynamics may reinforce this process and those banks that adopt higher standards of risk management and capital and countries that embrace the new supervisory approach could be perceived by markets as less risky, resulting in lower risk premiums and better access to financial markets.

Given the advantages of Basel II, it may be that the timetable set by the markets for banks and countries to evolve to Basel II will perhaps be more demanding than the soft transition that the supervisory community and other institutions are proposing.

From a different perspective, I think that what should be of concern to emerging markets is not just the level of capital flowing into a country, but also the volatility of the level of capital inflows. Abrupt changes in capital flows can be just as harmful as lower levels of flows. Volatility erodes confidence in the future supply of credit, rendering long-term planning meaningless.

I believe that banks adopting especially the advanced approaches to credit risk will increasingly take longer-term views of their international investments, as stress testing and other requirements will ensure that they consider how their risks would react to certain changes in the market environment. More formalised and disciplined risk assessment processes may provide for early detection of deviations or mistakes, and that may facilitate making smoother corrections at an early stage, reducing the probability of sudden changes in investment decisions. This, in turn, should benefit emerging market economies by improving the degree of confidence that they can have in the future level of capital inflows.

This is very much related to the discussion about procyclicality, an important issue that we at the Committee have taken up and addressed seriously. In particular, some have suggested that the ratings-based approaches will drive up the cost of credit for borrowers precisely at times when its supply is falling, namely during downturns in the business cycle.

This is a very complex point and deserves a whole lecture in itself. Given the time constraints today, I would like just to summarise my own views. Of course, I fully respect the different opinions that may exist on this issue, but in my opinion, there are some elements that make me think that the concerns over procyclicality are exaggerated. There is some degree of procyclicality inherent in banking behaviour. The question that we should consider is whether Basel II, or any regulation, will unduly exacerbate this behaviour. Furthermore, it is also important to consider the trend around which cycles will fluctuate. I think that under Basel II, in the context of a more efficient and sound financial system, fluctuations will occur around a superior trend. This superior trend represents a better relationship between the capacity of the economy to absorb risks and the ability of the banking system to provide credit.

Furthermore, one cause of pro-cyclical behaviour is low capitalisation and weak risk management. Undercapitalised banks will tend to make abrupt decisions to cut lending when there is news of a downturn, and banks which have not assessed risks properly may likewise be forced to react abruptly. Pillar 2 of Basel II requires banks to have a capital strategy that takes into consideration the fluctuations of capital through the cycle and to hold additional buffers of capital that will help to offset potential problems.

Basel II's more forward-looking approach to granting credit introduces "risk awareness" and "early detection" factors that will provide additional defence against credit disruptions and procyclicality. I also believe that when banks have the right incentives to manage their risks appropriately, to hold sufficient capital and to improve transparency, the banking system will become more resilient, more stable and better able to serve as a source for credit and growth

Nonetheless, the Committee recognises that any risk-sensitive capital framework will cause the minimum capital requirement to fluctuate for the same exposure if a borrower's creditworthiness strengthens or weakens. To mitigate excessively wide swings in capital requirements, the new framework incorporates a number of elements such as the requirement to use longer time horizons in the design of internal rating systems and in the average calculations of key variables, and also the need to carry out stress tests and conduct calculations in downturn conditions. All these elements will ensure that bank managers are conscious of how risk-drivers change through the cycle and in stress conditions, and that they incorporate these elements into their decision-taking processes and capital strategies.

Let me add a final comment to this important issue. It is clear to me that we could also do more, beyond the strict solvency standards, and study how other regulations, such as those related to provisioning, can contribute to reducing pro-cyclicality.

7. Basel II impact on global competition.

Another broad concern that the Committee has worked to address is Basel II's impact on global competition. In particular, some have asked whether banks that choose Basel II's advanced approaches will enjoy benefits over those that choose simpler approaches or remain on the 1988 Accord.

Basel II reflects also the existing diversity of banks and jurisdictions and the sense that no single-policy approach, and no single hard-and-fast rule, could be applied to all banks of all shapes and sizes. Consequently, the Basel Committee sought something bolder than a single, universal rule. The so called "menu approach" of Basel II offers different alternatives to different kinds of banks and jurisdictions, but in developing this approach significant efforts were made to ensure that the level playing field is maintained.

We should understand that adopting an advanced approach requires significant investments and does not automatically reduce a bank's capital requirements. In a more risk-sensitive capital framework, capital requirements for an advanced bank may actually rise relative to the current rules if the bank's exposures are actually riskier than the measures under the 1988 Accord would have suggested. Furthermore, some national supervisors in emerging economies may set higher capital requirements than implied by Basel I, perhaps even higher than those implied by Basel II, depending on the risk environment.

The issue of competition between banks has also come up in the context of competition between countries. Here, we should remember that Basel II is intended to help ensure that international competition in banking markets is driven by the strengths of each bank, rather than by differences in each country's rules.

One way that the Committee has sought to promote a consistent application of the new framework is by providing detailed requirements where necessary. As I have already mentioned, these details may add to the appearance of length and complexity, but a balance is necessary to ensure greater consistency and a more level playing field.

However, given the need for a framework which can be adapted to a wide range of circumstances, co-operation among supervisors is clearly the most important tool in achieving an appropriate level of consistency. To a large extent, the need for greater collaboration is a natural result of the increased level of internationalisation and integration in the financial sector. We have seen some structural developments over recent years that certainly pose challenges for both home and host supervisors alike, such as the emergence of locally significant - and systemically important - subsidiaries of foreign banks. Also, a local unit in a foreign country may be systemically important for the group.

But I think that, at least in some areas, Basel II will act as a kind of catalyst for action. Under the new framework, internationally active banks will use systems whose recognition and on-going validation will indisputably require vastly increased collaboration among supervisors. Co-operation is a key word, but so too are convergence, communication and confidence. Communication is vital not only between supervisors or between supervisors and the industry but also, and very importantly at this stage, within banking groups so that all units are aware and understand the implementation plan.

Additional co-operation and communication among supervisors will enhance confidence, reliance and convergence of supervisory practices. And some reliance and convergence will be necessary if we want to avoid redundant work, inefficiencies in the use of supervisory resources and an excessive burden for the industry. We are placing great emphasis on all these issues in our "Accord Implementation Group", which is working together with many supervisors on what we call "real" case studies, and which is making good progress.

8. Conclusion

Let me take a few moments to draw some conclusions. What I have tried to do today is to highlight the anticipatory and forward-looking elements of Basel II. But, as with many things, I think that the real value of Basel II will be best evaluated with the benefit of perspective. This brings me back to our author of 2046.

It may be that Basel II does not cover all the areas and refinements that are necessary to complete the framework for financial stability. It may be that Basel II raises new issues and requires a lot of work to be implemented. However, it is my view that Basel II cannot be assessed in a static way.

I believe that we will need some time to be able to fully judge the real benefits of Basel II. In my opinion, the main strengths of the framework do not come from its quantitative regulatory requirements, although these are certainly important. Neither do I believe that the most fundamental aspect is when exactly the new framework will be implemented in different countries. This will just be a transitional issue.

One of the essential strengths of the incentive-based approach of Basel II is the dynamic way in which it will contribute to financial stability by promoting risk sensitivity and strong risk management practices across banks, reinforcing market discipline and enhancing cooperation. These are key elements, because, in the end, no regulation in itself can prevent problems in badly-managed banks.

And Basel II represents a tremendous opportunity for banks themselves. By stimulating them to upgrade and improve their systems, business models, capital strategies, risk management systems and disclosure standards, Basel II should improve their overall efficiency and ability to compete globally.

It is my view that, if supervisors and banks in 2046 look back at the evolution of financial regulation over the years, they may well think in terms of "before Basel II" and "after Basel II".