
# "FINANCIAL STABILITY AND IMPLICATIONS OF BASEL II"

## CONFERENCE PROCEEDINGS

**Hosted by**
**CENTRAL BANK OF THE REPUBLIC OF TURKEY**
**16-18 MAY 2005, İSTANBUL**

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## *FOREWORD BY THE GOVERNOR*

*I am very much pleased to present you the Proceedings Book of the "International Conference on Financial Stability and Implications of Basel II". Please accept this book as a token of our gratitude to all the speakers and delegates who supported the event with their presence and to all our colleagues who showed intense interest in this organization.*

*As it was repeatedly noted during the Conference, safeguarding financial stability has gained more importance and stepped forward among the priorities of all central banks. The main reasons of this are particularly the painful lessons derived from the crises of the last two decades and the increased complexity of the financial markets, institutions and their operations due to globalization, technological improvements and financial deregulation. We are now much more aware of the fact that a stable financial system is essential for the effective transmission of monetary policy and for the smooth operation of payment systems.*

*Today, the degree of sophistication in financial markets urge all market participants, including regulators and supervisors, to increase their focus on risk management in an effort to build more robust and sound financial systems and to position themselves to participate more fully in this complex and fast-paced financial environment. In that sense, Basel II, aiming at further strengthening of the soundness and stability of the international banking system, offers a unique opportunity to respond to all these concerns and to call attention to the main sources of risk and vulnerability that could pose challenges for the financial system stability.*

*Within this context, it is for sure that issues, which have been discussed and evaluated extensively during the Conference, will mark a significant part of the international supervisory agenda in the near future. It is my opinion that, coming together in such events provides the most appropriate environment to exchange information and to enhance cooperation. I hope that this book of proceedings, further to being a record of the three-day discussions, may act for all of us as a reminder of the importance of international cooperation.*

*I would like to express again, on behalf of the Central Bank of Turkey, our deepest gratitude for kindly supporting us to make this event a fruitful and worthwhile experience.*

*Süreyya SERDENGEÇTİ*
*Governor*
*Central Bank of the Republic of Turkey*

**CONTENTS**

## Day 2-May 17, 2005



## Day 3-May 18, 2005

# INTERNATIONAL CONFERENCE
# ON
# FINANCIAL STABILITY AND IMPLICATIONS OF BASEL II

In parallel to global financial developments and based on increased concerns towards risk awareness, significant efforts have been put forward to establish a sound and healthy banking system in Turkey in recent years. As a focal point for the Turkish banking system, significant changes for the Central Bank of Turkey have also been introduced, including enhancement of its independence and clear definition of "price stability" as its main goal accompanied by the very vital duty of maintaining financial stability.

Within this context and at this particular stage where global concerns have concentrated on financial stability issues as well as implications of Basel II on financial stability, we have decided to enrich our experiences with those of different countries and provide an international platform, with the participation of leading practitioners and academics, where we could exchange information and enhance cooperation.

To this end, the International Conference on Financial Stability and Implications of Basel II was held between 16-18 May 2005, in İstanbul. We had the pleasure of hosting almost 350 guests from 38 countries and more than 100 international and domestic institutions.

During the 3-day conference, 31 leading practitioners and academics shared with us their expertise on both financial stability and Basel II as speakers and moderators. Overall, the first day was planned to include general discussions on financial stability, the second was on Basel II with an end-of-day speech on financial crises to form a background for the third closing day, which involved more technical discussions on financial stability assessments.

Below you will find the transcriptions of all the speeches delivered during the Conference. For two speakers, instead of speeches, their recent papers are provided. For the Conference Agenda, the list of speakers and moderators and their resumes, as well as the power point or overhead documents referred by the speakers in their presentations, please refer to the Conference website at http://www2.tcmb.gov.tr/conference/.

## DAY 1

### Welcome Address by Süreyya SERDENGEÇTİ
### Governor-Central Bank of the Republic of Turkey

Minister, Governors,

Academicians and Guests,

I would like to welcome you to İstanbul today and thank you all for your participation in this conference. It is an honor for me to host such distinguished speakers and participants in İstanbul.

One of the features of the world economy back in the 90's was the financial liberalization of economies. The ambitious macroeconomic policies of many countries aiming at liberalizing capital accounts started in fact with developed countries in the late 70's and spread to developing countries in the late 80's and 90's.

Another feature of the world economy in the 90's was the acceleration of capital movements around the world, which I would say is also an outcome of the financial liberalization

policies. The comprehensive technological progress in areas of information, communication and computing also highly promoted this active movement of capital across national borders.

This impressive change in the global economic environment since the 80s has resulted in important changes in global financial markets. As the figures indicated, during this period, the global financial sector in general and the banking sector in particular developed much more than the real sector did. New financial instruments that were designed for the financing needs of firms provided new opportunities for companies. Hedging markets developed rapidly. All in all, financial engineering emerged as a new area of knowledge.

Dear Guests,

The aggressive capital movements among countries and developments in financial markets generated a number of economic benefits at the global level. When borders between countries have disappeared in favor of capital flows, funds flew to regions where capital had the highest return. So, it has been observed that competitiveness and productivity of capital in global scale increased considerably in the 90s. There has been also a substantial rise in the volume of global merchandise trade.

However, all developments that I mentioned now represent only the front side of the medallion.

The back of the medallion has not been as bright as the front. In the 90's, not only the scope, timing and speed of the financial liberalization varied across countries, but also the consequences of economic policies had various effects on national economies, depending on the initial conditions and country specific factors. Hence, the rapid increase in capital movements among countries shook the financial markets from time to time, led to financial and banking crises in many countries and, even more importantly, caused the crisis in one country to spread to others.

In 2003, Caprio and Klingebiel reported 117 episodes of systemic and highly costly financial crises in developed and emerging market countries since the late 1970's[1]. The resulting costs for economies in terms of fall in GDP have reached even double digits and had a significant impact on the welfare of societies, especially in developing countries, and again especially when banking crises coincided with currency crises.

[1] Caprio G. and Klingebiel, D. (2003). Episodes of Systemic and Borderline Financial Crises. World Bank Database.

In addition to high incidence of "traditional" banking crises, the period also saw certain unusual episodes of financial distress with potentially damaging consequences for the real economy operating essentially through capital markets. This has been most evident in the United States, where non-banking intermediation has developed furthest[2]. Starting in the late 80's, examples included the banking crises in Nordic countries, Japan, some Latin countries and East Asia.

Along with excessive capital flows, economic research in recent years has identified a variety of market imperfections such as moral hazard and asymmetric information that, if widespread and significant, can threaten the smooth functioning of financial systems and lead to panic behavior, bank runs, asset price bubbles, excessive leverage, and inadequate risk management.

As Mr. Aninat (Former Deputy Managing Director of IMF) said once, and I'll quote his own words**,** "Historical experience shows that financial crises are here to stay; and dealing with unfolding crises in real time poses perhaps the most demanding and certainly the most stressful challenge to any central banker"[3].

As a result, it is widely accepted that financial stability is an important issue for policy makers that they basically cannot ignore.

Furthermore, economic literature and experiences of countries also showed that in order to reach sustainable growth and sustainable increase in employment, the key components of the economy are, in addition to indispensable price stability, a sound financial system and a financially stable environment.

Dear Guests,

For the efficient allocation of resources in an economy, financial intermediation should also function efficiently so that firms can find sources to produce more. As we keep dwelling on the banking sector particularly, banks play a vital role in the economy, matching supply of capital with demand, so knowing how a downturn affects these institutions is important in understanding national economies' dynamics[4].

[2] Borio and White. (February 2004). Whither Monetary and Financial Stability? The Implicaitons of Evolving Policy Regimes. BIS Working Papers. No. 147.
[3] Aninat, Eduardo. (2003). Foreword. Challenges to Central Banking from Globalized Financial Systems. IMF.
[4] Schuerman T. (2004). Why Were Banks Better off in the 2001 Recession? Current Issues in Economics and Finance. FEDNY. Vol. 10. No: 1.

Developments in financial markets have two important implications on the global economy and economic policies: Firstly, stronger a country's fundamentals are, less vulnerable it is to distortions caused by intensive capital movements. Hence, the importance of macroeconomic stability and strong fundamentals.

However, contrary to the general belief, turmoil in global markets in the 90's also showed that macroeconomic stability in general or price stability in particular does not necessarily guarantee financial stability. As historical evidence suggests, it is possible for financial imbalances to develop even in an environment of stable and low inflation.

Therefore as the second implication, it is impossible to avoid crises without discipline in financial markets. Then it naturally follows that the risk management developed as a distinct banking discipline in the 1990s. New tools and methods to manage the market and credit risk were developed, and brought about a dramatic increase in the volume of capital movements in the financial sector and variety of instruments. Efficient supervision became the vital part of this internal discipline.

I should also admit that, as financial engineering contributes to development of new and complex instruments, such instruments also create obstacles to supervisory authorities given their sophisticated structures.

As a result, a long debate started among both academics and policy makers as to whether the objective of price stability or financial stability should take priority for a central bank. I do not want to take sides in this debate. We, central bankers, are responsible for providing a stable economic environment, in which the economy operates efficiently in the long run. And prerequisites for a stable economic environment are both price stability and financial stability. So, there is always a strong reason for keeping financial stability in the central banks' reaction functions.

Therefore, these two objectives are not in conflict in the long run, but are complementary to each other. Accordingly, financial stability has increasingly become an auxiliary objective of central banks to pursue.

In fact, central banks' role in times of financial instability is not a new issue for the economic literature. The term "lender of last resort" originated in the writing of Sir Francis Baring in 1797. In his book, "Observations on the Establishment of the Bank of England", Sir Baring referred to the Bank of England as "the dernier resort" from which all banks could obtain liquidity in times of crises. But the concept of lender of last resort had been described and

used in a more comprehensive manner by both Henry Thornton in 1802 and Walter Bagehot in 1873.

Distinguished Guests,

I will add a point to the discussion that the benefit of having a strong financial system in an economy eliminates the ground for conflict in policies between financial stability and price stability. Since a strong financial system increases the efficiency of monetary policy on one side, it also provides elasticity for the economy to overcome external shocks easier on another. On the other hand, it is almost impossible to attain financial stability in the long run without maintaining price stability. Furthermore, price stability attained through credible monetary policies is an advantage in times of increasing uncertainty in the financial system and financial imbalances.

I should also mention that policies for financial stability not only mean measures taken in times of crises, but also consist of rules for maintaining financial stability in the long run. In the area of prevention of financial instability, perhaps the single most important thing a central bank can do is to foster a macroeconomic environment of low and stable inflation and sustainable economic growth.

Providing price stability is therefore a must but it is definitely not enough in itself to keep financial markets on track. Either central banks or other authorities in charge have to take measures and put harmonized policies into practice to maintain financial stability.

Within this framework, it is possible to mention three main functions for central banks to maintain financial stability: The first one is monitoring the financial system. The second one is running the country's payments system. And the third one is taking necessary measures for crisis resolution. Central banks also publish regular financial stability reports based on innovative in-depth analysis of financial vulnerability.

Dear Participants,

Before proceeding with the Turkish case, I want to address some issues about international cooperation in favor of sustaining financial stability and particularly a strong financial system on a global level. I will, however, not go into so much detail of evolution of the international efforts and criteria formed by international institutions, since many of you here today are not only well informed about the issue, but also largely contributed to these efforts.

The most important result of international efforts aiming at sound financial markets was the approval of modern risk management techniques as a part of regular financial intermediation process.

In this context the Basel II, the new capital adequacy framework, is a very important outcome of the action taken in the international arena. Although, the main aim of the original Basel Accord, which was applying institutionalized and international standards to the global financial system, has not changed in the Basel II Accord, the Basel II puts more emphasis on the risk management aspect of the financial intermediation process. It is expected that a sound and resilient risk management in the banking sector would also lead to more efficient risk management in the real sector. Therefore, in this way, as the financial system becomes more stable, less pro-cyclical and reinforced against shocks, more sources will be available for the real sector.

However, it should also be considered that healthy and efficient risk management requires more than the three main pillars of the Basel II Accord. A good understanding of the risks that a financial institution might encounter, a clear definition of risk taking procedures, compliance of risk taking decisions with the strategic goals of the institution, ensuring the risks are within the limits that were set by the management and adequate capital for given risk structure are other essential elements for a more significant advance in risk management in financial institutions.

Additionally, the Basel II is also significant due to its effect on the increase in transparency of the banking sector. As you may agree, the more transparency there is in the banking sector, the less probable systemic risk will be.

All these steps will certainly provide a mechanism that is designed to allocate resources effectively, initially financial resources but ultimately real resources. Hence this will contribute to the strength and efficiency of the economy as a whole.

Dear Guests,

Having touched on the notion of financial stability, financial markets and banking sector in the world economy, what I intend to do now is to familiarize you to some extent with the Turkish experience in this area. First of all, I will concentrate on developments in the financial system in Turkey in the 90's. Secondly, I will talk about the 2000-2001 crises. Finally, I will describe the implementation, in terms of financial stability, of the Central Bank of Turkey's monetary policy.

In order to give the appropriate point of view about the development of the Turkish economy and especially the financial sector in the 90s, I'll have to highlight the basic structure of that period in the Turkish economy.

The financial liberalization process that started in the 80s was one of the cornerstones of the Turkish economy. A set of reforms for developing a functioning market economy was put into practice. Interest rates were more and more determined in the markets, and some measures were taken regarding the supervision of the banking sector. However, before taking the necessary actions for strengthening the domestic financial markets, such as measures for more transparent balance sheets and more careful risk management in the intermediation process, the capital account was liberalized at the end of the 1980s. The Turkish economy with an inefficient banking sector became open to intensive capital movements.

In my view, the Turkish economy turned into an open one before it became strong enough to cope with capital movements that would occur in the 90s. The sequencing of reforms for the Turkish economy in general and its financial system in particular should have been set differently.

What went wrong in the Turkish economy in the 90s? Policies did not concentrate on ensuring and maintaining macroeconomic stability; different priorities, delayed reforms, loose fiscal policy and accommodative monetary policy led to dynamic instability throughout these years. As a result, inflation climbed to 79 percent on average, budget deficit widened so much that the public sector borrowing requirement reached 15.5 percent of the GNP by 1999, the output growth was very low on average and volatile compared to other emerging markets.

So, poor macroeconomic fundamentals and a fully liberalized capital account brought about vulnerability of the economy to external shocks and the Turkish economy faced severe financial crises and turbulences in the 90s.

Such an environment had also important implications on the financial system. Having suffered from the reckless and unstable macroeconomic management together with inefficient supervision, the system deteriorated severely and faced a serious moral hazard problem.

Dear participants,

A closer look at the Turkish financial system would be helpful to characterize its weaknesses and structural problems during that period. First of all, because of the high public sector borrowing requirement, fiscal dominance increased considerably in the financial markets and led the public sector to crowd out the private sector. Hence, the relationship between the

banking sector and real sector could not develop, as it should have done. Instead, the relationship between the banking sector and the public sector strengthened year after year.

Secondly, the banking sector as a whole failed to exercise good risk management in its credit allocation. Since financing the public sector budget deficits with high real interest rates was an easy way to make profits, banks did not pay much attention to basic principles of risk management, such as maturity and currency mismatches. Some banks also created considerable amount of connected-loans in their balance sheets. On the public banks side, more specifically, which had a high share in the overall sector, banks were heavily used to support government policies and credits were allocated inefficiently, which resulted in big losses and weakened their capital structure.

Lastly, in the 90s, regulatory and supervisory measures and changes in the structure of the financial system in the Turkish economy were not designed for strengthening the system in the long term, by incorporating elements such as prudent supervision, institutionalization of regulation, etc. Instead, the measures mostly sought daily solutions to the problems. As you know well and the research in the area suggests, *"Actions to deal with crisis can clearly lead to future moral hazard. If any protection provided to banks in a crisis is greater than they expected, this could increase their risk taking and [the possibility of another] crisis in the future."*[5] As Bagehot also put it, *"any aid to a present bad bank is the surest mode of preventing the establishment of a future good bank."*

In my opinion, the 100 percent blanket guarantee that was brought as a part of crisis resolution during the 1994 crisis, but kept in effect until very recently is a good example of this. The measures taken during the 1994 crisis unfortunately paved the way for the moral hazard behavior in the banking sector.

All of these distortions in the banking sector and institutional structure of the financial system led to important systemic risks in the Turkish economy. As the 1990s were over, it was impossible for the Turkish economy to operate without reforming its financial sector.

Therefore, the restructuring program for the financial sector was launched as a component of the exchange rate based disinflation program in 2000. The Banking Regulation and Supervision Agency (BRSA) became operational in August 2000 as an autonomous body in order to strengthen the prudential regulations and to improve the quality of banking

[5] Hoggarth, G. Reidhill, J. Sinclair, P. (2004). On the Resolution of Banking Crises: Theory and Evidence. Bank of England Working Paper. No.229.

supervision. The Banks Act was amended to simplify and bring the supervision standards in line with the EU directives, international practices and the core principles stated by the BIS.

However, the reform process was not continued in line with the pre-determined schedule and broke down during the 2000 and the 2001 crises. The process could only be restarted again after the 2001 crisis.

Dear Guests,

If I have to describe the crisis in the Turkish economy in 2000- 2001, I would prefer to describe it as the result of accumulated structural distortions in the economy. These distortions in the economy put pressure on the pegged exchange rate regime and, along with the credibility problem due to the bad track record of policies, resulted in first banking and then currency crises. In other words, the 2001 crisis started as a banking crisis, then it turned into both banking and currency crisis.

Dear Guests,

As I have mentioned several times in my speeches, in Chinese the word crisis also means opportunity. The Turkish economy nowadays is showing signs that, after all those hectic years, opportunity to stabilize it was finally seized.

Policies and measures that were put into practice after the 2001 crisis were not limited to simply practices of crisis management in the short term. Steps were taken in order to remove distortions in the Turkish economy, to renew the financial system and to change the dynamics of the economy with the purpose of achieving price stability, sustainable public finances and sustainable growth in the long run.

First of all, right after the 2001 crisis, economic policies aimed, in the short run, at maintaining financial stability and convincing market participants that sound macroeconomic policies would be put into practice with determination in order to solve the problems of the economy.

In my opinion, the most critical change that came after the 2001 crisis was the amendment to the Central Bank Law. The Central Bank of Turkey has been given independence after a period of 30 years of high and chronic inflation. The primary objective of the Bank is now defined as achieving and maintaining price stability. It was a turning point in the economy and highly contributed to the changing dynamics in the Turkish financial system.

In addition, it is now explicitly indicated in its law that financial stability is the Central Bank's auxiliary objective, and the Bank gives utmost importance to maintain it.

In the fourth article of the Law, the Bank's responsibility of financial stability is defined within the framework of the functions of central banks that I mentioned before. The fourth article of the Central Bank Law states that the Bank is responsible " to monitor the financial markets; to regulate the volume and circulation of the Lira, to establish payment and securities transfer and settlement systems and to set forth regulations to ensure the uninterrupted operation and supervision of the existing and future systems and to determine the procedures and conditions of reserve requirements and liquidity requirements by taking into consideration the liabilities of banks and other financial institutions as deemed appropriate by the Bank."

In this article it is also stated that the Bank will take measures for enhancing the stability in the financial system and take regulatory measures with respect to money and foreign exchange markets as well. Hence, The Bank is equipped to take necessary measures in times of external shocks and in fact proved that during the 9/11 event and also the Iraqi War in 2003.

Distinguished Participants,

After the 2001 crisis, besides amendments in the Central Bank Law, many steps were immediately taken to strengthen the financial sector. At first, the "Banking Sector Restructuring Program" was put into practice in May 2001. The main goal of the program was to eliminate the distortions in the financial sector, improving its intermediary function and thus enhancing its competitiveness by international standards.

Within this framework, restructuring public banks, strengthening private banks, solving the problems of the troubled banks taken over by "Savings and Deposit Insurance Fund" and strengthening the regulation and supervision of the banking sector were among the priorities of the program. And, for improving the asset quality of the system, a debt restructuring process was put into practice, named as the "İstanbul Approach". The sector increased its capital and decreased foreign exchange open positions to a great extent.

Hence, right after the 2001 crisis, the authorities intervened into the system in order to prevent a total collapse of the system. This operation had cost around 21.7 billions in New Turkish Lira – more than 12 billion Euros at current rates- or in other words, 12.1 percent of GNP. Firstly, the Treasury and the Central Bank have injected liquidity to public banks. Secondly,

the Central Bank started foreign exchange sale auctions on a daily basis to provide foreign exchange liquidity in exchange for some of the excess domestic liquidity to the system so that they could close their open positions in foreign exchange. The Central Bank also used open market operations to withdraw the remaining still excessive liquidity from the system to prevent hyperinflation. Thirdly, to provide more room to the banking sector for liquidity management, measures were taken regarding the reserve requirements of the banking sector. The Central Bank started paying interest to banks' required reserves.

The stability of the banking sector has been further strengthened by the ongoing reforms and boosted both mergers and acquisitions and foreign bank participation to the sector. The volume of the banking sectors' credits to non-financial sector rose by more than 70 percent in real terms and the sectors' profits increased by a considerable amount since 2002; capital adequacy and loan quality of the sector also improved.

As of today, efforts towards increasing the consistency of the legal framework with the EU, completion of the restructuring process and then privatization of the public banks and development of modern risk management are on the agenda.

Distinguished Participants,

Today we not only have a stronger banking sector, which forms a basis for macroeconomic stability, but we also see remarkable progress in the Turkish economy in general. With the stabilization program that was launched in May 2001, great progress toward macroeconomic stability was made, especially in the disinflation process and recovery in growth.

As the inflation rate is regarded as a signal of the quality of economic management, the achievement in the inflation front in the Turkish economy is among the most significant examples of progress toward better macroeconomic fundamentals. Single digit inflation was reached after a period of more than thirty years of high and chronic inflation.

Additionally, as inflation targets were attained in 2002, 2003 and 2004, and thanks to a sound communication policy, the public in general now believes in the determination of the policy makers to fight against inflation. As a result, policies have gained credibility and the inflation target has become a more credible nominal anchor for economic agents. This in turn has strengthened the disinflation policy and ensured its continuity.

As another development, the Turkish economy has been enjoying high rates of growth for three consecutive years in the falling inflation environment. The GNP growth rate was 9.9 percent in 2004. Accordingly, the real growth rate compared to 2001 was 25.5 percent.

However, even more important than achieving high growth rates, dynamics of growth in the Turkish economy are now changing. Now, growth is mainly driven by the productivity increase, comes from the private sector and increase in exports. This provides confidence regarding achieving sustainable growth rates in the future.

I want to emphasize that, not only recent developments in macroeconomic fundamentals but also the commitment to prudent policies in the medium-term economic program, prospects of EU membership and the new standby agreement with the IMF help the Turkish economy to operate in equilibrium of good expectations.

Dear Participants,

I want to mention that the Central Bank's commitment to start full fledged inflation targeting in 2006 will deliver extra confidence to economic agents in terms of prudent policies. The full fledged inflation targeting regime will bring more transparency to the actions of the Bank and also enhance the communication policy that the Central Bank put at the center of its policies since the 2001 crisis. As the transparency and institutionalization are critical qualifications of prudent policies to attain a sound macroeconomic environment, the implementation of full-fledged inflation targeting will certainly support further macroeconomic and financial stability in the Turkish economy.

Dear Guests,

As a central banker I must confess that conducting monetary policy in an uncertain economic environment is not an easy task and never will be. Distortions in the financial system further increase the uncertainty in the functioning of the economy, and the reform process in the financial system is in fact never-ending to sweep away these uncertainties. Therefore, there will always be steps to be taken toward attaining more transparent and efficient financial markets. And policy coordination between institutions on international and national levels will certainly be the most important aspect of this dynamic process.

Thank you very much.

## Opening Address by Ali BABACAN

## Minister of State

Distinguished participants, ladies, gentlemen and members of the press;

I would like to begin my speech by stating that I am very glad to speak in front of such a distinguished audience gathered for the Conference on Financial Stability and Basel II.

During the recent years, there has been a very important transformation process in Turkey. Considering the position of Turkey in the globalized world, I would like to emphasize that this transformation process requires close attention.

In the first part of my speech, I would like to share my comments on this transformation process. In the second part, I would like to make some remarks and assessments on financial stability and Basel II, especially its implications on the Turkish financial system.

Distinguished guests, it is possible to summarize this transformation, accomplished with an increasing pace during last years, under two main headings. The first step of this transformation would be the political reforms and the second step would be the economic reforms. The political reforms were realized mainly within the framework of the Copenhagen Criteria of the EU. The EU is a union formed around common ideals and values. At the same, it is the most essential peace project put forward since the Second World War. Especially after 9/11 Event, the transformation process in our region, encompassing the Middle East, Central Asia, North Africa, all in the vicinity of Europe, has become inevitable. The direction of this transformation has great importance for the whole world. The political reforms realized in Turkey, in other words, democratization, strengthening the principle of human rights and freedoms and our success in this transformation process will give some essential signals regarding the direction of the relations among civilizations. A well-functioning democracy in a country definitely sets a good example for other countries. We give special attention and importance to this political reform process for not only Turkey or for another country to be a

member of the EU, but also for the political reform process to take place in the whole world. In the future, the EU will be a union in which civilizations can meet peacefully. And this peace project will be not only for a specific region, but also for strengthening world peace. Turkey's full membership to the EU will increase the strategic aspect of the EU. It will also have great importance for the stability and the security in the EU.

At the EU Summit on 17 December 2004, there was a consensus that Turkey's political reforms had reached a level passing the critical threshold, so that Turkey got the right to start full membership negotiations on 3 October 2005. Consequently, Turkey has entered a brand new era that cannot be compared to another period. Political stability is a *sine qua non* for economic stability. It is useless to look for economic stability, financial stability or, in a narrower perspective, price stability in an environment where huge political turbulences and political crises occur. Especially during the last 2.5 years, Turkey has reached strong political stability under the single party government. However, the stability accomplished during the last few years, by itself, is not an important achievement. What is important is having a long-term sustainable stability. From this perspective, we give special importance to the EU accession process. This process will be a guarantee for the long-term political stability in Turkey, and also this essential reform process will become irreversible.

Distinguished guests, as for the economic reforms we have performed, there is a general opinion that Turkey's success in these reforms has exceeded expectations. This is not only the opinion of our government but also the common opinion of many international institutions and bodies making independent assessments.

For many years, Turkey has experienced very difficult periods. For three generations, in other words, during the last 30 years, there has never been a single-digit inflation figure. The average inflation rate of the last 10 years is 70 percent, but following that annual inflation rate, in 2003, it was 18.4 percent, and in 2004, it is 9.3 percent during our government. For this year, our target is to attain 8 percent inflation rate, and market expectations already indicate 7.6 percent.

Moreover, budget deficit has decreased seriously during the same period. In 2001, the budget deficit/GNP ratio was 17 percent; this year, same ratio has decreased to around 4 percent. This ratio covers not only the central government deficit but also the whole public deficit. The figure will be below 3 percent this year and next year. This threshold is a figure that EU full member countries and even countries in the Euro-zone are trying to stay below; some of these

countries have exceeded this threshold in 2004. Turkey will have met the first Maastricht criteria next year, namely in 2006. If we also consider our public debt/GNP ratio in net terms, we reduced this ratio from 90.5 percent in 2001 to 63.5 percent as of 2004. And this ratio will be below 60 percent no later than 2007. In other words, Turkey will meet the second Maastricht criterion in a very short period of time. After these, we will see the inflation figure and afterwards the interest rates. In a very long time before being a full member of the EU, Turkey will have had an economic data set required not only for being a full member country but also for being a Euro-zone country.

Nowadays, as you know, there are many concerns and opinions about Turkey's full membership. These views vary from country to country, but the main concern is whether Turkey will have a satisfactory performance in economic terms. I would like to stress clearly that when the time comes for a political decision about Turkey's full membership, Turkey will be a very strong country regarding many economic indicators. Turkey will not be a burden on Europe, but it is going to be a country ready to take over part of the burden on Europe. The growth potential of the European economy for the next 10 years is almost certain. The forecast is about 2 percent annually. However, Turkey will have a very huge growth rate and the gap will be closed in a very short time.

At the beginning of the establishment of our government, even before the elections, we faced important criticisms about our planned fight against inflation. They used to say that if we were to pursue disinflation, we would have to understand that growth would stop, unemployment would rise along with many other difficulties. In fact, it was also recommended to continue to live with inflation, for Turkey had been used to living with high inflation for 30 years, and there was no need to assume the political responsibility. They said we were entering a difficult era in which unemployment would increase; the economy would shrink or stop growing. We heard many similar criticisms. However, we were determined and we knew that high and unpredictable inflation was the biggest obstacle to growth, for the Turkish economy could not be compared to other stable economies. In economies where inflation is between 1 percent, 2 percent and 3 percent, the attempts to decrease inflation may result in lower levels of growth rates. However, in Turkey, the main impediment in the achievement of higher levels of growth rate was high and unpredictable inflation that was resulting in high real interest rates. We were aware of this fact.

The last Treasury auction that had took place just before our government was established resulted in 66 percent nominal interest rate and the real interest rate was 34 percent. You

cannot achieve sustainable growth with a real interest rate of 34 percent. First of all, we should be aware of this reality. We have rejected all other approaches. We know what is good for Turkey and we, to a large extent, have declared that.

Before the elections, we wrote these in detail in our official party policy. In the speeches we have made in Turkey and abroad, we have clearly declared what we are going to do and what we are not. We have said that Turkey's debt stock is high and it should be decreased; Turkey should defeat inflation and Turkey should decrease interest rates. Real interest rates should decrease rapidly. A foreseeable economic environment is required. To sustain these, serious budget policy implementation is a must. High primary surplus policy is required. Before the elections, we were the only party declaring that Turkey should have higher primary surplus through our official announcements. Strict budget policy together with monetary policy carried out by an independent central bank is extremely important. Yes, political stability is a must; strict budget policy is a must. These are the main pillars, but an independently implemented monetary policy dedicated to price stability is also a must. This can only be achieved by the independence of the central bank, which unfortunately was delayed until recent years.

We are a government dedicated to these goals not only in our political discourse but also in our hearts, and we have been implementing these measures strictly and without compromise for 2.5 years. And this decisiveness is an important guarantee of the developments to take place in Turkey.

In the last December, we declared a 3-year economic program and some targets. Growth rate target is 5 percent and this is in terms of GNP growth. In 2003, it was 5.9 percent; in 2004, it was 9.9 percent, and main source of the growth was private sector. I mean that this growth is not a product of budget deficit or monetary expansion; this is a private sector achievement. In 2005, 5 percent growth rate is an acceptable level, but it can easily exceed this level. If private sector is more active, works harder, makes more investments, then growth rate can be more than 5 percent. Nevertheless, our government did not put itself in adventurous policies by setting higher levels of growth rate. We had to set coherent, prudential and attainable goals. We put 5 percent growth rate and 8 percent inflation rate targets. But today, inflation expectations are lower than 8 percent; it is 7.6 percent. Growth expectations are higher than 5 percent; it is now around 5.5 percent. At this time, according to the Central Bank expectation surveys, real sector and financial sector actors' growth expectation is 5.5 percent. On the other hand, there are some independent analysis institutions expecting higher rates than these.

If you ask me factors, reasons behind these economic achievements in Turkey, and if I need to express the main source of development exceeding expectations, my answer will be "confidence", that's being foreseeable, coherence of policy implementations, continuity, not changing decisions overnight, not making any concessions on certain issues, not even allowing discussions on issues contradicting our main policies. For instance, capital movement is free in Turkey. There is no restriction, no tax on capital movements, and there will not be. This is an issue on which we never enter into discussion. Other one is floating exchange rate regime. We will never turn back to another regime. These are the main policies of Turkey. We do not even enter into discussion on these fundamental issues. Transparency is also very important. The rule here is that policies should be transparently declared and the declared policies should be implemented. Such reform policies are also important for the budget implementation.

Also, in line with these macroeconomic developments, Turkey is constantly changing in terms of microeconomic areas. There is a new foreign capital law in Turkey. We put it into effect in 2003. Now, we do not differentiate between foreign and domestic firms. As far as a firm is established in Turkey, it is not important for us whether its shareholders are domestic or foreign. This is also true for the banking sector and it will not change. We have a new law on banking in the Parliament. There is no differentiation there either. We think that in a growing banking sector that needs fresh capital, there should not be any differentiation at all.

Distinguished guests, we have made structural reforms regarding the issues closely related to the activities of public, private and financial sector to preserve the positive developments in the Turkish economy. These reforms are significant with respect to strengthening of the market mechanism, increasing the international competitiveness of our economy and aligning to EU standards. At the point we have reached, we should strengthen financial stability. Due to the emergence of new financial instruments and increase in the transaction volume in the international system, the concept of "stability" gains importance. Although there may be minor differences in practice, in all developed countries, financial stability, whose real meaning is the strong relationship between real economy and financial sector, is the basic goal following price stability. To achieve financial stability, 3 pillars should be attained. 1- the establishment of sets of rules in the financial system in a necessary regulatory framework, in other words, the disclosure of the rules of game, 2- an effective supervisory framework and an independent supervisory authority, 3- financial sector reforms to enhance competition. Now, I would like to talk about our financial reforms aiming at financial stability. First of all,

achievement of EU standards regarding banking regulation and supervision is important for Turkey. In this reform process, strengthening of private banks and reconstruction and privatization of public banks are at the front. Thanks to ongoing process of reconstruction and rehabilitation of banks, we aim that the sector reaches a more resilient structure and it enhances the finance of growth. Within this framework, private and public banks have adequate capital adequacy ratios and manage their risks more prudently. It is true that many banks in the past had to be closed. Many especially private banks were eliminated from the system. But now, with the existing strong banks closely monitored in terms of FX risk, banking system has adequate capital and has no FX risk.

Until 5 July 2004, blanket guarantee had been provided in the banking sector. This insurance was not only for deposits; it used to cover all the banking liabilities and was implemented for 10 years. It distorted the competition environment, which was the main reason for the Turkish banking sector to be only 70 percent of GNP. We abandoned this implementation on 5 July 2004.

Now, the guarantee covers only savings deposits. The upper limit of this insurance is YTL 50,000, per depositor and per bank, approximately 25-30 thousand Euros. We think that this is also high for Turkey. And in time, our approach is to diminish this level. Moreover, in 2006, together with the IMF and the World Bank, we will initiate FSAP (Financial Sector Assessment Program). In other words, our banking system will be more transparent, open and compliant with international standards. This program will increase the international confidence to our banking system. The bank-restructuring program together with the general economic improvement, positively affected the asset quality, credit quality and capital adequacy of our banks. For instance, in 2001, capital adequacy ratio of the banking system was 8 percent. At the end of 2004, it increased to 28.4 percent. Similarly, the share of credits of deposit banks in total assets increased rapidly from the historically lower levels experienced in 2001 and 2002. Risk management capacities have significantly improved and compared with 2002, non-performing loans as a percentage of total loans have decreased.

Another important issue is that as public sector borrowing requirement decreases, more resources become available for the corporate sector, and significant growth is achieved in the loans extended to the private sector (corporate loans, credit cards). It is also important for the government to reduce its dominance in this area.

Another important issue is that Turkish economy is dollarized. Especially, considering aggregate investment instruments, deposits, equities, bonds and mutual funds, the share of foreign exchange investment used to be 50 percent. Today, the composition has changed to 70 percent YTL and 30 percent foreign exchange. Turkey is going through a phase of reverse currency substitution. At the moment, a draft law on banking is being discussed at the Parliament in commissions. We expect that it will be discussed in the General Assembly soon and become effective before the Parliament takes the summer break. With this law, we will regulate the bank ownership, coordination of regulation and supervision of banking sector much more comprehensively. There are two important taxes in financial intermediation in Turkey. They are Banking Insurance and Transaction Tax (BITT) and Resource Utilization Subsidization Fund (RUSF), laid on loans extended by banks. In order to decrease intermediation costs, these taxes will be reduced gradually. We have explicitly announced this in our second economic program. If we do not encounter serious budgetary problems by the end of 2007, we are planning to abandon these taxes as of 2007. This is an important issue for the growth of our banking sector. Currently, the ratio of our banking sector assets to GNP is 70 percent, and there is no reason impeding this ratio to increase to 100 percent, 150 percent or 200 percent, which means that the banking sector assets might grow threefold. As I have mentioned before, a larger banking sector requires larger capital. In Turkey, we may not be able to generate this much of capital. Therefore, international capital is very important for the development of our banking sector.

Dear guests, Basel II, which supports corporate governance, contributes to the development of risk management systems and urges banks to align their capital with the risks they take, is a very important opportunity for establishing a more sound and efficient banking system in Turkey. On the other hand, due to the fact that Basel II will be applied in European Union countries by the implementation of Capital Adequacy Directive, it will also be a very important item of the agenda for our banks during European Union membership negotiations. Since Basel II will inevitably affect all decision-makers in the economy, all parties will assume roles in the adjustment period. In this respect, we carry out the work regarding the effects of Basel II on government borrowing, the regulations regarding the adoption of risk focused supervision and the effects of Basel II on financial stability in the process of inflation targeting. BRSA should work on a roadmap for transition in cooperation with the related authorities and institutions.

Dear guests, as a result of risk management culture that Basel II emphasizes, our banks will have to adopt modern risk management techniques in the medium and long term. As the banking sector becomes more resilient to external shocks, it will certainly become more efficient in transferring funds to the corporate sector. In this process, the corporate sector firms, especially the small and medium-sized enterprises, will have to reconsider their corporate management principles and financial structures and be open to change. At this point, there is a need to underline an important issue, especially for the corporate sector institutions and small and medium-sized enterprises. In the period ahead of us, the structure of our banks, risk management and credit extension processes will go through a significant change. In Turkey, there are many small and medium-sized enterprises and even large enterprises that are unregistered. Banks in Turkey face difficulties in making a performance based evaluation as they extend credits to the corporate sector. The balance sheets and income statements do not reflect the real position of the firms. Banks try to obtain information in different ways, and unless they get collateral that has a value 2-3 times more than that of the loan to be extended, they do not make transactions. The relationship between the unregistered firms and banks in Turkey will become much more difficult in the coming period. Especially, as a result of implementation of Basel II, unregistered corporate sector firms will face serious difficulties. The world is changing now and Turkey is about to enter a new era. In order for the real sector to overcome these difficulties, the unregistered transactions need to be registered.

Dear guests, all these developments will support sustainable improvement and will ensure the maintenance of the achieved stability.

Thank you.

**Speech by Jaime CARUANA**
**Governor-Bank of Spain**
**Chairman-Basel Committee on Banking Supervision**

## Introduction and Overview

Thank you, Governor Serdengeçti, for your kind words of introduction and your opening remarks on what promises to be a timely and interesting conference. I am honoured to have the opportunity to share with you some thoughts on two related topics that are near and dear: financial stability and the Basel II capital framework.

As I will be discussing this morning, the financial sector and banking supervisors are in the midst of a period of great change. Change and growth must be second nature to this great city on the Bosphorus, where the remains of the Roman, Byzantine, and Ottoman Empires reside within a modern, forward-looking city. İstanbul has thrived over the centuries in the face of constant evolution, and today serves as a bridge between Europe and Asia, east and west, ancient and modern. Of course, the challenges of Basel II cannot truly compare to the development of a city with almost 3,000 years of history, but certainly İstanbul seems to me a very appropriate place in which to discuss the role of banking supervisors in a rapidly changing world.

My talk this morning will address several issues. First, I will talk about why the Basel Committee developed the Basel II capital framework and what it intends to accomplish. Second, I will share some thoughts on how prudential banking supervision contributes to the stability of the financial system. Next, I will discuss how I see Basel II contributing to financial system stability. Finally, I will offer some thoughts on steps countries can take in preparation for adopting Basel II.

But let me advance the main conclusion of my presentation:

In a nutshell, I think that the new capital framework represents a significant step towards achieving a more comprehensive and risk sensitive supervisory approach. Basel II is about much more than just setting better quantitative minimum capital requirements. It is about establishing incentive-based approaches to risk and capital adequacy management, within a comprehensive framework of three mutually-supporting pillars. In my view, the combination of better risk management, a stronger capital structure and improved transparency standards in the banking system can significantly improve financial stability.

**Why Basel II?**

Let me begin with an overview of the Basel II capital framework, which was released in June last year. As you may be aware, Basel II has probably attracted more public attention than any other banking supervision reform. While I will not go into the details of the new framework, it is important to spend a few minutes talking about what the Basel Committee hopes to achieve with Basel II.

Any discussion of Basel II should probably start with the 1988 Basel Accord, which established the first internationally accepted definition and measure of bank regulatory capital. In many ways, the 1988 Accord was a tremendous success story. It was adopted in over 100 countries, and contributed to the strengthening of bank capital at a time when a number of countries had experienced problems in their banking systems. It has become one of the benchmark measures of a bank's financial health.

While the simplicity of the 1988 Accord helped to foster its widespread acceptance, that simplicity has become a liability for some banks and supervisors. Almost 20 years later, industry developments in risk measurement and management have widened the gap between the regulatory capital measure under the 1988 Accord and the internal capital measures used at many internationally active banks. More sophisticated technology and telecommunication, as well as market innovations, have enabled banks to better measure and manage their risks. As a result, the Basel Committee determined that a new capital framework was needed that would address these developments for the most complex and sophisticated banks, but that would also be appropriate for less complex banks. The Committee also determined that the new capital framework should provide incentives for banks to improve their risk management practices without reducing the overall level of capital held in the banking system.

Basel II, in my view, is fundamentally about better risk management and corporate governance on the part of banks, as well as improved banking supervision and greater

transparency. It is also about increasing the stability of the global financial system, to the benefit not only of banks, but also consumers and businesses.

The new capital framework attempts to achieve these objectives with three mutually reinforcing pillars. The first pillar aligns minimum capital requirements more closely with banks' actual underlying risks. Qualifying banks may also rely partly on their own measures of those risks, which will help to create economic incentives to improve those measures. In concept the first pillar is similar to the existing capital framework in that it provides a measure of capital relative to risk. What is new are the second and third pillars.

The second pillar – supervisory review – allows supervisors to evaluate a bank's assessment of its own risks and determine whether that assessment seems reasonable. It is not enough for a bank or its supervisors to rely on the calculation of minimum capital under the first pillar. Supervisors should provide an extra set of eyes to verify that the bank understands its risk profile and is sufficiently capitalised against its risks.

The third pillar – market discipline – ensures that the market provides yet another set of eyes. The third pillar is intended to strengthen incentives for prudent risk management. Greater transparency in banks' financial reporting should allow marketplace participants to better reward well-managed banks and penalise poorly managed ones.

That, in sum, is what Basel II is all about. I believe that the incentives for better risk management that are built into the new capital framework, and the flexibility to adapt the framework to local needs, will ensure its validity. I also believe it marks a major step forward in the right direction, and that it will contribute to a more resilient and stable banking system that is capable of promoting sustainable economic growth.

The Committee recently announced its intention to verify that Basel II meets our long-stated objective of maintaining the overall level of capital in the banking system while keeping incentives to adopt the most advanced and risk-sensitive approaches. As a result we intend to conduct a fifth Quantitative Impact Study, or QIS 5, in the last quarter of this year. It is important to understand sooner rather than later what the impact of the framework will be. The Basel Committee will continue its work based on the existing timetable, and supervisors and bankers planning to implement Basel II should continue their preparations accordingly.

**Banking supervision and financial stability**

Let me turn now to my second topic, which is the link between effective banking supervision and financial stability. I'm sure we can all agree that a stable banking system is critical to the

long-term growth of an economy. But discussing financial stability issues is always a challenge because we don't have a framework for financial stability as comprehensive as in the case of price stability. However, in recent years, we have learned more about the concurrent need for macroeconomic stability and a stable financial system. That concept includes 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 they can build and grow. We need an efficient and resilient payments system to maintain the flow of funds through the economy at all times. We need financial markets that remain active, liquid, and trusted regardless of events in the economy.

The challenge for supervisors is to promote the health of the banking sector with a broad range of tools. We have certainly found that problems in the banking sector tend to have a "ripple effect" across the wider economy. Therefore, it is in everyone's interest that a country's banks should be able to manage their risks today and respond to challenges tomorrow. This is first and foremost the responsibility of the banks themselves, but supervisors also have an important role to play in ensuring that banks are prudently managed and capitalised.

Banking is fundamentally about trust. Banks are charged with a special public trust to safeguard customers' wealth. We have all seen what happens when customers lose trust in the ability of individual banks or the banking system as a whole to protect their savings. This puts a special onus on banking supervisors to ensure that banks operate soundly. No bank can maintain public trust for long if it lacks sufficient capital, so supervisors impose capital requirements to safeguard the banking system. Since capital is the last line of defense against bank insolvency, regulatory capital requirements are one of the fundamental elements of banking supervision.

I should note that strong banking supervision is not enough to ensure financial stability. While I believe that a sound financial system requires robust regulatory and supervisory frameworks, there are many other potential sources of financial instability outside the financial system. Many financial crises have not resulted from shocks arising in the financial system. Any regulatory or supervisory framework must be built on a series of preconditions and on the foundations of a sound supervisory system.

With respect to preconditions, there is a set of issues that may be considered. Firstly, I think there is a broad consensus among all of us about the importance of promoting the

implementation of **appropriate macroeconomic policies** consistent and sustainable over time. Secondly, an **appropriate institutional framework is also needed.** In particular, a set of mercantile and civil laws must be in place to safeguard agents' property rights. A legal and judiciary structure, which provides legal security must thus be in place, together with the so-called **safety net** institutional arrangements, **core principles, etc.** Moreover, it will be necessary to consider **microeconomic aspects related to payment-system and market structures.**

All these considerations allow us to underline the notion that the achievement of financial stability must be based on a broad range of tools which we should all seek to strengthen. 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. I believe that prudential supervisors should analyse the extent to which conditions are in place so that the banking system can remain resilient in the face of internal and external shocks. This should contribute to the proper functioning of the economy under a wide range of circumstances.

**Basel II and financial stability**

That leads me to my third topic, which is a discussion of the impact the new capital framework will have on financial stability. You are probably not surprised to hear that I believe the framework will enhance stability. But let me elaborate on several areas where I believe Basel II will foster stability.

*Incentives for better risk management*

First, I believe that Basel II is a major step forward in strengthening the incentives for the ongoing improvement of banks' risk measurement and management systems. The new capital framework is an incentives-based system and it is a risk-based framework. By creating a right set of market friendly incentives to improve risk management, Basel II offers us the opportunity to ensure that supervision and regulation takes a forward-looking view on risk, that it remains up-to-date with sound practices in the industry and that our supervisory framework motivates responsible risk-taking and prudent behaviour in our markets.

Improved and more formalized risk management will bring better assessment better quantification and more awareness of risks. To the extent that risk assessment and control methods **become more formalised and rigorous**, this will lessen the likelihood of making

bad decisions and will improve risk-adjusted pricing policies. It will also contribute to the prompt detection of errors and deviations from targets, allowing banks to implement corrective measures at an early stage. Increased **awareness** of the risks and **early reaction** to problems is likely to lead to a smoother adjustment to new conditions or to the correction of mistakes, making decisions less abrupt

However, we should remember that 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. Such judgement is valuable and will always be necessary, but should be reinforced with the best possible information in conjunction with up-to-date techniques and tools for processing that information. Banks should be encouraged to develop systems that allow managers to identify and understand the risks they are facing, consider the risks that may arise in the future, and respond promptly and actively to both. Basel II will not only help banks to measure and allocate the provisions and capital necessary to withstand expected and unexpected losses, but it will also help supervisors and market participants to ensure that banks have done so in a way that will maximise the likelihood that they can continue to operate, even in the most difficult of circumstances.

*Sound corporate governance*

The second reason I believe Basel II will promote financial stability is that it promotes more effective corporate governance. Risk management must be based on a strong foundation of corporate governance. A bank can have the most sophisticated measurement tools in the world, but if it is poorly governed, it will be vulnerable to financial and operational weaknesses.

The Basel Committee recognised this when it developed the qualifications that banks must meet in order to adopt the most advanced approaches under Basel II. While much attention has been paid to some of the more complex quantitative aspects of Basel II, I believe the most important qualifying criteria are those that address how the bank's risk management framework is governed. Banks that adopt Basel II will be expected to have a comprehensive and sound planning and governance system to oversee all aspects of their risk measurement and management process. The board of directors, senior management, and audit and other control functions will be expected to exercise their duties in a rigorous manner. I believe that better managed banks under Basel II will be safer, sounder, and more resilient.

*Shock absorbers adequate and risk sensitive.*

Third, I have already mentioned that no bank can maintain public trust for long if it lacks sufficient capital. One of the fundamental tenets of risk management is that banks need to create provisions to absorb expected losses and to have sufficient capital to absorb unexpected losses. Accordingly, capital and provisions are an essential part of any supervisory framework. I believe Basel II reinforces the need to implement sound policies in both areas.

I will just add in this point that given the unique positions of banks at the crossroads of businesses and consumers in every economy – and their special role as intermediaries of credit to both – nothing threatens financial stability more than the presence of poorly managed and poorly capitalised and provisioned banking institutions.

*Appropriate time horizon and counter-cyclical elements. Stress testing*

Fourth, the solid and stable functioning of banks requires an additional consideration, a macro perspective. Namely, risk management decisions, capital and provisioning policies should be set with an appropriate time horizon that allows at least a full business cycle to be considered and avoids excessive emphasis on the short term when assessing risks. The aim is not to promote the uniformity of time horizons, but to encourage managers to consider how risk determinants alter over the cycle and in conditions of stress.

The need for capital in a full range of economic scenarios has resulted in a requirement that banks consider stress scenarios when assessing capital adequacy. One of the fundamental tenets of risk management is that banks need to create provisions to absorb expected losses and to have sufficient capital to absorb unexpected losses. Accordingly, capital and provisions are an essential part of any supervisory framework. I believe Basel II reinforces the need to implement sound policies in both areas. In this respect, it is important to analyse provisions and capital over at least one complete economic cycle. Moreover, a range of potential future scenarios, with an emphasis on stress scenarios, should be considered, taking into account past experience and current conditions. Indeed, Basel II requires banks adopting the more advanced approaches to credit risk to apply a forward-looking approach to credit risk management by meaningfully stress testing their credit portfolios.

Gaining room for maneuver and shoring up finances during good times in the business cycle is not only prudent policy, but is also consistent with sound risk management. Many would say that risks increase during bad times, but I believe this is only partly true. In my view, the

exposures of banks, and therefore their risks, actually increase during economic upturns. These risks may not materialise until times of difficulty, but the seeds are generally planted during good times. In sum, when designing their capital and provisioning strategies, managers should have the aim of strengthening banks during good times and should remember that the imbalances that foster financial instability usually build up during the best parts of the economic cycle.

*Transparency*

Fifth, a very important reason why I believe Basel II will contribute to financial stability involves greater transparency. The exercise of market discipline should be considered a vital element of successful prudential policies. In particular, in order to ensure responsible and prudent behaviour by bank managers, supervisory action is not sufficient. Majority and minority shareholders, depositors and debt-holders should also have the capacity to evaluate banks and reward or penalise them according to how prudently they are managed. As mentioned earlier, Basel II, via the third pillar of the framework, provides for greater transparency. This should serve to curb excessive risk-taking in advance, and should reduce surprises that arise from opacity that can result in a shock to the financial system.

*Risk-based supervision*

Sixth, the assessment of risk has begun to play a predominant role in supervisory procedures. Banking supervision traditionally sought to ensure the solvency of banks by emphasising an accounting review of their financial and capital position. There is certainly still a role for this type of review, particularly in assessing asset quality and ensuring proper provisioning and risk concentration policies. The traditional approach is no longer sufficient, however. Today it is necessary for supervisors to place a greater emphasis on anticipating problems. It is vital to complement the traditional accounting approach with a greater emphasis on the analysis of the risks that affect banks and the management and control systems that mitigate such risks.

Basel II places a firm emphasis on taking a risk-based approach to supervision. Banks are expected to conduct their own internal assessments of risk and capital adequacy. Supervisors, in turn, are expected to regularly review these assessments. The intent is not to have supervisors functioning as bank management. Rather, supervisors should evaluate the degree to which a bank has a sound internal process in place to assess capital adequacy.

This assessment should take into account not only credit and market risk, which are part of the current capital framework, but also other critical risks such as interest rate risk in the

banking book and credit concentration risk. In addition, banks are expected to manage and hold minimum regulatory capital against their exposures to operational risk, which is the risk of losses stemming from failures in internal processes or systems or from external disruptions. Indeed, we have found that some of the largest bank losses in recent years have been the result of operational loss events.

*Responsiveness to rapid changes in the financial sector*

Seventh, Basel II is an evolutionary framework that is responsive to recent trends in the financial sector and capable of adapting to future changes. Technological advances and institutional developments have provided for more mature financial markets and more reliable and efficient payment systems. The banking business has grown more sophisticated, in large part as a result of technological progress. Technology allows banks to offer solutions, which not only provide a more individualised approach to customers, but also allow banks to operate more efficiently. Competition has required banks to control their costs and operate with a higher level of efficiency in order to ensure their survival. This has occurred both within national borders and internationally as well.

The growing sophistication and internationalisation of financial institutions, combined with their greater sophistication, have contributed to the emergence of new risks and to the intensification and rapid transmission of previously existing risks. A number of bank managers have responded by improving their risk management systems and allocating more resources to risk identification, measurement and control. Banking supervisors face the challenge of responding meaningfully to these trends without curbing financial innovation, and I believe Basel II will help supervisors to meet this challenge.

*Greater cross-border co-operation among supervisors*

The final reason that I believe Basel II will contribute to financial stability the growing scope and complexity of banking groups and financial markets make it necessary to increase international co-operation between supervisors. While not new, this issue is increasingly important. Effectively combining the necessary supervision at the local level in the host country with effective supervision at the consolidated level in the home country requires greater co-operation, a more thorough exchange of information, and better knowledge of financial instruments and links within financial groups.

Basel II not only encourages such co-operation; its success will largely depend on the effectiveness of such co-operation. It will be necessary in the future to foster greater co-operation, co-ordination, and consistency in evaluating banks' capital adequacy. This will promote consistency in the implementation of standards, a level playing field, and the reduction of unnecessary regulatory burdens. It will also diminish banks' incentives to engage in regulatory arbitrage across different jurisdictions.

Work is underway on a variety of fronts to promote such co-operation. First and foremost, the Basel Committee's Accord Implementation Group, or AIG, is working to foster information-sharing among supervisors to promote consistency of Basel II implementation. The AIG is encouraging home and host supervisors, including those from non-G10 countries, to use actual banks' implementation plans as the basis for heightened co-ordination and communication.

The Committee welcomes the work being done in a number of non-member countries and believes that continued outreach is essential. Dialogue with countries outside the Basel Committee played a critical role in the development of the revised framework, and I am personally committed to continuing such dialogue in the future as the new capital framework moves into the implementation phase.

**Adoption of Basel II: who and when?**

I would like to share some thoughts on when and how the new framework should be adopted in different countries. I am not referring specifically to Turkey with these comments, as it is not for me to talk about your plans in this respect, but I would like to make some comments about how we see the process in general terms.

Let me begin by emphasizing that I cannot answer the question of when or how any country should adopt Basel II. Whenever I speak with colleagues from other countries, I stress that only national authorities can decide when to adopt Basel II. Members of the Basel Committee believe that it is beneficial to move in the direction of Basel II, but no country should adopt Basel II if it feels that it is not yet ready. If a country does decide to adopt Basel II, the timing should be determined by its own circumstances, not the timetable for Basel Committee members.

I hope you will pardon my pronunciation, but I am told that there is a Turkish proverb that says "hamama giren terler," or "he who enters a Turkish bath sweats." If I understand correctly, the point of this proverb is that you should understand the consequences of your

actions. If the result is to be very positive, some work and thus some sweat is required. I don't know whether adopting Basel II is similar to entering a Turkish bath, but I do know that it is important to understand that this is a high-quality and demanding standard.

Unlike the 1988 Accord, which was relatively simple to adopt, Basel II is more complex and demands more of banks and supervisors. Therefore, we don't expect Basel II to be adopted as widely and quickly as the 1988 Accord, at least at the outset. However, we do believe it is appropriate for all economies, and we expect and hope that the number of countries that adopt the new framework will grow over time. We believe that countries should adopt the options and approaches that are most appropriate for the state of their markets, their banking systems, and their supervisory structures. Basel II is not a "one size fits all" framework. Supervisors can adopt the framework on an evolutionary basis and use elements of national discretion to adapt it to their needs.

For any country that is considering adopting Basel II but may not yet be ready, I like to suggest a three-stage approach towards building a foundation for the new framework: (1) strengthening the supervisory infrastructure; (2) introducing or reinforcing the three pillars; and then (3) making the transition from the 1988 Accord to Basel II.

The first stage is strengthening the supervisory infrastructure. Basel II is not intended simply to ensure compliance with a new set of capital rules. Rather, it is intended to enhance the quality of risk management and supervision. One of the things that I strongly encourage for all countries is a review of implementation of the Basel Committee's *Core Principles for Effective Banking Supervision*. These principles are key to laying a successful supervisory foundation. Likewise, sound accounting and provisioning standards are critical to ensuring that the capital ratios, however calculated, meaningfully reflect the bank's ability to absorb losses.

The second stage, then, is to consider how the second and third pillars of the new framework can be implemented. Supervisors do not need to wait for the formal adoption of Basel II to start introducing or using the principles of the three pillars. On the contrary, incorporating these principles is excellent preparation for adopting Basel II in the future. For example, supervisors might choose to move towards a more risk-based approach to supervision, developing skills in assessing the quality of a bank's risk management and its ability to assess risk exposures. At the same time, banks could be reminded of their responsibility to develop their own processes for evaluating their capital needs and a strategy for maintaining their

capital levels, consistent with the principles of Pillar 2. With regard to the principles of market discipline in Pillar 3, supervisors may wish to focus initially on ensuring a baseline level of disclosures across all banks. This might include discussing with banks, investors, and other users of financial information their information needs and the tools available so that supervisors can tailor requirements accordingly.

In my view, these two preliminary stages provide an excellent preparation for the "final" stage of moving to Basel II. With a strong foundation in place, supervisors can then select the alternatives within Basel II that are most appropriate for their own circumstances.

**Conclusion**

To conclude, let me insist on the general principle on which I think supervision should be built, which I mentioned before. Supervision needs to consider a broader analysis of the vulnerabilities internal and external to the banking sector, including the necessary macroeconomic and institutional elements, and those relative to the stability of financial markets on which banks operate. I think that Basel II recognizes the importance of a combination of micro and macro factors for achieving greater financial stability. Furthermore, I would say that Basel II incorporates some of the key basic principles that are also built in modern approaches to monetary policy: a flexible and forward-looking approach, anticipatory rather than reactive behaviour to risk, and the need to take into account market views.

Looking into the future, we must direct our resources to ensure that banking supervision in the 21st century is more dynamic, more preventive, more flexible, more inclusive, and more transparent. We should continue adapting and learning. I believe the ultimate objective of financial stability increasingly requires co-operation and properly aligned incentives on the part of the industry, markets, and supervisors.

Thank you.

## Speech by Josef TOŠOVSKÝ

## Chairman-Financial Stability Institute

Thank you very much for your introduction. It's a great pleasure to be here today in İstanbul at the invitation of the Central Bank of the Republic of Turkey and to participate in this international conference on Financial Stability and the Implications of Basel II.

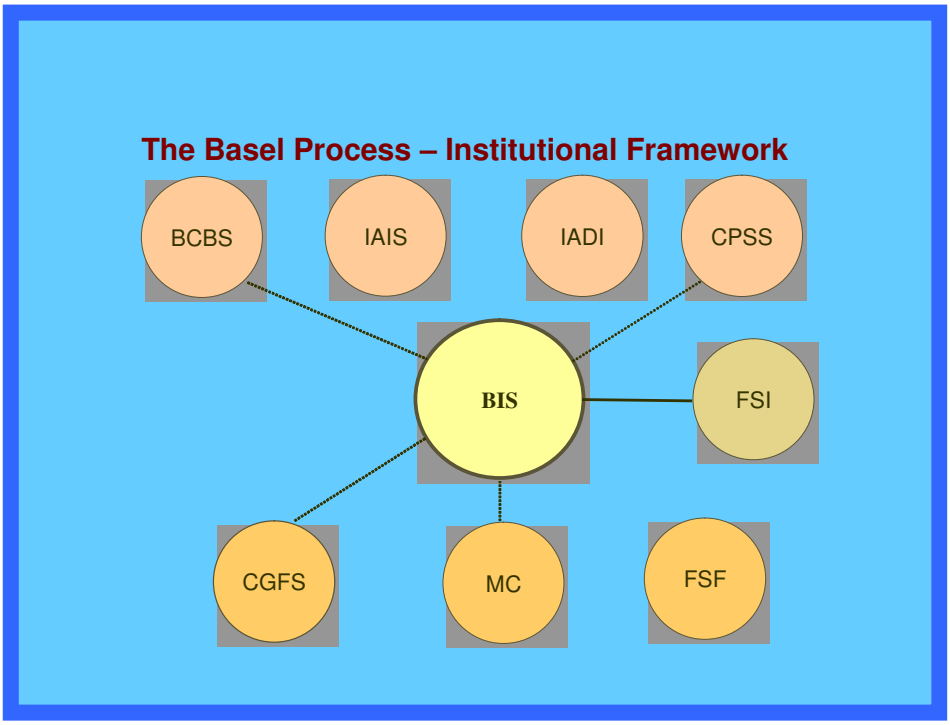
My presentation will focus on Financial Stability and the Basel Process. The presentation will touch on the following issues: (1) the integration of financial markets and financial stability, and (2) the Basel Process.

Today the safeguarding of financial stability must confront the fact that many large financial institutions operate globally in modern, integrated financial markets. For instance, recent innovations in financial services, such as sophisticated new instruments, products and strategies, make a financial institution's risk management more complex. Concerning today's modern financial system more broadly, the boundaries between the different financial system sectors, especially between the banking, insurance and securities sectors, continue to blur. In addition, the greater integration of financial markets permits capital to flow more freely across national borders. Indeed, short-term capital can enter and also leave a country at short notice and in huge volumes. The driving forces behind these developments are capital market liberalization, deregulation and advances in technology. Of course, these developments have benefits such as the better allocation of resources, not only within countries but also worldwide; however, they also have drawbacks such as an increased risk of financial instability or even financial crisis.

Against this backdrop, one might argue that it would be desirable to transfer responsibility for domestic financial stability, which today lies with sovereign states, to some supranational body. Yet this is not likely to happen any time soon. Accordingly, the current challenge is to promote financial stability largely through national actions, assisted to the highest degree possible by international cooperation. At the national level, there has been a significant effort,

by many central banks and other institutions, to shed more light on issues related to the safeguarding of financial stability in this new environment where the operations of many large financial institutions take place across a number of legal jurisdictions and institutional frameworks and are regulated by a number of national supervisory authorities. Arriving at a suitable definition of financial stability has been one of the goals of these efforts. Other goals have been the creation of indicators of potential instability – measures of the temperature of the financial system, one could say – and the identification of suitable policy instruments to strengthen financial stability.

Allow me now to explain the Basel Process to you. One can hear the name "Basel" in various contexts, especially in the area of monetary and financial cooperation. I will use it in the context of an international effort to strengthen financial stability.




At the centre of the Basel Process is the Bank for International Settlements (BIS). The BIS, the world's oldest international financial institution, was created in 1930 and is celebrating its 75th anniversary this year. The BIS's shareholders are central banks, and its mission is to foster cooperation among central banks and other agencies in pursuit of monetary and financial stability. The BIS organizes regular, bimonthly meetings for governors and other high-ranking officials and hosts many other meetings of experts.

Standard setters, a standard disseminator and other groups are shown in the chart above, with standard setters at the top and the standard disseminator to the right of the BIS. Other groups that form part of the Basel Process are shown at the bottom of the chart. The links, or the absence thereof, show how these groups are related to the BIS. For example, a bold line means that the Financial Stability Institute (FSI) is part of the BIS. In contrast, a dotted line indicates only a loose relationship with the BIS, and the complete absence of a line indicates that the group in question is simply hosted by the BIS. With the exception of the FSI, all of these bodies have their own chairperson outside of the BIS and are free to set their own agenda. For example, Mr. Caruana is simultaneously the Governor of the Bank of Spain and the Chairman of the BCBS. I would say that, with the exception of the FSI, these bodies are to a large extent independent of the BIS.

An important part of the Basel Process is the production of international standards. In the absence of a global financial regulator, the work of international standard setters reflects

international sound practices and market developments. These standards are so-called "soft laws", and one problem that consequently arises is their enforcement. However, because these soft laws are often adopted by jurisdictions, they can become "hard laws" that are enforced. For example, approximately one hundred countries have adopted Basel I; therefore, this standard has, in many countries, become part of domestic legislation. Standard setters help in this work by fostering regulatory and supervisory convergence across jurisdictions and financial sectors. The international standards that are the result of this work can be considered as supranational policy.

Let me now say a few words about the standards creation process. As an illustration, I will use the preparation of the new standards embodied in *International Convergence of Capital Measurement and Capital Standards*, so-called Basel II. In the case of Basel II, the standards were prepared by the BCBS, a group made up of representatives from thirteen countries. The prepared standards then went through a consultation process, which included discussions with financial supervisory authorities from non-BCBS countries and private sector participants, including many meetings between the Basel Committee and the International Institute of Finance. The consultation process generally involves academics and, also very importantly, politicians, because the standards need to go through the legislative process in order to be adopted and enforced. The consultation process also helps to prevent over regulation of the financial system and at the same time takes into consideration new developments and risks and can lead to higher compliance. This consultation process is of course time-consuming and can at times be over politicized; however, it is a very important process.

Let me say a few words about the cooperation process. The close cooperation among standard setters such as the BCBS, the IAIS and the International Organization of Securities Commissions inside the Joint Forum and on a bilateral basis is extremely important. This cooperation can include other standard setters (e.g. the Islamic Financial Services Board and the International Accounting Standards Board). This could lead to the harmonization of standards across sectors while at the same time avoiding gaps and overlaps.

Let me now move on to the standards dissemination process. The FSI plays a very important role here by disseminating standards, codes and practices and also by creating a platform for financial sector supervisors to share their experiences, practices and knowledge. The FSI also helps in capacity building and promotes research on regulatory and supervisory topics. In all of these ways, the FSI creates a better understanding of standards by promoting the use of the same definitions and language. By organizing various meetings, conferences and seminars, the FSI fosters networking among financial supervisors, an important part of this process.

Home-host regulatory coordination is essential for internationally active banks with a large number of branches and subsidiaries worldwide.

So far I have talked about one part of the Basel Process, the production and dissemination of standards; yet another important part of the Basel Process relating to financial stability issues is macroeconomic monitoring. There are two committees, which play the main role in these activities. One is the CGFS, which monitors global financial markets, seeks to identify and address potential sources of stress and promotes the development of well-functioning and stable financial markets. Another is the Markets Committee, a forum for senior officials responsible for market operations in the G10 central banks to discuss recent developments in foreign exchange and related financial markets.

The Financial Stability Forum (FSF) is also a part of the Basel Process. The FSF is in fact the first informal group to fully recognize the existence of a globally integrated financial system. It focuses on macro issues, micro prudential regulation and supervision and also infrastructure issues such as those related to payment and settlement systems. In the main, its task is to identify and assess potential vulnerabilities in the international financial system and also to identify and oversee actions needed to address them. The FSF has several participants, including national financial authorities, international financial institutions, international standard setters and committees of central bank experts. The FSF therefore brings together all major stakeholders involved in financial stability issues.

That's all I have to say about the Basel Process. One may ask the question: Does the Basel Process guarantee financial stability? The answer is clear: No, it does not. But in a world of highly integrated financial markets with fragmented jurisdictions, the Basel Process has an important role to play in contributing to the safeguarding of financial stability.

## Session I: Perspectives On Financial Stability

***This session is moderated by Prof. Sübidey TOGAN, Professor, Bilkent University.***

### Speech by Dr. Lars HEIKENSTEN

### Governor-Bank of Sweden

Allow me to begin by thanking the conference organizers and particularly central bank governor Serdengeçti for inviting me. To be given the opportunity to speak on an interesting subject and at the same time visit İstanbul, one of the most beautiful cities in the world, is truly a privilege.[6]

I last visited Turkey four years ago when I was invited to speak about monetary policy based on inflation targeting, with the aim of inspiring this country, as well, to follow that path. As my Spanish colleague Jaime

[6] I would like to thank Martin Andersson, Fredrika Lindsjö Hermelin, Martin Noréus and Patrick Nimander for valuable comments.

Caruana mentioned, a number of changes are being made in terms of the focus of monetary policy, but also in other areas. I would like to wish you every success with these changes.

I plan to devote my introduction today to how a conceptual framework for working with financial stability can be designed in a central bank. The framework that I will present has, of course, been strongly influenced by our own Swedish experiences when we, in the wake of a serious financial system crisis, developed a framework for analysis and surveillance to prevent such a crisis from happening again. That work is similar in many respects to the current developments in Turkey.

I intend to begin by speaking about why public authorities should work with financial stability, with a particular emphasis on the role of central banks in this work. I will then describe the Riksbank's stability work in practice. That will represent one example of how to organise the task of analysing and overseeing stability issues, but there are of course as many ways to structure this kind of work, as there are central banks. I seem to notice, however, that central banks are beginning to converge in their view of what financial stability is and how stability work should be conducted. This is a natural development, as these issues have been discussed for five to ten years now and thus are starting to mature.

**Why do we need public authority involvement?**

My view is that public authorities have to work with financial stability. Allow me to give the reasons for that.

The main argument has to do with the fact that market failures can give rise to systemic risks. I am referring here to contagion risks. If one bank suffers financial problems this usually has immediate effects on many other banks. However, when taking decisions that affect a bank's risks, the bank often lacks any incentive to take account of the cost to society entailed by these contagion risks.

In addition, banks are special. Banking is inherently risky and unstable, since banks accept liquid deposits, which they convert into illiquid loans. To put it simply, that means that a bank's funding can dry up at short notice while it may be difficult for the bank to sell its assets. It is also easy for spillover effects to arise between different banks, due to the fact that they have the same type of business and mutual obligations. The mere suspicion of a connection between banks can result in problems spreading between them.

Banks hold a special position as the lubricant in a market economy. They act as payment intermediaries and provide us with services for saving and borrowing, as well as for managing different kinds of risks. If the banking system does not work efficiently, it limits the opportunities for growth in the whole economy. The banking crises that have occurred have had far-reaching effects.

This becomes especially clear when one thinks of the payment system's role in an economy. That payments can be made efficiently is a fundamental condition in a market economy. The Swedish payment system has a daily turnover of around 500 billion kronor. In other words, payments equivalent to Sweden's entire annual gross domestic product pass through the system in less than a week.

Finally, I should mention consumer protection as a reason for public authority involvement in overseeing stability in the financial markets. I do not intend to discuss this in more detail here, however, since it is normally not a central bank task.

**What is the role of central banks in this work?**

In addition to the responsibility for monetary policy, many central banks have been charged with the task of safeguarding the payment system or, more broadly, the financial system. In the Riksbank's case, the Sveriges Riksbank Act states that in addition to the task of achieving low and stable inflation, the Bank shall also "promote a safe and efficient payment system".

**So why do central banks, of all public authorities, have a role to play in this work?**

One reason is that central banks normally have a monopoly on issuing banknotes and coins. A direct consequence of this is that central banks cannot default – in the sense that they can always produce more money. That in turn makes it natural for banks to hold accounts at the central and to execute payments with each other via these central bank accounts. So it is no coincidence that most central banks today not only provide settlement accounts for banks but also own or operate the central payment system. More recently, a number of central banks have actually handed over responsibility for the day-to-day management of the payment system to the market participants themselves, but payments are still settled through central bank accounts. And the central banks often retain the role as overseer of the payment system that is run by the private sector.

The ability of central banks to create liquidity also enables them to act as lender of last resort with the aim of avoiding a systemic crisis. This is another reason why central banks have an

important and central role in financial stability efforts. To be able to determine whether a bank meets the requirements for receiving emergency liquidity assistance the central bank must also participate in the day-to-day surveillance. It is only by keeping itself well informed on a regular basis that the central bank can posses the knowledge required if a crisis should arise.

Another significant factor is the connection to monetary policy. Financial stability can be seen as a condition for conducting successful monetary policy and there are also important linkages in the opposite direction. A much-discussed topic at present is the kind of linkages that exist between financial stability and price stability. The current situation with rapidly rising household borrowing and house prices is something that can have an impact on monetary policy without constituting a threat to financial stability. Even if their ability to service their debt is satisfactory, the mere fact that both assets and debts are increasing in relation to incomes makes households more sensitive to changes in interest rates and asset prices. So, should interest rates rise and housing prices fall, it would have a bigger impact than before on households' purchasing power, and thereby probably on consumption and saving as well.

**Division of labour with other public authorities**

Of course, central banks are not the only authorities to engage in stability work. In most countries at least two authorities are involved in stability issues and thus have some division of labour between them. Cooperation with authorities in other countries also plays an important part. The financial system is becoming increasingly cross-border in nature and we are going to be more and more dependent on each other in the event of a crisis.

In Sweden, the work on stability calls for highly developed cooperation between the Finance Ministry, Finansinspektionen (Sweden's Financial Supervisory Authority) and the Riksbank.

The preventive work involves designing laws and regulations that set boundaries for the activities of financial institutions. In Sweden as in most other countries, the laws governing financial operations are enacted by parliament, with the finance ministry as an important agent. More detailed regulations are issued by Finansinspektionen, which also monitors their observance. The Riksbank's contribution to the work on rules and regulations consists in the first place of submitting opinions. In addition, the Bank participates in international efforts to develop the regulatory framework further. The main part of this international work is carried out within the framework of the G10 and the EU.

The continuous surveillance of the system is performed by Finansinspektionen, as well as by the Riksbank. Finansinspektionen has primary responsibility for prudential supervision of individual banks. The Riksbank oversees the banking system as a whole and attempts to assess the risks that could arise in it in both the short and long term. Of course, there is some overlap in the tasks of the two authorities, but it is sometimes fruitful to approach a problem from somewhat different angles. The Riksbank and Finansinspektionen have clarified the division of labour and these overlaps in a joint agreement. Our experiences of this division of labor have been positive.

Stability work does not only consist of preventive measures but also of maintaining readiness in case a crisis nevertheless should arise. Our ability to provide liquidity assistance makes us, as I said earlier, a central player in crisis management. We can only grant emergency liquidity assistance if an individual institution has encountered such serious problems that the stability of the entire system is threatened. And assistance can only be given to an institution that is solvent. If the institution is insolvent, it is the Swedish parliament that decides on the provision of assistance, since such a measure can result in costs for the taxpayer. With our experiences of the Swedish banking crisis at the start of the 1990s we know that it is often difficult to quickly determine whether an institution fulfils these conditions. It is important therefore to have worked out a clear organisation in advance regarding who does what in a crisis. I will come back to that in a moment after I have said something about how our stability work is carried out in practice.

**What do we do in practice?**

So how do we work with financial stability in practice? The work comprises two parts – on the one hand monitoring and analysing developments in the financial system and on the other hand managing a crisis if one should arise.

Let me begin with the analysis work. Naturally, there are differences in how central banks have opted to work with these issues, but I think that the starting point for most of them is the institutions that operate in the financial system. The central role of banks in the payment system means that they are the focus of the stability analysis.

The surveillance of banks is not only a question of monitoring what they do in the payment system. For the financial system to function it is highly important that the participants in it have confidence that it works in all of its aspects. Consequently, the Riksbank believes that it is essential to also analyse developments and tendencies in the financial markets that conceivably could lead to threats to stability.

Twice a year the Riksbank presents its analysis of potential risks and the Swedish banks' resilience to these in a stability report.[7] The first report was issued back in 1997, making the Riksbank one of the first central banks to publish its stability analysis. The regular reports have helped us to focus and develop our work at the Riksbank.

The aim of the report is to present our view of risks and resilience to the participants in the financial markets, but also to other interested parties. Hopefully, the report can contribute to initiating a debate on the stability of the Swedish financial system and influence the operators in the system.

Let me guide you through the report just to give you an insight into how we work with oversight issues. The report begins with a look at what has happened abroad in terms of economic growth, prices in the financial markets and other asset prices. Growth influences the propensity of households and companies to borrow money as well as their ability to service existing debts. Financial market prices affect banks more than before since they are now more exposed to them. Asset prices affect the collateral held by banks as security for their lending.

We then devote a chapter to borrowers – households and companies – both inside and outside the country's borders. The property market is important to analyse since many crises in the financial markets begin with problems in this market. The household sector is not as significant from a stability perspective, but problems in this sector can influence stability via developments in demand and growth as I mentioned earlier. These issues are highly relevant to the monetary policy discussion in Sweden and a number of other countries at present, but unfortunately I will not be able to go into them in more detail here today.

[7] See for instance Financial Stability Report 2005:1 at
http://www.riksbank.com/pagefolders/19699/2005_1_eng.pdf

The banks' own actions can also have an impact on stability, which is why the third chapter analyses developments in the banks more closely. Profitability trends can indicate the extent to which banks are exposed to strategic risks. The quality of bank assets is evaluated as an indicator of how credit risks might develop, while the banks' funding capacity provides a picture of potential liquidity risks.

The final chapter analyses the financial infrastructure. This must function efficiently enough to ensure that problems that arise in an individual financial institution or in a sub market do not spill over to other participants or markets. It is also vital that problems do not emerge in the infrastructure as a result of disruptions to the systems themselves.

By way of conclusion, we usually include a number of articles on certain topics of interest. For example, in the most recent report we published an article about Swedish private equity investment companies to investigate whether these might pose a risk to the major Swedish banks. We may also publish more policy-oriented articles such as that on the economic reasons for regulation, which also appeared in the latest report. Our ambition with this article was to create a conceptual framework for the regulation work in this field.

**Figure 1. Report on Financial Stability**

***Contents***

- Financial markets
- The Swedish banks' borrowers
    - the corporate sector in Sweden
    - the household sector in Sweden
    - Borrowers in the other Nordic countries, Germany and the Baltic States
- Developments in the banks
    - Profitability
    - Assets
    - Liabilities and funding
- financial infrastructure
- Articles

The fact that our analysis work has developed since we published our first report in 1997 does not mean that we can rest on our laurels. We have taken outside assistance in our endeavour to focus and develop our analysis work. Last year, we presented an assessment of our work on the Financial Stability Report made by an American researcher, a manager at the IMF and a manager from a Swedish commercial bank. They concluded that we essentially devoted ourselves to the right issues and used the right approaches. However, they also presented some interesting suggestions for improvements. One of these was to include a standing chapter that describes our view of a number of current stability issues concerning the regulatory framework. This is an interesting suggestion and something that we will explore further.

Regardless of how well we oversee the financial system there is nonetheless no way to completely eliminate the occurrence of crises. Consequently, we must be ready to manage a crisis in the event that one should arise. In such a case, we have to quickly assess the extent and consequences of the crisis in order to be able to take the correct measures. For this to be possible it is crucial to have well-prepared routines in place.

At the Riksbank we have concluded that the decisions that have to be taken during an acute crisis – where the bank in question is solvent and only has a temporary unplanned liquidity requirement and where there is a considerable risk of a systemic crisis – must be made within approximately three hours. We therefore have prepared a crisis manual that contains checklists for what has to be done and which information we need, draft press releases, lists of phone numbers for all potentially relevant people, etc. We also carry out regular crisis management exercises. Our ambition is to perform one or two such exercises a year and on the basis of our experiences from them we improve our manual. We have also decided to have a special crisis management organisation that is activated in the event of substantial disturbances in order to speed up the decision-making process.

However, crisis management is not something that central banks can do in isolation from each other and other public authorities. Efficient cooperation both nationally and internationally is necessary for managing a crisis. Our crisis management exercises are conducted together with Finansinspektionen and the finance ministry. We have also played an active role in enabling both Nordic and European crisis management exercises to be carried out. The international cooperation in this field will become increasingly important given the fast pace of financial market integration.

**Summary**

Allow me to summarize what I have said here today. I believe that financial stability issues are significant for all central banks, and will be increasingly so, as the financial markets become more important and our economies become more integrated. The key role of the payment system and the linkages between financial stability and price stability makes it important for central banks to be involved in these issues.

By way of conclusion, on the basis of our own experiences the advice I would give to all those wishing to engage in stability work is to be focused in their analysis. Stability work differs from monetary policy analysis insofar as there is no specific instrument with which we can govern stability, even though interest rates can of course have a certain effect. Solid analysis, and thereby the credibility to be able to influence market participants, is the only instrument we can make use of before a crisis has occurred. It is important therefore to safeguard that.

I have underlined the importance of international cooperation in my introductory remarks today. This cooperation is needed in the development of regulations but also in the field of crisis management, given the increased integration of the financial markets.

Thank you.

## Speech by Dr. Nicholas GARGANAS

## Governor-Bank of Greece

Ladies and Gentlemen,

I thank the organizers of this conference for inviting me to be here today. I am especially pleased to be speaking on such an important issue. The concept of financial stability, considered from different perspectives, which is the main focus of the Conference, is appropriately receiving considerable attention in the light of the variety of risks confronting financial systems. My presentation will deal with the practice of financial stability assessment in Greece, key aspects of the Basel II implementation process in Greece, and some implications of Basel II for financial stability.

It is generally agreed that the objective of financial stability assessment is to review the main sources of risks and vulnerabilities likely to affect the stability of the financial sector and to evaluate its capacity to absorb the impact of adverse disturbances.

The Bank of Greece's assessment of the stability of the Greek financial sector is contained in a section devoted to that issue of its semi-annual report to the Greek Parliament. Moreover, the Bank's Annual Report to the General Meeting of its shareholders also contains a section on the stability and the supervision of the Greek banking sector.

Before presenting the Bank's approach to financial stability assessment, let me provide some key aspects of the Greek supervisory framework and of the Greek financial sector.

Effectively there are three bodies responsible for supervision of the financial system as a whole.

The Bank of Greece regulates and supervises credit institutions and some special institutions such as credit companies, financial leasing and factoring companies, etc. It also has a mandate to contribute to the overall stability of the financial sector.

The Hellenic Capital Market Commission regulates the capital markets and supervises investment firms and collective investment funds.

Finally, the recently-established Commission for the Supervision of Private Insurance is responsible for insurance companies.

Cooperation between the three domestic supervisory authorities is crucial to the pursuit of financial stability. To this end, a Memorandum of Understanding has been signed between the Bank and the Capital Markets Commission, which lays down the practical arrangements for cooperation; in addition a representative of the Bank sits on the Commission's Board. Cooperation with the new supervisory body for the insurance industry is expected to be organized along similar lines once the authority is fully operational.

Banks dominate the Greek financial sector, accounting in terms of assets for approximately 85% of the entire financial sector. The banking sector itself is characterized by relatively high concentration with the 5 largest banks controlling 65% of the total assets of the banking sector. The Bank of Greece's regulatory framework is essentially based on the relevant EU Directives, which are closely aligned to the Basel I framework. In the Greek context, credit risk is the main component of banking risks. Overall the profitability and capital adequacy of Greek banking groups is satisfactory. On a consolidated basis, the rate of return on equity and the rate of return on assets before taxes were respectively 16,1% and 1% for 2004 and the capital adequacy ratio reached 12,8% at the end of 2004.

In view of the dominance of the banking sector in the Greek financial system, I will focus on this sector.

First, let me outline the approach followed by the Bank to assess the stability of the Greek banking sector. On the one hand, this approach involves an evaluation of the information provided by a number of indicators relating to the risk profile of banks and the economic condition of households and firms, and an assessment from a stability perspective, of developments in key macroeconomic variables and markets. On the other hand, the Bank seeks to determine the banking sector's capacity to absorb negative shocks. For this purpose, it utilizes data on bank profitability and capital adequacy and also takes account of the results obtained from stress tests.

To derive the main indicators for credit risk, the Bank makes use of information submitted by banks in their supervisory reports on exposures in default, provisions, concentration ratios and credit migrations of individual exposures. Alongside ratios calculated from this source, data

from household and firm surveys on both debt and income/profit levels provide information on the debt-bearing capacity of the household and business sectors.

Data from supervisory returns also provide information on market and liquidity risks. In its evaluation of the information provided by all these indicators, the Bank takes into account the corresponding EU and Euro zone average values of these indicators where available.

As regards macroeconomic variables and markets that may affect the stability of the banking sector, the Bank focuses on developments in the GDP growth rate, interest rates and exchange rates, and in the stock and real-estate markets. The direct impact on the financial condition of the banking sector of adverse developments in interest rates and exchange rates and in share and real-estate prices can be quantified using data on bank exposures to each of these risk factors. The indirect impact on banks of adverse developments in GDP growth and the aforementioned risk factors on banks mainly consists of an increase in credit risk arising from the effect of such developments on the financial condition of households and enterprises and thus on their debt-servicing ability. At present, the Bank makes only a broad qualitative assessment of this indirect impact in its published stability analysis.

In order to assess the banking sector's capacity to absorb the impact of adverse disturbances, the Bank focuses on a number of developments in banks' financial condition and makes use of stress testing. The latter involves the Bank asking banks to quantify the impact on their own funds and capital adequacy ratios of pre-specified adverse changes in the values of certain basic risk factors. The risk factors considered are the probability of default and the loss given default, interest rates, share prices and exchange rates. In addition, the Bank is working towards developing a macro stress-testing framework, especially for credit risk.

Let me now move on to discuss issues related to Basel II, which represents a major change in the supervisory framework and a challenge to both supervisors and banks. Before considering some implications of Basel II for the stability of the banking sector, I would like to refer to the preparations for Basel II implementation in Greece and to the choices Greek banks are expected to make between the alternative approaches for calculating capital requirements.

A large majority of Greek banks are expected to adopt the standardized approach in determining capital requirements for credit risk. However, a number of banks, comprising a share of around 50% of the total assets of the banking sector, are reasonably expected to adopt the foundation IRB approach for a significant part of their total portfolio. The Bank of Greece is encouraging banks to move to the IRB approach because this approach will require an

improvement in their risk measurement and management systems. Thus, it will strengthen their competitive position and their capacity to successfully adapt to changes in the economic environment.

For operational risk, although the majority of Greek banks are expected to adopt the basic indicator approach to determine capital requirements, most of the large banks plan to adopt the more refined standardized approach.

The Bank of Greece is working closely with the banks to help them prepare for the implementation of the new rules. In this connection, it has already put out 5 consultation documents. These documents deal with issues where there is national discretion and discuss measures, which the Bank intends to adopt as well as other matters requiring clarification and supervisory guidance. Detailed consultations with each bank planning to use the IRB approach have begun so that problems can be identified and resolved, while the preparations of banks intending to use the standardized approach will be reviewed at a later stage - - sometime before the end of 2006. An important issue for the Bank of Greece is to evaluate not only the technical aspects of the banks' internal systems and the methodologies used to validate their output, but also to ascertain whether the output of these systems is utilized in managerial decision-making in such areas as loan approval and pricing, provisioning, and capital allocation.

At this stage it is difficult to determine the overall impact of Basel II on the total capital requirements of the Greek banking sector. The impact will depend not only on the alternative approaches adopted by the banks, but also on the composition and quality of their assets, both of which are affected by economic conditions. However, one limited preliminary indication was provided by the result of the 2003 quantitative impact study. For the 6 Greek banks that participated using only the standardized approach at that time, there was a 7.5% net increase in the combined capital requirement for credit and operating risk compared to the corresponding requirement under the existing framework (a 2.5% decrease of the requirement for credit risk and a 10% increase for operating risk).

Pillar II on supervisory review requires the conduct of risk-based supervision and the existence of detailed systems and policies at each bank to determine maintain and allocate economic capital in accordance with its risk profile. This increases the pressure on supervisory resources as well as banks. In Greece, supervision has traditionally focused more on examining the accuracy of supervisory returns submitted by the banks, on a point-in-time

evaluation of the quality of loan portfolios, and on the technical calculation of capital requirements to cover credit and market risk. In recent years, however, increasing emphasis has been placed on the assessment of internal control and risk-management systems, taking into account the risk profile of each bank. In this respect, the Bank of Greece found it necessary to impose a minimum capital adequacy ratio above the statutory minimum of 8% on some banks. To enhance its ability to conduct risk-based supervision, the Bank has taken steps to improve the skills of existing supervisory staff through specialized training and has also recruited personnel with skills in quantitative risk analysis. The banks have also strengthened their risk management units, but in order to successfully implement Pillar II further efforts will be required.

Pillar III enhances market discipline by requiring credit institutions to disclose appropriate risk information, allowing the market to reward well-managed and well-capitalized credit institutions.

Let me now turn to some implications of Basel II for the stability of the banking sector.

To successfully implement Basel II, Greek banks will need to further improve their risk measurement and management systems and to develop their contingency planning. This will enable them to react more promptly and effectively to disturbances affecting their risk profile. In addition, the Bank of Greece, in its stability assessment, will utilize the output of the banks' improved internal systems to undertake more timely and accurate estimates of the total impact of alternative stress scenarios on the risk exposures and capital adequacy of the banking sector. Therefore, it will be in a better position to evaluate the sector's overall resilience.

It has been argued that Basel II is likely to produce a procyclical effect. According to this line of reasoning, for banks using the IRB approach, capital requirements for credit risk will increase during cyclical downturns because of a deterioration in the quality of loan portfolios and, conversely, decrease during cyclical upturns. As a result, bank capital adequacy will deteriorate during downturns, given the difficulty of raising new capital in such conditions. Consequently, Banks will be under pressure to restrict their lending during downturns, while during upturns they will tend to unduly expand it. It should be kept in mind, however, that bank lending is likely to be pro-cyclical to some degree, irrespective of the supervisory framework. Yet, the possible additional pro-cyclical effect arising from the IRB approach can be mitigated. In the context of Pillar II, supervisors should insist that banks hold capital

comfortably above minimum requirements under normal conditions and also require banks to conduct rigorous stress tests in order to assess the adequacy of capital buffers. In addition, it would be advisable to encourage banks to adopt a more forward-looking through-the-cycle approach in their credit quality assessments and in their provisioning policy. At present, even the more sophisticated Greek banks tend to employ only a point-in-time approach to determine the values of the main credit risk parameters.

In its consultation document regarding the minimum requirements for the Internal Rating Systems, the Bank of Greece has announced that, although it will accept Point in Time systems, it encourages banks to incorporate the effects of the economic cycle in their assessments.

During the various consultation phases preceding the finalization of Basel II, concerns were also expressed with respect to the impact of Basel II on small and medium enterprises (SMEs). It was argued that capital requirements applicable to loans to these firms, especially under the IRB approach, would increase compared to the existing framework, leading to an increase in their financing costs or, possibly, to a decrease in the amount of credit supplied to them. Both these factors would adversely affect their financial condition. This, in turn, would have negative consequences for economic growth and employment and would impact on financial stability, particularly in countries such as Greece, where SMEs account for a large share of total output and employment. I believe, however, that the final version of Basel II substantially alleviates these concerns. In Greece, the majority of banks will adopt the standardized approach. For the significant part of their total exposures to SMEs, which will qualify as retail exposures, the applicable risk weight will actually decrease compared to the existing framework. For most of the remainder, the risk weight will remain unchanged. Even in the case of banks adopting the IRB approach, most of their SME customers are expected to derive some benefit either from the firm-size adjustment for corporate exposures or from the generally lower risk-weight function for retail exposures.

Increased disclosure under Pillar III is expected to strengthen market discipline by increasing transparency. This will have a positive effect on stability to the extent that anticipated market reaction dampens banks' incentives to assume excessive risks. However, the influence on bank behavior of the direct market discipline exercised by depositors, other creditors, and shareholders, is often limited either because these stakeholders lack sufficiently strong incentives or because, in some cases, the interests of the different stakeholders do not coincide. In particular, the actual or presumed existence of public safety nets may dampen the

incentives of depositors to exercise discipline. Wider and more pertinent public disclosure is expected to enhance the information content of listed banks' share prices and of interest spreads on subordinated bank debt. This will increase the accuracy and predictive power of fragility indicators based on market data, such as the distance to default, an indicator derived from market prices of bank shares. At this point, I may mention that the 10 banks whose shares are listed in the Athens Stock Exchange account for over 75% of the total assets of all credit institutions operating in Greece. Based on empirical evidence, changes in the distance to default represent a useful forward-looking indicator for stability assessment purposes, especially if based on weighted average values for the entire banking sector rather than for each individual bank. In general, market-based fragility indicators are a useful supplement to supervisory data, which are derived as a rule from accounting records.

In concluding, I would like to stress the increasing importance of maintaining financial stability in the increasingly competitive environment of recent years, following the deregulation of the Greek financial system and the liberalization of capital movements. These changes have made the Greek banking system more sensitive to international capital flows, which can sometimes be volatile and unpredictable. The internationalization of the activities of Greek banking groups, Greece's entry into the euro zone, and the integration of European financial markets, although generating significant benefits, have also increased the exposure of the Greek financial system to contagion risks. In the light of these developments, the Bank of Greece has instituted - and continues to institute- changes that improve the quality of its financial stability analysis, so that timely and accurate assessment of risks be made and, where necessary, appropriate policy responses can be formulated. I believe that the implementation of Basel II in Greece will yield significant benefits because of its effects on the risk profile and the risk management systems of banks in the evaluation of their capital adequacy. This, after all, is a key determinant of their capacity to absorb adverse shocks. Therefore, both from a supervisory and a financial stability perspective, the difficult task of implementing Basel II in Greece will be well worth the effort.

Thank you for your attention.

**Speech by Dr. Mario I. BLEJER**
**Director-Centre for Central Banking Studies**
**Former Governor-Central Bank of Argentina**

First of all let me thank very much the Central Bank of Turkey and the Governor for inviting me to this very important and interesting conference. Let me tell you at the outset that I don't have a very happy story to tell you. I will try to briefly elaborate on the lessons that can be drawn from a very traumatic event such as the dramatic financial crisis of Argentina that reached its peak about three years ago. For the sake of brevity I am making some generalizations and, as you all know, generalizations, when they are not properly qualified, tend to be quite provocative. However, listening this morning to the presentations of the Governor of the Central Bank of Turkey and to the Minister of this country, I realized that many aspects of the running up to the crisis in Turkey in 2000-2001 have, indeed, very large resemblance to some of the developments that I am going to describe. It means that probably the generalizations are not so sweeping, although I still believe that the Argentinean crisis was of such a magnitude to make the case really an outlier. But sometimes, it's useful to learn from the extreme.

In this sense, it would be useful to have some idea of the magnitude of the crisis in Argentina. One summary measure is the loss of output during the period of the crisis. From a peak in GDP registered in June 98 to the end of the first quarter of 2002, Argentina has lost about 25 percent of its real output. In addition, there were very serious social consequences: increasing poverty, reductions in real wages, and a significant rise in unemployment. The magnitude of the crisis was, therefore, extremely severe. The Argentinean crisis was, in reality a combination of crises: it was a currency crisis and a banking crisis because there was a run on the domestic currency--the peso--and there was a run on the banks. And in fact it was a triple crisis since it also encompassed a massive debt default at the beginning of 2002. There was,

therefore, a very complex financial situation in which the currency, the banks and, of course, the finances of the public sector, were all under attack. I think that one can analytically separate between the different components of the crisis, and although this would lead to some artificiality, I will concentrate here only on the banking issues because that is the focus of this conference.

I will not talk now about all the details of how this crisis really came about but I will just like to elaborate on some lessons and some observations that one can make from this extreme event. The first one has to do with the potential fragility of financial institutions. Second, I like to stress the negative consequences of excessive government intervention in the financial sector. The third aspect is the importance of liquidity management both to prevent and to manage a financial crisis. Then, I will say some words about the role of foreign banks during a crisis. And finally I will comment on capital flows and capital controls. Some lessons can also be learnt from this crisis in terms of the role of public banks versus private banks and the issue of independence of the central bank, but I will not discuss these aspects here.

On the **potential fragility of financial institutions** the salient comment is that the Argentinean experience proves that there is really no room for complacence in the financial sector. The reality is that financial institutions could be fragile, even when they are very solvent, and that greatly solid financial structures could deteriorate extremely quickly. If you go back to the 90s, particularly to the end of the 90s, and look at what has been said about the Argentinean financial sector, you will find that it was stressed numerous times that the financial sector was sound, robust, well capitalized, well administrated, and with an appropriate and professional level of risk management. In other words, it was asserted that the banking system in Argentina was a very solid and well structured system. I am aware of studies that compare the Argentinean banking sector with Singapore, for example, and claim that both were, approximately, at the same level. Thus, the Argentinean system was regarded as one of the best emerging market banking systems. And, in fact, this perception was quite correct. I am not claiming that these observations were wrong. But the deterioration of the banking sector was extremely quick and was extremely dramatic because as solvent or as solid a banking sector might be, it would be very difficult—or impossible—for a banking sector to withstand inadequate interventions, distorted incentives and misguided policies. As Governor Caruana said this morning, there is no supervision that can survive a macroeconomic framework that doesn't work well. The Argentinean case is a very clear case in which a very solid, well-structured banking sector was the victim of misguided policies.

What I really want to stress in this context, because we are discussing here Basel II which is of course one of the central standards of supervision, is that while standards, codes, supervision and rules are indeed necessary condition for stability, they are not sufficient conditions. And that one has to rethink the balance between enforcing codes and standards vis-à-vis a grossly inappropriate policy stance. One interesting aspect is that if you look at the Financial Sector Assessment Program (FSAP) report for Argentina produced by the IMF and the World Bank in 2001, you will find that it gives very good marks to the Argentinean financial sector and, probably, this was not incorrect. But the problem is that, these robustness was not enough to withstand bad policies.

The important lesson from this discussion is that you cannot rely on a strong and well structured financial sector in order to try some policies that in the margin maybe very negative. The problem is that a very well structured system may actually provide an incentive and be a temptation to governments, to implement policies that are inconsistent or inappropriate. The result, at the end of the day, is that the fragility of the financial system will reappear.

Just to depart from these abstract considerations, it would be useful to have some idea about what actually happened in Argentina. In the sixteen-month period between March 2001 and July 2002, bank deposits measured in dollars, fell from 85 billion to 15 billon USD. And domestic credit from the banking sector contracted approximately at the same speed. I have never found anybody that was able to tell me a story about a bank run that lasted sixteen months. Bank runs are very short events, after one, two, three weeks, the banks collapse or the problem is solved. But in Argentina we had this event going on for sixteen months.

Why this happened and why this happened in this manner? This point can be clarified by discussing the second lesson, i.e. **the negative consequences of excessive government intervention.** While there were a number of problems in the banking sector arising from the currency board system (the fixed exchange rate and the convertibility system that existed in Argentina) in my view the Argentinean bank crisis was largely caused by what we can call the government abuse of the banks. I will try to define what I mean by "government abuse of the banks", but the main point is highlighted by the assertion that the crisis was not caused by a weak or insolvent banking sector but rather it was caused by government policy that abused the banking sector in a particular and specific way. While there are several possible aspects to the interference of government with the financial system, I think one of them was particularly relevant for Argentina: the financing of the public sector through the banking sector and the

crowding out effect. Of course there are other components of government intervention, such as excessive involvement, regulation and political pressures, but I think that in the Argentinean case the abuse of the banking sector came through the ***forced*** financing of the fiscal deficit through the banking sector.

In the build up of the crisis, from March 2001 to the end of 2001, the share of total bank assets composed of government debt was increasing very rapidly. And basically, if you follow the numbers, you will see very clearly that as the percentage of total banks' assets composed of government bonds went up, deposits fell and the price of Argentinean bonds also collapsed. As the government was pushing more and more of its financing--its bonds--into the banks balance sheets, deposits fell and there was a sharp increase in country risk. Basically, the point is that as the importance of government loans in the portfolios of the banks was increasing, this brought home to the depositors the risk that the government will end up confiscating the assets of the banks or defaulting in a way that banks will not longer be able to pay back the deposits. That perception led, of course, to a bank run. And, the same happened with the price of the bonds abroad. At that time there were many analysts claiming, and I have this whole documented, that bank deposits were falling because the foreigners were losing confidence in Argentina as shown by the higher country risk, and there were those saying the opposite: foreigners are losing faith in Argentina because the local public is withdrawing the deposits. But obviously both variables were driven by a missing variable: the government pushing its bonds into the banks because that was the only remaining source of financing.

For the sake of completeness, one can explain what happened behind this "abuse". Argentina had a fiscal deficit during the time of the currency board and that, certainly, was the central inconsistency of the system. Although at the beginning of the 90s there were some fiscal surpluses, they were largely arising from privatization revenues. Later on, however, deficits increased, raising interest payments as percentage of GDP and, in 1998, at the beginning of the recession, primary expenditure of the government started also to increase very rapidly. Since, given Argentina's currency board system, the central bank could not finance the deficit by printing money, Argentina was largely financing these deficits borrowing abroad. But when the Russian crisis erupted in 1998 capital flows fell very rapidly. That faced the government with a very serious conundrum: either the fiscal deficit is cut, or another source of financing should be found. You cannot finance the fiscal deficit through the central bank and you cannot finance the fiscal deficit abroad because capital flows are not there anymore.

The Argentinean government really could not find money anywhere else except, of course, in the banks. And that was the story, in a nutshell.

I will move now to the third lesson: **the importance of proper liquidity management**. While we all know that liquidity management is important I just want to stress the crucial role played by the availability of liquidity in the prevention and managing of a financial crisis. The Argentinean currency board arrangement deprived the banking sector from a lender of last resort. Although the existence of a lender of last resort may not have guaranteed the stability of the system, its absence worsens the conditions and accelerated the crisis. Banks were, as said before, well capitalized, they had reserves, and the Mexican-tequila crisis in 95 was quite well managed without a lender of last resort. But during the 2001 crisis, with the public very nervous about the bank's portfolios, the unavailability of emergency liquidity was clearly an element that accelerated the crisis**.** This is probably quite well acknowledged, but what I want to add here is that the presence and the aggressive use of the lender of last resort facility as a crisis management instrument was very effective in Argentina. While I am aware of the moral hazard issue connected with the provision of liquidity during a systemic crisis, I think that the Argentinean banking sector would have disappeared in the first quarter of 2002 if the central bank would not have regained the ability to act as a lender of last resort and if the central bank would not have aggressively used this facility. There was, of course, a serious risk of creating hyperinflation by expanding liquidity, and the central bank had to absorb most of this newly created liquidity and had to lose reserves. But the concept was that the central bank will not allow the massive closing of banks during the systemic crisis that followed the devaluation. One third of the total liquidity needed by the banks to attend the deposit run was provided by the central bank (another third was provided by the banks themselves, since rediscounts were provided conditional to banks increasing their own liquidity, and the remaining third came from credit contraction). In my view, the central bank provision of large amount of liquidity was the crucial element that avoided the collapse of the entire system. I therefore believe that while the availability of a lender of last resort facility is important to prevent crises, it is crucial to ***manage*** a crisis.

Let me now make a short remark about **the role of foreign banks**. I am of course aware that foreign banks have been very useful in the transfer of technology, in increasing integration, and in improving efficiency. In this sense and through their role in fostering the development of the financial sector they may also contribute to financial stability. In Argentina, before the crisis, about 60% of the banking sector was foreign owned, while the other 40% was equally

divided between private and public local banks. The questions are whether the presence of foreign banks did reduce financial vulnerability and if they in fact could provide some substitute service as lenders of last resort (when a forma facility is not in place). I don't have a good answer for the stability question. There are arguments in both directions. I do believe however that with or without the foreign banks, the Argentinean system would have equally collapsed in the presence of the massive government intervention. Therefore, on balance, foreign banks did not seem to have reduced financial vulnerability. But what is totally clear is that one cannot expect, and one should not expect, that foreign banks would provide lender of last resort functions, particularly in the presence of a systemic crisis. I believe now that, if there was a representation, both by the banks and by the central bank, that Argentina does not really need a full-fledged lender of last resort facility because it has large presence of foreign banks this was indeed misleading. This was not the case, of course, and it was not supposed to be the case. We have here a very clear case study of a systemic crisis in which the presence of foreign banks did not diminish the need for liquidity provision of the central bank.

Finally, I want to mention the point of the **capital flows and capital controls**. Does capital account integration reduce financial vulnerability? The convertibility law in Argentina was a blanket opening of capital and financial markets. There were some limitations (for example, issuance of indexed instruments were not permitted) but international financial integration was largely achieved during this period. It is difficult to provide a very clear picture here because Argentina suffered the Tequila effect and certainly was affected by the Russian crisis in 98. I think that one has to distinguish clearly between the long run desirability of capital account integration and the short run risk, the transitional risk. The problem is that the transition seems to be very long and the question is what should be done during this transition. One could have the capital controls Chilean style but I think that they could work only in the very short term and I do not think that they could reduce vulnerability substantially and permanently. The question is, then, if one can develop the instruments necessary to benefit from financial opening and, at the same time, limit the potential damage.

But the point that I do want to stress is that during a crisis, during the period of intense run against deposits, and during the management of the crisis, capital control did fulfill, at least in the Argentinean case, a very useful role. I don't believe that we would have been able to reverse or to stop the bank run if capital controls would not have been put in place. So I think that capital controls, as a crisis management instrument, have a role to play. The problem of

course is, again, what is transitional and what is permanent. Once capital controls are in place, may be difficult to eliminate them fully.

In summary, what have we learned from this serious crisis? First of all, that strong prudential regulation is indeed important. It is crucial to prevent currency mismatches, to protect the balance sheet of the banks. Standards and codes are important. But appropriate macro, and particularly fiscal, policies and the prevention of public sector exposures are absolutely necessary conditions for stability. Without these elements it is very difficult to see how prudential regulations and standards and codes can protect the banking sector. It is very important to have a developed capital market especially because that would help hedging operations and improve the structure of the banks but the main lesson is that there are no shortcuts for stable rules of the game and for proper institutional development. In Argentina, the abuse of the banks by the government extended to the abuse of the central bank too, to the destruction of institutional structures. Therefore, stable rules and the preservation of the institutional structures are indeed crucial for achieving and maintaining financial stability.

## Session II: Overview of Basel II and Its Reflections on Financial Stability

***This session is moderated by Durmuş YILMAZ, Board Member-Central Bank of the Republic of Turkey.***

**Speech by William L. RUTLEDGE**

**Executive Vice President –Federal Reserve Bank of New York**

Let me begin by commending the organizers for pulling together such a timely and important conference - Basel II promises to be a watershed event in global financial stability, and giving a full airing of the issues associated with its introduction is particularly important as we draw closer to implementation. I am very pleased to be able to participate in the discussion of those issues – the views I offer will naturally be my own rather than necessarily those of the Federal Reserve.

The Federal Reserve has major roles both as a bank supervisor, and, more broadly as a central bank, for fostering financial stability. Basel II has direct and significant implications for these several roles; it will clearly be an integral part of our supervisory approach going forward, and its emphasis on strong risk management practices also supports our broader financial stability mandate.

My comments will set to the side calibration issues and focus particularly on what I believe are two major ways in which the basic structure and operational requirements of Basel II should enhance the stability of the financial system.

The first is that the new Accord should provide an improved and more comparable way to look at risk-taking across organizations. Accordingly, it will allow market participants, supervisors, and the banks themselves to be more effective in detecting changes in risk levels, and to better assess the appropriateness of particular capital levels supporting such risks.

A second major contribution of Basel II to financial stability is that the preparations for, and the final implementation of the Accord, will result in increased resources applied to improving bank risk management practices. This should result in pricing becoming more reflective of risk, and in better capital allocation across firms, borrowers and industries. Basel II has, without question, already led financial institutions to deepen and accelerate their efforts to improve the evaluation, quantification and disclosure of risk.

These beneficial effects will not just happen, but rather will require major efforts on the part of the private and public sectors. Moreover, there are also possible negative effects of Basel II to evaluate and factor in to our approaches - a topic that I will also touch on briefly.

**Limitations of Basel I and current supervisory approach**

In thinking about the effects of Basel II, it is useful to step back and look at the current supervisory and regulatory framework - taking into account the Capital Accord currently in effect and how it is used in our supervisory processes.

The original Basel Capital Accord was itself a landmark event, revolutionary in providing a common capital assessment approach, now used by over 100 countries. However, it has obvious limitations that have become more significant over time. It has become less and less reflective of the risks of our largest organizations, and, accordingly, has become less and less integral to our ongoing supervision of them.

Basel I, as we all know, includes such shortcomings as: a) its failure to recognize differing credit quality within the same general asset type; b) its varying the capital charge with the credit exposure's legal form, such as whether it is on or off balance sheet; and c) its simplistic approach to risk transference and credit risk mitigation.

More generally, Basel I was not structured to keep pace with the rapid rate of financial innovation that we have seen in internationally active banks. It clearly has created incentives for capital arbitrage, with banks able to structure transactions with the primary goal of minimizing regulatory requirements without a commensurate reduction in risk. Similarly, it has resulted in distortions in bank activity, by creating a tax on certain activities while understating the risk for others.

These have combined to make the regulatory capital metric less informative to investors, supervisors and counterparties, and have eroded the principle of adequate risk-based capitalization that the Basel Accord was designed to promote.

I should emphasize that the weaknesses of the current regulatory capital framework are much more relevant to the supervision of the largest and most sophisticated banks than they are generally across the industry. For the vast majority of the thousands of U.S. banks, the existing regime largely works. In recognition of this, among other considerations, we expect that in the U.S. most banks will stay on Basel I while the largest and internationally active banks will adopt the advanced Basel II approaches. We are considering some simple adjustments to Basel I to ensure that the framework is up to date and that there is competitive equity with Basel II adopters.

In any event, the lack of risk sensitivity and incentives for arbitrage have made Basel I less relevant in our supervision of the largest banks - it is a benchmark requirement to be met, but not, in practice, a critical discriminating factor as we judge their financial condition.

As supervisors, we have focused increasingly on assessing the rigor and effectiveness of each organization's risk management and control systems. We have looked to understand the risk appetite of each firm, and then assess how well it is able to measure and manage the resulting degree of risk taking.

A key recent part of the supervisory effort has been to encourage the development of banks' internal economic capital models - models that link risk taking to capital and that look to compare risk taking, and the returns on risk, across business lines, regions and products.

But the current stage of development of economic capital modeling - the differences in model construction, assumptions and coverage - limit our ability to make comparisons of the results across institutions. More generally, economic capital models clearly remain in an early evolutionary stage, most particularly regarding operational risk. Their early stage of development can also be seen in the relative paucity of disclosed economic capital estimates by banking firms. Only very recently have we begun to see that some bankers have sufficient confidence in the quality of their economic capital estimates, even of credit risk, to disclose them publicly.

**Basel II: Effects on comparability**

This brings me to Basel II. The new Accord links risk taking to capital adequacy in a meaningful and consistent way. Its systematic quantification of risk will give market participants new tools for viewing banks' capital positions - providing a strong basis for making comparisons across institutions and over time. While relying to a considerable extent on a firm's internal systems for generating credit risk and operational risk capital charges under the more advanced approaches, the new Accord establishes strong preconditions for firms to meet in using those methodologies. In doing so, it also puts a strong measure of responsibility on the supervisors to ensure that each firm is in fact adhering to those requirements - we cannot simply accept the legitimacy of such an important element of financial condition as capital adequacy without extensive and critical reviews of the processes that generate the numbers.

With these elements in place, comparability should be greatly enhanced. Moreover, unlike Basel I, the new Accord allows for the evolution of bank practice over time by building on the core elements of a bank's internal methodologies - methodologies that are expected to continue to improve, particularly with supervisory and market encouragement.

**Basel II: Risk management improvements**

The second, and perhaps more significant, benefit I mentioned is the encouragement to improvements in bank risk management practices. Basel II has always had this objective in mind in addition to creating a stronger, more risk sensitive measure of bank capital. We are clearly already seeing this objective being realized.

Basel II builds on risk measurement concepts that have emerged in the industry, although clearly the application of these leading practices varies within and across firms. There has

been enormous progress as banks commit to programs that will bring their systems and practices into alignment with the standards articulated in Basel II.

As I have emphasized, a major focus of our supervisory activities has been on ensuring that banks are actively engaged in advancing the linkage of quantified risk-taking to capital, as this is at the heart of both sound banking and Basel II. Let me offer some specific examples, beginning with credit risk and then turning to operational risk.

An example can certainly be seen in the management of retail exposures. Over the last decade, as the geographic dispersion and size of lending portfolios grew at large banks, and amid intense competition, reliance solely on expert judgment in the evaluation of the risks of retail exposures became less and less plausible. Banks developed, and continue to enhance sophisticated scoring systems to better express the likelihood of repayment of individual borrowers, and have grown increasingly sophisticated in their ability to segment exposures by characteristics that provide a fine classification of the risk of a homogenous pool of borrowers.

Basel II allows banks to build off of these practices, bringing regulatory capital requirements into much closer alignment with internal economic capital estimates. Importantly however, this occurs only when banks use those models for risk management purposes - ensuring their continuing effectiveness.

A key element of Basel II is that it establishes rigorous standards for data collection and the systematic use of the information collected. The greatest challenge for the industry, and the greatest potential long-run benefit, involves the collection and categorization of accurate, detailed information on borrower and exposure characteristics and exposure performance. This involves significant investments in technology, and for some firms the revamping of historical underwriting practices. Enhancements to technological infrastructure and MIS, combined with detailed, granular data will, over time, prove a powerful combination allowing firms to better price exposures and manage risk.

The emphasis in the new Accord on improved data standards should not be interpreted solely as a requirement to determine regulatory capital requirements, but rather as a foundation for risk management practices that will strengthen the value of the banking franchise.

In addition to building on the current state of risk management practices, Basel II also promotes continued improvements in those practices. As I emphasized a moment ago, bank supervisors now are heavily focused on critically assessing risk management and control

systems - where we find shortcomings, we constantly urge banks to make risk management improvements. Those shortcomings can reflect individual firm failings, in which case, we press the individual firms to bring their approaches up to the evolving best practices of well managed competitors. But the shortcomings can also reflect more systematic problems across the industry - necessitating supervisory efforts to move the industry ahead more broadly to improve its standards. Clearly, both through the micro-judgments for individual firms and through the issuance of broader public guidance to address cross-industry concerns, the supervisory process is critical in ensuring improvements in risk management practices.

Basel II can materially reinforce these efforts by setting strong qualification standards and capital incentives for firms to measure risk more accurately. Historically, the supervisory method for evaluating credit risk at banks in the U.S. focused on the identification of individual commercial loans that were already troubled. Bank supervision added value by assuring counterparties and market participants that banking entities had clean and accurate balance sheets by forcing the timely recognition of losses.

More recently, in response to the development of rating systems, the supervisory effort has shifted to the evaluation of the credit risk management process, and specifically the quality of each bank's internal credit rating system. As supervisors we are no longer solely concerned with whether a bank has properly rated a troubled credit. Rather, we are now focused on the extent to which the bank can properly distinguish between loans across the spectrum of credit quality through its ratings, and whether these ratings are adjusted on a timely basis according to changes in a borrower's performance.

With Basel II, there are requirements for a meaningful differentiation of risk, for credit ratings with integrity, and for a warehouse of data to support the ratings (and requirements to ensure that historical data horizons cover appropriate economic downturn conditions). Moreover, banks will be required to test their rating system's performance, resulting in more accurate ratings and capital assessments. In addition, through Pillar II, banks will be required to benchmark the results of their Pillar I credit assessments through rigorous stress testing.

Basel II also sets rigorous standards for the recognition of credit risk mitigation, ensuring that firms have sound internal procedures for assessing the legal certainty of such mitigation, that they include the effects of netting and collateral and that they factor into their calculations mismatches in maturity between hedging and hedged instruments, as well as other forms of basis risk.

The more recently issued Basel/IOSCO consultative document further raises the bar when it comes to recognizing the effects of double default in credit risk, modeling counterparty credit risk in an integrated manner that recognizes portfolio effects and improving the modeling of market risk, particularly as it relates to the growing exposure to credit-like risks within the trading book.

Basel II already has had a particularly strong impact in improving the way the industry assesses its exposure to operational risk. Before the issuance of the Advanced Measurement Approach, many firms did not consider operational risk to be a discipline in its own right, as they did market and credit risk. Operational risk tended to be managed in a decentralized manner at the level of individual business lines and it was largely based on qualitative considerations. For many firms, operational risk really was focused on managing back-office operations and processes.

With the introduction of the AMA, supervisors introduced a much more comprehensive framework for how firms should go about measuring and managing operational risk. Firms are required to have a much more comprehensive definition of what constitutes operational risk, including not only processing errors, but also business disruptions, legal and compliance risks and fraud, whether from internal or external sources. As with market and credit risk, firms are expected to supplement the management of operational risk at the business line level, with an independent operational risk management function that is responsible for establishing firm-wide policies for measuring and managing operational risk. Finally, firms are required to bring together quantitative elements, such as internal and external loss data, with qualitative elements, such as control self assessments and scenarios, to arrive at a reasoned assessment of their exposure to operational risk losses across the firm.

Internal rating systems, credit risk mitigation and operational risk measurement are merely a few of the examples of how Basel II has already spurred improvements in bank risk management and how final implementation will bring further discipline to risk management practice.

Supervisors also will have to make judgments about the effectiveness of the models and associated procedures that banks intend to use for regulatory capital purposes. A key element in making such judgments is the so-called “use test” which requires that banks’ regulatory capital models build on the models that they use for internal risk management purposes. This

is a necessary condition for supervisors to have confidence in the integrity of banks' regulatory capital models.

Additionally, Pillars II and III give added impetus to comprehensive improvements in bank management practice. Under Pillar II, supervisors will assess the integrity of banks' internal economic capital models - focusing on aspects that are not well-captured in the Pillar I framework, such as the firm's correlation assumptions within and across portfolios and the rigor of its stress testing programs. Finally, under Pillar III, supervisors will seek to ensure that accurate information about risks will be disclosed by banking organizations.

**Areas of possible concern with Basel II**

***Procyclicality***

While I have emphasized the various benefits of Basel II for effective supervision and the preservation of financial stability, there clearly are some possible downsides of the new approach. Concerns have been raised that the adoption of the new Accord will have some destabilizing effects on the international financial system, and emerging market economies in particular. Chief among these is the concern that Basel II will amplify procyclicality as Basel II adopters severely tighten credit standards in response to rising capital requirements in the event of deterioration of credit conditions.

We do expect that minimum capital requirements will rise and fall in response to changes in the risk of a bank's activities, just as the internal economic capital models currently used by banks reflect changing risk exposure by changing capital levels. By itself, this will mean that, even with some changes the Basel Committee made over the years to lessen the effect some procyclicality still remains.

However, the procyclicality debate should include not only whether capital requirements will rise and fall with economic cycles, but also whether the new requirements provide useful signals to banks, supervisors, and market participants that will lead them to take appropriate action in response to a changing economic environment.

With more gradations in the Basel II framework, banks, supervisors and the marketplace will have an early warning signal when credit quality deteriorates and when it improves. A more risk sensitive measure should give bank managers accurate signals to adjust lending policies in a more gradual manner early in cycles, dampening severe contractions or expansions in lending.

With its emphasis on planning and risk analysis, the new Accord will require banks (and their supervisors and rating agencies) to think more systematically about the level of capital needed during upturns in order to weather downturns.

***Herding behavior***

Another concern that some have raised is that the uniformity imposed by Basel II in calculating capital requirements will result in homogeneous assessments of risk, which in turn will amplify herding behavior in the market place. The new Accord does set requirements for bank risk management by requiring certain types of inputs, and it does set the correlation factors for asset types, but it does not mandate that all banks must have the same assessment of their inputs. Individual banks will still have different methodologies for arriving at the inputs based on their reasoned assessment of risk, and banks' estimates will clearly vary according to their business strategies and the nature of their portfolios.

***Concerns that Basel II will be destabilizing for emerging markets***

Another charge leveled at Basel II is that increased capital requirements for lending to emerging market economies will cause banks to reduce credit extensions. Here I think it is particularly important to consider the current reality of banks' decision-making processes. Internationally active banks are not currently making lending decisions primarily on the basis of Basel I capital requirements - rather, they are using their internal risk ratings systems and economic capital models for pricing and lending decisions. These internal models and capital requirements are far more constraining than Basel I requirements.

Therefore, when we try to gauge the impact that Basel II will have on emerging market lending, the pertinent comparison is not with Basel I, but with the internal risk ratings and economic capital systems that internationally active banks now use. As such, we do not expect major changes in international lending as a result of Basel II requirements.

Additionally, Basel II will bring stabilizing benefits to emerging markets that are often overlooked. The sharp distinction in capital charges for longer-term lending versus short-term loans under Basel I has created some distorted incentives, particularly with regard to emerging market lending. The new rules will remove these incentives for short-term lending - a form of lending that can be especially destabilizing to emerging markets during financial stress.

The adoption of Basel II internationally will have the benefit of spreading stronger risk management practices to all countries, including emerging market nations. This is not to say

that Basel II is the right answer for all banks or all countries at this time, but rather that all countries should work to adopt various of its underlying principles in assessing banks' risk management systems and in promoting transparency and disclosure. Investors and rating agencies would then have a better understanding of the risk profile of emerging market banks, which could result in a reduction of the risk premium currently applied to some emerging market lending.

**Conclusion**

In wrapping up, I would emphasize that implementation of Basel II should help supervisors and market participants better detect increases in risk in individual institutions and across the financial system through a more risk sensitive capital measure. Basel II also promises to reinforce and accelerate improvements in bank risk management globally, as well as promote future innovations through its reliance on banks' internal methodologies. How well these improvements unfold will depend critically on the actions of supervisors in integrating the new regulatory capital requirements with their overall supervisory and regulatory approach.

Thank you very much.

## Speech by Prof. Charles GOODHART

## Professor-London School of Economics

Governor, fellow students of issues relating to financial stability. I am going to try to approach this subject from a historical direction. After all, if you want to know where you are going, it is good to know where you have been. And in this historical, magnificent city of İstanbul, I am sure that you appreciate the importance and relevance of history. I first entered this field of financial regulation myself when I joined the Bank of England back in the mid 1960s. At that time there was virtually no one in the UK really concerned with financial supervision; there was one senior official at the Bank of England mainly concerned with those institutions related most closely to money markets, and he had only a handful of supporting senior officials. There was, moreover, no mandate to the Central Bank for trying to maintain financial stability. Now why was that? In fact it was because there had been no concerns about bank crises since the end of the 1930s. If you look at table 1, you will see the middle row between 1945 and 1971; during this period, (and indeed you can take this back to 1938), there were no bank crises. Also there were virtually no twin crises involving both banks and an external exchange rate crisis. There were lots of currency crises, lots of external financial payments crises, but there were virtually no banking crises. Figure 1 also shows that diagrammatically.

Now why was that, why did we have so few banking crises over this period of about 30, or so, years? It was partly in the aftermath of the disastrous interwar depression, and the measures that were taken to prevent that occurring again. These included the introduction of deposit insurance in a number of countries. At the time, the interwar crisis was largely attributed, (though there have been a lot of revisions to history since then), to the effect of excess competition. So there were numerous measures, the Glass-Steagall Act of the US for example, to restrict competition, particularly to restrict competition in setting interest rates and prices.

There were, for example, constraints on banks' ability to offer interest rates on demand deposits, and interest rates on time and saving deposits were also frequently controlled. Beyond that, this was a period when current ideology was favoring greater intervention by the state in the functions and the operations of banking. That intervention took a massive step forward with World War II. The need to transfer resources into war production meant that bank lending to the private sector had to be cut back drastically, replacing that by banks providing finance to the public sector, in hopefully a non-inflationary way. With the end of World War II, there was still for most countries in Europe a concern over the shortage of dollars. So the government continued, in almost all countries, to require banks to direct credit to the large manufacturing tradable goods sector which could provide the exports, which could in turn enable those countries to attain the dollars to buy the necessary imports. The result was that from the end of 1930s, in almost all countries, banks were restricted to lending to the public sector, and loans to the very largest, biggest industrial corporations. There was virtually no lending to persons; that was a function, if at all, of the few specialized mortgage institutions. No lending to the service sector; lending to importers, double or triple no. But this meant that actually the banks had a very, very safe portfolio, and so they did virtually no risk management at all. They did not need risk assessment. The managers' training in those decades was how to say "no" to those sectors that were not favored by the government. Since those sectors that were favored by government were generally the safest, that meant the banks actually were very safe. In effect in the most of our countries until the end of the 1960s, and the beginning of the 1970s, banks were the equivalent of public utilities.

This was fine from the safety angle, but it also meant that they were extremely inefficient and uncompetitive. They were uncompetitive compared with unconstrained financial intermediaries in their own countries, and increasingly during those years some countries, led by the United States and also Germany, were deregulating. Such deregulation, and the slow removal of exchange controls combined with information technology, enabled countries to do off-shore banking. So, there was growing international competition. That, in turn, encouraged deregulation in all our countries, because, if we have not deregulated, much financial business would have gone abroad. And all that led to even greater competition. Competition both internationally, especially in wholesale markets which could be contended most easily, and also within countries. The increase in competition brought about by such deregulation enabled all financial intermediaries to enter areas from which they had been excluded by the credit controls earlier. That led to the blurring of distinctions between different intermediary

functions in commercial banking, investment banking, insurance and so on. That leads on to the question whether regulation and supervision should still be segmented functionally, or should cover the whole range of financial intermediation, as it does now in my own country. An example is the rise of universal banks, and you could also say, universal insurance companies and in some cases universal market funds.

However, such competition brought problems. Competition, as it was intended to do, led to reduced spreads; that is what competition is supposed to do. Reduced spreads then led to lower profits, and falling profitability led the banks to move towards higher risk borrowers and indeed, towards new areas of business. If such business areas are new, you know less about them and that means they tend to be riskier. As a result there was a further twist to the continuing downwards trend in capital adequacy ratios that has been going on since the end of the 19th century. Declining capital adequacy ratios and the shift away from safer borrowers to riskier borrowers also led to the credit ratings of the banks being lowered. And that caused the big borrowers, who would have borrowed from the banks beforehand, to wonder why they should borrow from the banks and pay a spread at all. Since their credit rating was now just as good as the banks, they could go directly to the capital markets; and they did, leaving behind them lower qualified bank borrowers; so systemic risk increased during the 70s and 80s.

That was a growing concern to regulators in many countries, certainly in UK and US and elsewhere. But requiring such ratios to be raised could not be handled nationally; it could not be handled nationally because most aspects of banking, particularly international banking, were now a global business. If you just raised required capital adequacy requirements on your own banks, then, if banks in other countries were not similarly required to hold higher capital ratios, they could take business away from you. In the 1980s there was particular concern about competition from Japan, where capital holdings were supposedly increased by cross holdings of shares in the vastly inflated Nikkei equity market of the time, and competition from France where the banks, being largely public sector owned, did not feel required to maintain any capital at all. So it became the function of the Basel Committee of Banking Supervision to try to introduce international capital adequacy requirements, in order to restore capital adequacy ratios from their declining trend to a more appropriate level, in a world in which you had to do this internationally because of international competition. And that was the rationale for Basel I. And it was a great success. It reversed the downward trend in capital adequacy ratios, and did it relatively quickly. Basel I took the apparently reasonable view that capital should be required in relationship to the relative riskiness of the individual bank.

Surely that must be sensible. After all, a bank, which held only, say, own government treasury bills must require less capital than one lending to fly-by-night borrowers from the informal sector. But such relative riskiness was measured very roughly, for example by simply adding up the absolute riskiness, or variance of individual classes of assets, not the overall riskiness of the portfolio as a whole. Moreover the categorization of individual classes, or buckets, of assets was really extremely rough.

The assets of the large international banks were commonly divided into two separable books: the trading book and the banking book. At this time, the large commercial banks, for example JP Morgan, were developing simplified models for assessing the riskiness of their investment, or trading, book, for example, via the well known value at risk model-(VaR). The regulators sought to piggy-back on the models, and systems that were used by the best, most sophisticated, banks. So they have attempted to apply VaR models to the banks' trading books. Although VaR is a model that is well suited to commercial use, it is actually very poorly suited to regulatory use. This is mainly because VaR models rely on an assumption of log normal distributions, but we know that price movements in markets tend to have extraordinarily larger proportions of extreme fluctuations, high kurtosis, fat tails in the distributions, then the log normal distribution would suggest. This was worst in the banking book. Credit metrics, that have been developed to model banking risk, are much more complex, partly because data on the probability of default (PD) and on loss given default (LGD) have not been available.

Meanwhile, given the very broad buckets and inappropriate modeling of risk in Basel I, regulatory arbitrage developed. All banks' lending to the private sector, except for mortgages, had under Basel I the same hundred percent weight, whether it was lent to the safest or to the worst conceivable borrower in the economy. Since the required capital was the same, that meant that the cost of the high quality loans, which in terms of economic capital require much less capital because it was not going to go bust, was raised relative to the low quality loans. So banks' response under Basel I was to shift high quality loans either on to the capital markets or through securitization onto other borrowers. And that made banks into bad banks, since they only kept low quality loans on their books. In other words Basel I had the unintended consequence of making the quality of bank loans worsen rather than get better.

So Basel II is aiming to make required capital more closely related to the economic capital which a bank would want to hold on its own to avoid risk. Now, how do you do this? What they are doing is that on the IRB approach they are using an internal risk rating basis for

estimating the probability of default and for the sufficiently advanced, loss given default. Many, perhaps most, of the banks outside the major international banks in the most developed countries will probably continue to use the standardized approach, which uses external ratings. Since in those countries very, very few companies have external ratings at all effectively such banks will be on much the same basis as now on Basel I. But, in order to encourage banks to move onto an IRB approach, the capital requirements for such banks will generally decline. However, regulators did not want the capital adequacy ratios for the main international banks to fall. Hence, they supplemented the credit risk requirements by a new category, that of operational capital. Certainly operational risk exists. It includes predictable problems, for example of credit card fraud, trading errors, operational issues such as IT failures, and, much more important in terms of the likely scale of loss, unpredictable events such as massive insider fraud. An example is Nick Leeson of Barings. However it is not clear what is the justification, in terms of overcoming market failures, for requiring minimum capital to hold against such risks. The normal rationale for holding required capital is because of externalities, where if one bank fails, depositors look at the problems of that bank particularly in terms of its credit books, and then assess which other bank is like it, and then depositors tend to run on that other bank, so that there are externalities. If a bank fails because of fraud, as with Barings, whom do you run from? Where are the externalities, which other bank do you expect, do you suspect to be subject to fraud as well? The externalities here are very limited indeed. It is not clear what, in theory, is the justification for outside public sector intervention in the ordinary business of banking in this particular case. But I am glad to say that, after some criticism of the concept of operational capital, its required level was somewhat reduced in extent.

For developing countries, countries such as Turkey, the addition of operational capital requirements in addition to, if you use the standardized approach, the credit risk requirements, will generally raise the average capital adequacy requirements. One can argue if that is a good or bad outcome. There is also a suggestion, which has been just made in this Conference, that it does not matter because most banks have economic capital in excess of regulatory capital anyhow. I never take that argument seriously, because there is a cost to infringing regulatory capital requirements. So any increase in regulatory capital is bound to push up the desired economic capital beyond it; there have been certain studies in the UK demonstrating that.

There are some undoubted considerable advantages of Basel II: it raises risk awareness and it will improve risk measurement. And it does tie economic and regulatory capital more closely

together, so that there will be less regulatory arbitrage. However, there are also disadvantages: it is likely that there will be greater cyclical movements in required capital ratios. Moreover, there is now more endogenous risk. Banks will behave in the same kind of way under the same kinds of pressures. And that leads to common responses, which is known as herding activity. Secondly Basel II is enormously more complex than Basel I. Basel I was short and succinct. Basel II in terms of reading material is vast. I wonder how many people in this audience have actually struggled through all the Basel II pages. Thirdly, despite all that, it actually still offers quite a problematical measure of riskiness. It is based on the assumption of one single common factor of riskiness, which is generally within a country the cyclical movement of own country GDP. It does not take any proper account of international diversification. Considering that it is supposed to be related to international banks, it is extraordinary that it takes no account whatsoever of international diversification between countries, and between areas. It will not avoid, but will reduce, regulatory arbitrage; there are bound to be loopholes that clever lawyers and clever economists will find, and regulatory arbitrage always rises over time. Finally, it is fairly prescriptive to banks about how they apply risk measurement and risk assessment. And that prescription is likely to reduce the degree of experimentation and the range of analysis that banks undertake in this field.

But there is no doubt that the whole exercise of introducing Basel II has had remarkable educational effects. That is partly what Basel II is about. But one can ask, and as an economist I must ask, "Is improving education a proper function of the authorities?" Normally, intervention in markets in the private sector is supposed to be dealing with market imperfections and market failures. And here our main concern should be with systemic risk, and with asymmetric information, i.e. with protecting depositors. Does Basel II really help in either case given the procyclicality and potential herd behavior? What do you think? You should be careful to aim off on the arguments, in the sense that many of the speakers that you have so far heard have been those who had been involved with introduction of Basel II and will, therefore, tend to emphasize its strong points. I am now an entirely independent academic, and it is an academics' métier to be critical. So you should also aim off for that. Basel II is a trade-off between the beneficial effects of greater individual bank risk awareness and risk management against what may be the unfortunate systemic side effects of greater procyclicality and herd effects. Which will be greater? Will it be beneficial? Or might it actually be adverse for the overall system as a whole. I cannot tell. I hope those proponents of Basel II are right to claim that it will be beneficial. But you certainly cannot tell in advance,

and you want to be fairly careful about the possibility that it might actually worsen cyclical fluctuations.

Where do we go from here? One thing, that you should be aware of, is that virtually everyone that I know who was involved in this exercise has agreed that Basel II is not a final resting place for the regulation of credit, or operational risk, or bank risk management, or anything of that kind. Indeed there is a widespread desire amongst regulators to become much less prescriptive, much less complex and much less intrusive in banks' own business and to be able to rely more on banks' own credit risk control mechanisms than is currently possible under Basel II. But that is not possible yet, because banks generally have not yet reached that stage of development. Moreover, in the meantime, there is a very understandable need to let the new system become tried, tested, and see how it actually works. How long should that running-in time be, before there is any further major reconsideration? Basel II will be revised and evolve in minor ways, in almost a continuous fashion. But how about a major reconsideration? I would suggest that would probably be about ten, or maybe more than ten years, to be the length of time to allow this new system to stay in place, and to see how it actually works. But do not think that this is the last word, because it is not. Though it is my last word.

**Paper by Dr. Gerard CAPRIO, Jr.**

**Director, Financial Sector Operations and Policy Department-World Bank**


Mr. Caprio, in his speech which draws on the book that will be coming out soon from Cambridge University Press with the title of "Rethinking Bank Regulation: Till Angels Govern", has given an overview of the banking regulation and supervision issues by mentioning the role of government; public versus private interest. Mr. Caprio, also talked about the effects of Basel II on the development of banks and drawing attention to some concepts like

efficiency, integrity, stability and bank governance, he stressed out the importance of market discipline.

A copy of Mr. Caprio's paper co-written by James R. Barth and Ross Levine, which he based his speech on, is included in the ANNEX.

### Speech by Dr. Iris JANDRASITS

### Seconded National Expert, Banking and Financial Conglomerates-EU Commission

First of all, I would like to thank the Turkish National Bank to be invited on behalf of the European Commission. As I will be the last speaker of a very long day, as I don't want to be compete presumably with a very exciting evening program and I am representing an institution, which is very often seen as too bureaucratic, I will try to be unbureaucratic and try to use my 30 minutes to less than 30 minutes. So this is just for your information. I would like to start with just a short overview what is the background of our capital regulation within the European Union. It started in 1988 with the Basel Accord , better known as Basel I, continued by a first proposal for the new capital adequacy framework by the Basel Committee on Supervision in 1999. What did we do then as the Commission? Between 1999 and 2003, three consultation papers were publicly available including a Quantitative Impact Study in 2003. In April 2004 PriceWaterhouseCoopers, on request of the European Commission published an economic consequence study on the impact of Basel II for banks and investment firms in the European Union. Backed by the agreement of the Basel Committee in June 2004, the College of Commissioners adopted formally in July 2004 the draft proposals. How does this institutional process look like in the European Union? After the formal adoption, there has to be a co- decision by the Council of Ministers and by the European Parliament. The Council of Ministers has already agreed on a common position in ECOFİN in December last year, which is basis for negotiations with the Parliament. In the Parliament three public hearings had been taken place since November 2004 and now we are

waiting for an initial report, which should be followed – hopefully- by a plenatory vote expected after the summer break. Our aim is – and I just mentioned it shortly - also to include the trading book review in the current legislation proposal. I think this slide is a very well known picture to you all, it presents the new capital accord with the three pillars - how it looks like in the European Union. The key issue we are facing right now and was in the past is the implementation date. What does it mean "Basel II" for our 25 member states? It means that there will be a full implementation by all member states , respectively by the legislation, which has to be ready upon 2007. For 2007, the following approaches will be available for the industry: for the credit risk the "new" Standardized Approach and the Foundation Internal Ratings Based Approach and for operational risk the Basic Indicator Approach and the Standardized Approach. By the end of 2007, beginning with 2008, you will be able to use the IRB approach for credit risk and advanced measurement approach for operational risk. Well, how will it be implemented in EU? We are doing actually a recast of two directives: The recast of the Codified Banking Directive and the recast of the Capital Adequacy Directive, and of course with a kind of flexibility - the "comitology" process. What are the objectives behind for the European Commission to install a new capital adequacy framework? The Commission wanted to establish a more risk sensitive regime and to enhance the financial stability of the European Union financial markets. To whom will it apply? It will apply, I just mention before to 25, no, to 27 Member States, because as of first of January of 2007 we will have 27 Member States and - in contrary to the Basel II Accord – the new capital requirements framework is mandatory for all EU member states. Another difference to the Basel Accord is that it will apply to investment firms in the 27 Member States, which are authorized under the Investment Services Directive. Well, modifications in the EU apply? We were very often asked what is the difference between Basel II and our Basel II ? We had long discussions about this topic in the last years and I think, the result is quite attractive to everybody, to all users in the market because what we achieved was to take into account the wider scope of EU application, also the wider range of business so-to-say we have a very fragmented market with a lot of SMEs and also with smaller institutions. Just for review, again this is the three pillars structure. With Pillar 1, the minimum capital requirements, the credit risk weightings are based on either on the Standardized Approach which is based on ratings of external agencies or one of the two approaches which are based on the banks' own ratings. And the operational risk, we have the Basic Indicator Risk, the Standardized Approach and Advanced Measurement Approach. Especially Pillar II is enhancing financial stability, as the aim is that the banks have adequate capital to support all the risk in their

business. There will be two key elements: on one hand the institutions, which must carry out an assessment process to ensure that they hold adequate levels of capital and on the other side the supervisors who must review and evaluate institutions' risk profile and capital adequacy. We look at the next slide with four principles: One principle is setting out the role of the bank and three other principles are setting out the role of the supervisors. Financial stability will be enhanced via the requirements on supervisors: they have to review and evaluate the financial institutions' capital adequacy, they have to intervene at a very very early stage and they have to encourage their banking system to establish a robust capital management process. Pillar 3, market discipline, again very important for financial stability is to complement the capital requirements of Pillar 1 and the supervisory process of Pillar 2 as it has to encourage the market discipline by developing a set of disclosure requirements which allow market participants to assess the capital adequacy of the institution. The market will get much more relevant information on banks' risk assessment capabilities, on the risk profile and will know more about the capital adequacy. The banks on the other hand, they have to disclose much more essential information on the capital allocation process and the risks taken beyond the present financial reporting framework What are the challenges we are facing in the future in the European Union implementing the capital adequacy framework? We do have a large number of national options. We have an enhanced supervisory discretion meaning, supervisory review process and validation of models and we have a fragmentation of supervision concerning large groups. I would like to thank you for your attention. And if you have any further questions, please, refer to my e-mail, and my colleagues and myself will be very pleased to answer them.

## DAY 2

## Session I: Implications of Basel II

***This session is moderated by Dr. M. İbrahim TURHAN, Board Member-Central Bank of the Republic of Turkey.***


**Speech by Dr. Erdem BAŞÇI**

**Vice Governor-Central Bank of the Republic of Turkey**

Governor Serdengeçti, distinguished participants, dear guests, I am going to talk about the implications of Basel II on the Central Bank policies. To tell you the conclusion first, Basel II will make life easier for central banks. That is the bottom line of my speech, but given that I have 25 minutes, let me just fill the remaining gap. First, I will talk about central banks and financial

stability. Second, I will discuss financial stability and Basel II. Third, I will comment on Basel II and Turkey, and finally I will conclude.

To start with, we do not need a definition for the term “central bank” as everybody knows its meaning. Then how can financial stability be defined? Up to now, many definitions have been offered, though no widespread agreement has been reached on the definition of financial stability. Yet the typical definition would start with the phrase “lack of”, making it a negative negative definition. “Lack of something” is bad. The shortest one would be lack of financial crisis. However, I prefer a positive positive definition. I would like to define financial stability as sustained success of financial contracts. Both definitions, of course, basically mean the same thing.

Now, how about central banks, what are the duties of central banks? Typically, a modern central bank has price stability as its primary objective. Typically again, employment and growth aims are given as secondary objectives, and payment systems, their development, establishment of smoothly functioning payment systems and also financial stability are given as auxiliary objectives or additional duties. In our case, namely in the Turkish Central Bank case, the Central Bank Law stipulates that price stability is the main objective of the Central Bank of Turkey. To the extent that it does not contradict price stability, the Central Bank also follows policies that support the employment and growth objectives of the government. It is a lexicographic ordering; price stability comes first. In line with this setup, we are going to start formal inflation targeting next year. Additionally, the Central Bank Law also imposes duties on the Bank about payment systems and financial stability explicitly. So, the traditional central bank function of lender of last resort is obviously related not only to the last two duties of maintaining payment systems and financial stability but also to the first two, namely price stability and growth. The lender of last resort function of the Central Bank is always there almost by definition.

I will now talk about two trade-offs or two tensions. One is between financial stability and price stability, and the other is between financial stability and financial development. Regarding the first tension, the Central Bank’s job has been quite easy up to now because one of the main causes of financial instability in Turkey was the lack of price stability. Accordingly, any step towards price stability helps to achieve financial stability. There has been a complementarity between them. So, there is no tension for the time being, but in the future, there will probably be eras and periods when we will have to make some choices. At that moment, we will probably focus more on price stability than financial stability according

to the Central Bank Law. Therefore, the presence of the Banking Regulation and Supervision Agency, acting autonomously, will make our life relatively easy to focus solely on price stability.

So, where is the trade-off? Our governor has mentioned some of the Asian crises, and now let me also give you just a hypothetical example: Suppose that in a country the trend is towards price deflation. There is an excessive fall in inflation down to zero percent, and the fear is that there will be deflation. As a reaction to that situation, the Central Bank in question reduces the real interest rates substantially to stimulate economy and avoid the deflationary outcomes. However, that may have implications on the asset market side, and there can be housing booms or asset price bubbles. As you see, in order to reach the price stability objective, the Central Bank may endanger financial stability, and a question emerges: "If we raise the rates, will the asset bubble burst, will the housing bubble burst, will that have further implications on the real growth and the real sector?" So, there is a tension, and it will probably not disappear altogether.

The second trade-off was mentioned by Mario Blejer: "Is financial stability necessarily a good thing?" We see that the more the financial development is, the more likely the instability will be. Financial development, the emergence of new instruments and new contracts, and the increase in the volume of transactions are typically followed by crisis and instability. Therefore, there is a trade-off. If you want a significant amount of financial development then you opt for crisis and financial instability, which is another difficult topic. But I will not elaborate on these issues. I will instead focus on some related aspects that are relevant to Turkey.

Coming to central banks and financial stability, obviously, the maintenance of financial stability is a much more difficult and complex job compared with maintenance of price stability. There is no straightforward instrument that a central bank can use for financial stability. One way is publishing financial stability reports, becoming common nowadays among the central bankers. These reports are useful communication tools to bring some awareness among public agencies and people about potential fragilities and problems. Other than that, there is not much actually. Although there is only the interest rate instrument under a floating exchange rate regime, this instrument should better be used in order to obtain price stability. So, there are not many tools that central banks can employ for financial stability other than sound communication strategies.

Now, coming to the second topic, financial stability and Basel II, I will very quickly go over these. Of course, better risk management, effective supervision, international standards, especially accounting standards and also better disclosure will all contribute to financial stability. Therefore, Basel II is good news. These are the three pillars of Basel II. And all three pillars have direct implications for financial stability.

First, the minimum capital requirement, having a capital level that is more resilient to shocks, the alignment of regulatory and economic capital and the encouragement of better risk management techniques will all help financial stability. For the central bankers having banks with adequate capital is the most important level of defense as far as our lender of last resort function is concerned. So, if the banks are solvent then it will be quite comfortable to extend them short-term credit for liquidity reasons. Of course, we will ask for collateral; nevertheless, solvency is the foremost condition.

As for the supervisory review process, there is a very long list of issues here, but I would like to focus on just two aspects. Under Pillar I, the credit risk is taken into account. How about the market risk and the liquidity risk? There is an indirect link to Pillar I from here, and the supervisory review process is important in that sense. There should be capital charges on banks for price risk. I separate the price risk from foreign currency risk. Why did I separate them? Why did I not just call them market risk altogether? That is because foreign currency risk is quite important for emerging markets. Therefore, the supervisory authority should be very careful about foreign currency risk and charge additional capital on banks with open positions. The second aspect missing from Pillar I is the liquidity risk. In fact, under Basel I and Basel II, there is no capital charge for the liquidity risk of the banks. We need an additional regulation to make banks liquid enough. Many European countries do this by enforcing some liquidity ratios. We also have a draft law in the Parliament being discussed nowadays, and there will be a liquidity regulation for micro prudential reasons.

Pillar III is on market discipline, better information disclosure and enhanced efficiency of financial markets, which are also very useful especially for Turkey. Some of the small and medium-sized firms do not even have proper balance sheets. First, they should have balance sheets, then be obliged to comply with the international accounting standards, and then we should look for further disclosure in the banking system.

Coming to the last part, as for Basel II and Turkey, I want to give a very brief history. Basel I was basically adopted in Turkey in 1989 in principle, and market risk was incorporated in the

calculation of capital adequacy ratio in 2002. The QIS-3 was completed in 2003 on the Turkish side, and recently we have had a QIS-TR, which was published by Banking Regulation and Supervision Agency.

Now, I will talk about two main trends in Turkey. These are recent trends of the last three years or so. One of them is reduced fiscal dominance and the other one is reverse currency substitution.

Starting from the first one, the Turkish Government has a high debt stock. After the crisis, public net debt stock to GDP ratio jumped to nearly 90 percent, which is an excessively high figure for an emerging market. During the last three years we have managed to take this figure down to 63.5 percent of GDP by 2004. It is a substantial and remarkable achievement thanks to the very high primary budget surpluses. It seems that this trend will continue in the coming three years, because a primary surplus of 6.5 percent of GDP will continue hopefully for three more years in line with the economic program we have submitted to the EU. Also that is the basis of the IMF stand-by arrangement. Accordingly, public debt to GDP ratio will fall very fast in the future. There, we are quite comfortable. At the same time, the deposit to GDP ratio is quite low in Turkey. It is around 45 percent. Compared to 63.5 percent public net debt stock to GDP ratio, it is still insufficient. There is some growth in deposits, but the growth in GDP and growth in deposits are matched, so that the ratio is roughly constant: 45 percent. As the public debt falls, private sector loans naturally increase. This is good news, but look at loans to GDP ratio. It is only around 23 percent. That is the data for the end of 2004. The loans to GDP ratio, which was around 17 percent two years ago, is now 23 percent, a sizeable growth though the level is still low. So, how do the Turkish companies finance themselves? It is mainly through internal equity finance. That is what small and medium-sized enterprises do. They mostly use their own funds to run their businesses.

The second trend is about the return to the Turkish lira. Turkey, due to very high inflation, had a lot of dollarization. It is better not to use the term dollarization, because foreign currencies in use also included Deutsche Marks first and now they include the Euros. It is currency substitution not only for money under pillows but also for bank deposits. There is a significant amount of FX deposits in the banking system. That is decreasing quite significantly. I can give you some figures. If you look at the total household assets and total household wealth, you see that around 40 percent of that amount was in foreign currency in 2002. In 2004, that ratio is down to 29 percent. So, there is a significant reverse currency substitution on the household side. A similar trend is observed for the firms' deposits at

banks. Their FX deposits are going down. The asset side is reflected through the point of view of the households and firms. Liability side, on the other hand, is viewed from the point of view of households and the Treasury. Share of households' foreign currency denominated loans is zero because banks are not allowed to extend FX denominated loans to the households. Therefore, it is zero. The share of the Treasury's FX liabilities has been quite high, but that is coming down quite fast. FX sensitive debt in total debt of the Treasury is now below 40 percent, and moving in the right direction.

I will move very briefly to the effects of Basel II on banks' balance sheets: Turkey will lose the benefit of being an OECD country with zero weight for sovereign securities. Under our current country rating, the Turkish Treasury's foreign currency denominated papers will receive a risk weight of 100 percent. So, there will be an increase from zero percent risk weight to 100 percent. On the Turkish lira side, there is national discretion, and the authorities may choose zero percent risk weight or up to 100 percent risk weight, but it is under national discretion. Therefore, if there is such an unequal treatment between the Turkish lira and the FX denominated debt, then there will be further move towards the Turkish lira denominated debt probably in the Turkish Treasury. That will help some de-dollarization on the liability side. Coming to the consumer loans, the risk weight will be 75 percent for small and medium-sized enterprises and 35 percent for owner occupied mortgages. As a result, there will be some incentives for the banks to extend more credits to the consumers and SMEs, especially for mortgages. There would be more lending to the private sector if we were to adopt Basel II today. Finally, there are additional capital requirements against operational risk, mentioned before.

In conclusion, Turkey needs to improve risk culture and awareness. That is the first item. The floating exchange rate regime is relatively new, and people still are not fully aware of FX risks. We are warning them that foreign currency risks are there, and the exchange rate can move either up or down. They must be aware and maintain balanced positions. They should not open their positions as they did in the past. Banks basically have zero open positions on total, and the private firms, should be cautious about their FX positions, as well. Better supervisory capacity is obviously necessary for implementing Basel II. As for rating agencies, some new arrangements and improvements are needed. We need better disclosure practices and the use of international standards, a better credit registry system, which is currently under the Central Bank of Turkey. Obviously, effective cooperation between supervisors is needed as well.

To conclude, Basel II is very good news for central banks as far as the financial stability objective is concerned. It will make them more comfortable with their price stability objective. Macro prudential analysis that covers banks as well as non-bank sectors, households, firms, government is also essential, and the first issue of our Financial Stability Report, which will be published this summer, will contribute to that end. Thank you very much for your attention.

**Speech by Dr. Susan SCHMIDT-BIES**

**Member of the Board of Governors-FED**


I want to thank the Governor and the Central Bank of Turkey for the invitation to speak at this prestigious conference. The sharing of ideas among policymakers, academics, and bankers at venues such as this benefits all involved and, I believe, helps us assess important issues relating to the strength and stability of banking and financial markets. I hope that my remarks today will contribute to that overall objective.

This conference on financial stability and implications of Basel II is certainly timely. As you know, members of the Basel Committee on Banking Supervision are working diligently to implement the framework issued last June. At the same time, we are all dedicated to maintaining financial stability in our respective jurisdictions, and in global banking and financial markets as a whole. In this light, Basel II should not be seen as an end in itself, but a means to promote broad stability and enhance safety and soundness of financial institutions.

Today I want to address three issues. First, I will describe the challenges facing bank regulators as they strive to improve financial stability. Then I will briefly describe some of the Basel II issues in the United States that were covered in the recent interagency press release and in last week's congressional hearing. Finally, I want to describe the challenges bank supervisors face in effectively implementing Basel II.

**Financial stability**

As a central banker, I realize how vital it is to have a strong, stable financial system to support effective monetary policy. Excessive volatility in financial markets can significantly raise the cost of capital for business investment and adversely affect real economic expansion. History has demonstrated that a weak financial sector can significantly impede the monetary transmission mechanism when the central bank is trying to stimulate the economy. Since banks are the core of the financial system, efforts to improve their risk management can help mitigate the impact of shocks on financial markets and real economic performance. With effective risk management, banks are better able to plan alternatives to mitigate risks when they exceed predetermined risk exposure levels. It is important to emphasize that the normal fluctuations in asset prices that result from dynamic demand and supply conditions, and even some increase in uncertainty, do not usually generate financial instability. Put differently, financial stability implies that key institutions in the financial system are operating without significant difficulty and markets are generally functioning well.

Bankers implicitly accept risk as a consequence of providing services to customers and also take explicit risk positions that offer profitable returns relative to their risk appetites. The job of bank supervisors is to ensure that bank capital represents an adequate cushion against losses, especially during times of financial instability or stress. Basel II is yet another step to minimize the negative consequences of risk-taking by financial institutions, particularly those institutions that could contribute to financial instability.

This is reflected in the use of unexpected loss to calibrate capital. The assumption is that normal volatility should be covered by normal operating earnings. For losses beyond the normal range of expectations, capital should be in place to absorb the loss and leave the financial institution stable and able to continue operating effectively. Thus, financial institutions with weaker profit margins, or with customers with more varied ability to meet their obligations, should have more capital. It is important here to distinguish between higher expected losses, for which bankers raise prices to cover risk, and greater volatility of results, which requires additional capital.

Greater sensitivity of regulatory capital to risk has taken on increased significance as virtually all banking markets have become considerably more concentrated, with some companies - by their very size alone - posing the potential for systemic risk. Also, the advanced approaches of Basel II better align regulatory capital to the risks presented by sophisticated financial instruments and to the complexity of large, internationally active financial institutions. The current Basel I framework is more focused on credit risk for balance sheet assets. But sophisticated financial institutions carry fewer of their potential exposures on their books.

Rather, after credit- and market-risk mitigation, it is often the process of managing risks or laying off exposures that has created earnings surprises in recent years. Basel II is intended to mitigate potential disruptions in banking markets by improving risk measurement and management; establishing a better link between risk and minimum capital ratios; and providing more information to bankers, supervisors, and other market participants.

But we should also remember that the increased sensitivity to risk in Basel II carries with it the possibility that minimum capital ratios could actually be more volatile than they are today. As my colleague Bill Rutledge pointed out yesterday, that is what we expect, since those ratios will be more responsive to changes in risk. The Basel Committee has attempted to reduce procyclicality effects in the new framework, incorporating factors such as estimates of loss severities that focus on downturns. These are wise decisions intended to obviate the need for institutions to raise large amounts of capital at the trough of a downturn - something that can be quite difficult and add to financial market instability. But I think we could all agree that Basel II should not be unresponsive to changes in risk, for example when the obligor rating distribution at an institution shifts to poorer-quality borrowers. In my view, we want these signals of changes in risk reflected in regulatory capital levels. But by being careful about the extent that capital levels respond to cyclicality, we are trying to make sure that risk signals do not on their own generate added instability. This requires some balancing.

Greater responsiveness of regulatory capital ratios to risk is something that institutions will have to learn to manage under Basel II. Given the potential for increased volatility in their capital ratios, I expect that institutions operating under Basel II will maintain a certain cushion above their minimum ratios since they must have the capital in place before the date of measurement of risk.

Indeed, Pillar 2 of the Basel framework (supervisory review) requires banks to develop a viable internal process for assessing capital adequacy that helps determine the amount of capital actually needed for their particular business mixes and risk profiles. Explicit assumptions are built into Pillar 1 (minimum capital requirements), such as the idea that portfolios are well-diversified and do not contain geographic or sectoral concentrations - assumptions that are not true in the case of many institutions. Supervisors must remind institutions that it is initially the banks' job to address any deviations from Pillar 1 assumptions, as well as any additional factors that affect the risk of the individual bank, and adjust their capital accordingly. Under Pillar 2, supervisory authorities, in turn, will review these adjustments by banks and could ask them to take additional steps to ensure that all risks have been addressed.

There are additional reasons why I expect that well-run financial institutions will maintain capital ratios above the regulatory minimums, as they have under the existing Basel I framework. Some markets and customers will require their banks to have a stronger credit rating than that implied by the Basel I or II minimum capital frameworks. Banks will also continue to be opportunistic in pursuing mergers and new business expansion, and this requires capital above the regulatory minimum to be able to respond promptly to new initiatives. Finally, bankers who are using economic capital models such as RAROC (risk-adjusted return on capital) recognize that Basel II does not take into consideration some forms of unexpected losses, for example, higher charge-offs that occur when new products are introduced, information technology systems change, merger integrations occur, and internal control processes occasionally prove ineffective.

**Implementation efforts in the United States**

The U.S. banking agencies' reaction to the results of the fourth Quantitative Impact Study - known as QIS4 - shows how seriously we are taking Basel II implementation. In a statement issued on April 29, the U.S. banking agencies indicated that the minimum regulatory capital changes resulting from QIS4 were more variable across institutions and capital dropped more in the aggregate than the agencies had expected. This was the impetus for deciding to delay issuance of our next round of proposals for Basel II.

These unexpected results show the continued benefit of conducting periodic quantitative impact studies. They serve as a milestone to help us calibrate the progress of the framework and the bankers as we move to Basel II. We now must determine the reasons for the unexpected results from QIS4. Do they reflect actual differences in risk among respondents when prior supervisory information suggested more similarity in credit quality? None of the participating banks has completed their databases and models for all of their risk areas. In some cases, this created results that would not be reliable for implementing Basel II. For example, for some portfolios, expected losses reflected only the last year or two of results. Thus, the strong credit performance of recent experience was not balanced by higher losses at other points of the credit cycle. Were there limits of the QIS4 exercise itself? Is there a possible need for adjustments to the Basel framework itself? Analyzing the data used in QIS4 is vitally important, because ultimately the success of Basel II will depend on the quantity and quality of data that banks have to use as inputs to the framework. I am sure that those of you working on Basel II - particularly the advanced approaches - are facing the same types of issues in your own countries.

For those of you who will be conducting QIS5 or similar exercises, I strongly suggest that you include qualitative responses from the participants as well as quantitative data. We are finding this very useful as we review the results and have follow-on discussions with bankers.

U.S. regulators expect to provide additional information on the lessons we learn from the QIS4 review in the near future. The notice of proposed rulemaking for Basel II will incorporate what we learn from this exercise. But we really are caught in a process dilemma. Bankers cannot complete their models and collect the necessary data until they know what the specific requirements will be. Regulators, on the other hand, will have to develop these requirements before seeing the actual results of these models and robust databases. The process we have for vetting Basel II in the United States is probably similar to those followed in many other countries. We are putting forward proposals and seeking comment from the industry, our legislature, and other interested parties. Given what a vast undertaking Basel II is, this seems entirely appropriate and beneficial.

In addition to what we learn from the work on QIS4 results, we will also assess the trading and banking book comments of the Basel Committee on Banking Supervision and the International Organization of Securities Commissions. We will incorporate the latest proposal into the notice of proposed rulemaking and hope to complete our efforts in a timely manner.

**Challenges for supervisors**

In preparing for Basel II, supervisors realize that they must address their own capital needs - that is, human capital. Throughout Basel II implementation in the United States, it has become strikingly apparent that supervisors will need a higher degree of knowledge, skill, and experience. Even just our preliminary work on Basel II, which includes writing regulations, drafting guidance, and evaluating preliminary estimates from banks, has consumed substantial resources within the Federal Reserve System. We are in the process of training existing staff members and recruiting new ones, and that itself takes time and resources. We are aware that to implement a framework of the complexity and scope of the advanced approaches of Basel II, we need highly qualified supervisors. As we have learned over the past few years, many aspects of Basel II will require a considerable amount of judgment and experience. That is, as supervisors engage in the qualification of institutions for Basel II and then conduct ongoing monitoring, they will need to become intimately familiar with many technical aspects of the framework and have the ability to assess each institution in context. We want to ensure that in all Basel II discussions, bankers will sit across the table from supervisory staff who understand the framework and how it applies to individual institutions.

This does not pertain just to Basel II, specifically, but also to supervision of evolving risk-measurement and -management practices more generally. As they have in the past, supervisors must keep pace with the latest developments in the industry and be able to differentiate among them in terms of appropriateness. One of the many attractive characteristics of the Basel II framework is its flexibility for incorporating new best practices without having to be fundamentally restructured. It provides a useful and credible basis for improving bank practice today and allowing for future improvements – which could include actual modifications to the framework. We consider this vitally important because banking will remain a highly dynamic industry. Supervisors will have to be especially attentive to changing best practices and ensure that Basel II does not inhibit adoption of new banking practices and financial instruments.

**Conclusion**

Maintaining financial stability in global banking and financial markets continues to be an important objective of regulators, bankers, and other market participants, particularly because of the negative impact that financial instability has on economies as a whole. Basel II, in my view, will help improve financial stability. The new framework will enable bank regulatory capital ratios to be more responsive to changes in risk and will foster additional disclosures by banks about their risk-measurement and - management systems. And even though minimum regulatory capital ratios are likely to be more volatile under Basel II, this reflects greater risk sensitivity. Perhaps most important, Basel II will encourage banks to develop their systems to measure and manage risk as part of the investment needed to support strategic initiatives. The greater volatility in measured risk, coupled with strategic capital planning, should encourage bankers to continue to maintain actual capital levels above regulatory minimums.

In the United States, we are working very hard on Basel II implementation and are taking the appropriate, measured steps to ensure that we get it right. I expect that those in other Basel member countries are doing the same, and facing similar challenges. Of course, certain non-Group of Ten countries are looking to see if adapting Basel II is the best choice for them in the near term. For all of us engaged in Basel II work, it is helpful to remember that certain prerequisites have to be met - particularly for the advanced approaches - including the development of qualified and experienced staff to oversee banks' adoption of the new framework.

**Speech by İbrahim ÇANAKÇI**

**Undersecretary-Undersecretariat of Treasury**

Distinguished participants,

Ladies and gentlemen,

Before I start out, I would like to thank the Central Bank for organizing this conference and for their kind invitation.

Since Mr. Başçı has covered the implications of Basel II on central bank policies, I will focus more on the likely impact of Basel II on banking, public finance and real sector.

I would like to start with a very brief overview of recent history and description of the issues and then move to my comments on Turkey.

Under the fast track integration of markets during the last two decades, the need to achieve financial stability intensified the efforts for adoption of a set of common rules regulating financial systems across the globe.

The Basel accords, which served as the main guideline for the financial sector stability, continued to evolve in line with financial market needs and innovative advances in the sector.

Though we had the rules in place in the 1990s, many countries including Turkey could not escape financial crises with devastating impacts on the real sector and wide spread contagion in other countries. In many of these cases, main factors to blame were the weak financial systems and poorly managed and supervised banks.

This painful experience resonated in the global financial community.

While the rules of Basel I were common practice for more than a decade, it became apparent that they needed a thorough review to enhance better functioning of the financial system.

Basel II has been shaped after years of intense efforts to introduce new rules not only on capital structure but also on supervisory process and market discipline.

Three mutually reinforcing pillars of Basel II provide a better framework for safeguarding the stability of national and international banking systems.

The first pillar, defining a new capital requirement ratio creates immediate incentives for banks to improve risk analysis of their assets.

The second pillar strengthens the power of the supervisory authority in evaluating a bank's assessment of its risks and in enforcing measures for poor risk management and for inadequate capital allocation.

The third pillar brings market discipline through improved disclosure, enhanced transparency and strengthened corporate governance.

Thus, the third pillar will enable the markets to reward banks that take a responsible approach and penalize those that do not.

Dear participants,

Now, I would like to touch upon the impact of the new framework on the Turkish economy, in the context of banking, public finance and real sector.

Turkish banking sector will feel the immediate effect of Basel II on capital adequacy ratios, given the proposed changes in the risk weights of assets.

But, studies indicate that the impact of the new rules on the capital adequacy ratio at consolidated level in the banking sector will remain limited.

In fact, Quantitative Impact Study conducted by the Banking Regulation and Supervision Agency shows that even though banks' capital adequacy declines to some extent under Basel II, this is not considered to be significant because of prevailing high capital adequacy ratio of Turkish Banking Sector.

More specifically, the results of the study indicate that the consolidated capital adequacy ratio of 23 banks currently standing at 28.8 percent will decline to 16.9 percent under Basel II.

The basic reasons for this decline are the high capital obligations for FX denominated Treasury papers and operational risk factor taken into account in the calculations under the new framework.

Another point to be raised with respect to banking is the funding cost. As the OECD club rule in the current framework will be replaced by the credit rating rule under Basel II, Turkish Banks' cost of funding from international markets is likely to be affected.

Basel II will also have certain implications for strengthening the risk management practices of the banks.

We have made substantial progress in this area by the introduction of "Regulation on Internal Control and Risk Management Systems of Banks" in February 2001.

The compliance of Turkish banks with International Accounting Standards has been completed to a great extent.

Banks have also furthered their efforts to establish consolidated risk management systems.

From a macro policy perspective, it is particularly encouraging to see the regulatory environment of banking sector being increasingly harmonized with the internationally accepted standards.

The advanced risk measurement requirement of Basel II will impose additional costs to the banks for investment in information technologies, human capital and organizational restructuring.

I would like to underline the fact that Turkish banking sector has been very conscious of this requirement and has been heavily investing in this area.

I am sure Mr. Şirin, Vice Chairman of BRSA and Mr. Özince, as the General Manager of a bank, will share their reflections on this issue with us later today.

Transition to Basel II will make the need for consolidation in the banking sector more pronounced, while laying the ground for more integration with the international financial system.

We have been observing very encouraging developments in this front.

With entrenched macroeconomic stability and European Union perspective, mergers and acquisitions in the banking sector are gaining further momentum.

We strongly believe that improved supervision (through Pillar 2) and enhanced market discipline (through Pillar 3) will further strengthen investor confidence in the Turkish financial system and help attract more funds into the sector in the years ahead.

These positive developments will ensure the convergence of the Turkish banking sector to the EU standards more smoothly and make the transition to Basel II less costly.

All in all, it is fair to say that Turkey has accomplished a structural transformation of the banking sector. We are determined to implement further structural reforms on our way to full

integration with the EU. The new banking act is a reflection of our policy to bring the regulation and supervision of the financial sector more in line with the EU standards.

Distinguished guests,

The new accord will also have implications for the public finance strategy.

With the introduction of Basel II, the international capital flows will be more dependent on the credit rating of countries.

In assessing the likely impact on Turkey, we should keep in mind that in allocating their funds, international banks already rely more on country ratings rather than OECD membership. In other words, the new accord will only institutionalize what has been the current practice.

On the other hand, since the risk weights of FX denominated government bonds will be 100 percent whereas those of domestic currency denominated bonds might be between 0 to 100 percent under the national discretion, the composition of borrowing will be tilted towards domestic currency.

At this point, I would like to draw your attention to recent trends in Turkish financial markets.

With increased confidence in economic outlook, substantial decline in inflation and currency reform, there has been a very strong demand on YTL based assets by both national and international financial institutions.

In fact, issuances of debt instruments in YTL terms by foreigners including Austrian Treasury, World Bank and EIB have reached around 4 billion dollars since December 2004.

Similarly, the share of YTL instruments in total financial assets has increased to around 70 percent as of May 2005 from around 50 percent at the end of 2002.

These are clear indicators of confidence in the Turkish economy and in national currency, which obviously will help Treasury to better cope with the challenges of transition to Basel II.

Moreover, as Turkey's credit rating improves over time, risk weights of FX denominated bonds will decline substantially.

In fact, Turkey's credit rating has been raised 4 times during the last 2.5 years. Our credit rating was upgraded to BB- for the first time in ten years.

We are committed to continue with our comprehensive economic reform program and the EU accession process, which we believe will eventually help to raise Turkey's credit ratings to investment grade.

Distinguished participants,

Let me now touch upon the impact of the change on the real sector.

Under Basel II, strengths and weaknesses of companies will be more closely analyzed and credit conditions will be strictly based on credit ratings given by banks or rating agencies.

This in turn will bring tough challenges particularly for small and medium sized enterprises.

In the new framework, SMEs will have to improve their accounting standards, to operate in a more transparent way and to enhance their governance.

In addition, they have to increase the level of risk awareness and improve risk management practices throughout their organizations.

SMEs will also need to take appropriate actions to improve their capital bases.

To meet these challenges, SMEs will need to improve their product qualities and strengthen their role in the supply chain of the economy.

Investments in information technology and human capital, use of risk hedging methods, and implementation of advanced international accounting standards will occupy the agenda of the real sector in the coming years.

Distinguished guests,

Overriding importance of financial stability in the Turkish economy is better recognized now.

A successful transition to Basel II will definitely contribute to financial stability through improved risk culture, strengthened regulatory and supervisory framework, and enhanced transparency.

The experience with the new Accord will serve as a public good for all. I am sure, initial adjustment costs will be outweighed by the future gains.

Let me remind you that Basel II will lay the ground for Capital Requirements Directive of EU. As Turkey moves along in harmonizing with the EU and adopts "Acquis Communitarie", Basel II needs to be incorporated into our system. In this regard, making a successful transition to Basel II becomes more imminent for us.

I believe, now is a good time for Turkey to accelerate the process and build on the good progress so far. In fact now, we are in a good position to leverage the favorable factors such as improved resilience of the banking sector and the strengthened economic fundamentals to ease Turkey's transition to Basel II.

As I conclude my remarks, I would like to point out three issues to be tackled with.

For the public sector, the challenge is to continue with prudent fiscal and monetary policies.

The task for the financial sector is not to be complacent and to be responsive to the changing environment.

As for the real sector companies, the challenge is to realign their operations and practices in accordance with the higher standards required under the new framework.

I strongly believe that the Turkish private sector will, once again, prove its ability to adapt to the changing conditions very quickly and will transform these challenges into opportunities.

I, once again, thank the Central Bank for this very important event and thank you all for your kind attention.

## Speech by Ahmet ŞİRİN

## Vice Chairman, Banking Regulation and Supervision Agency

Distinguished participants,

First of all I would like to thank the Central Bank of Turkey for organizing such an important event, our speakers who share their valuable knowledge and experience with us and all the participants.

I hope this conference will be a beneficial platform for discussing and exchanging views on Basel II principles, which will be international norms of banking sector in the following years.

**Introduction and summary**

In my speech I will discuss Basel II from the perspective of a supervisory authority. First of all, with a brief history concerning capital adequacy in banking I would like to introduce the current standpoint of the issue. Afterwards, I will discuss the impact of Basel II on Turkey and mention special conditions peculiar to Turkey. Finally, I will express the policy of Banking Regulation and Supervision Authority (BRSA), the actions that are taken to this extent and my opinion concerning the actions that need to be taken.

**Capital Adequacy in Banking**

Distinguished participants,

Today, implementation of risk based capital adequacy in banking represents a significant deviation from the traditional capital adequacy regulations, which assess the capital adequacy by using a standard ratio for the assets that are classified into general risk categories. As we all know, Basel I, which was introduced in 1988, constitutes the first risk based capital adequacy regulation at the international level. Basel I has received extensive international recognition and now it is still being implemented by nearly 120 countries.

Basel I enabled separation of bank assets into different risk weighting buckets, calculation of capital for each risk weighting bucket and thus calculation of different levels of capital according to the riskiness of assets. While Basel I had foreseen capital requirement for only credit risk in its original text which was published in 1988, with an extension which was made in 1996, it is required that the banks have to hold regulatory capital for market risk besides credit risk.


Moreover, later on, with the new Accord, as its well-known name Basel II, approach to capital management has been significantly revised.

Basel II, which was prepared as a result of these studies, has a much more comprehensive and risk-sensitive approach to banking risks. While the credit risk approach is subject to a considerable change in Basel II, for the first time capital requirement has been introduced for operational risk, which is another important risk. New Accord has much more comprehensive purposes and objectives than the existing one. Besides many others, it is possible to list the following as the most important objectives of Basel II:

-Promote safety and soundness in the financial system,

-Better alignment of regulatory capital to underlying risk,

-Encourage banks to improve risk management practices and

-Enhance competitive equality.

Basel II is not only a calculation process for capital adequacy. In Basel II, the focus is especially on risk management besides risk measurement. Basel II standards are determined in order to provide banks to have safe and sound risk management systems. In this framework Basel II is not only a simple ratio calculation operation, it is a new banking and risk philosophy which brings fundamental changes concerning banking activities and supervision of banking activities.

Different from Basel I, which consists of only minimum capital requirements, Basel II is constructed on 3 pillars.

Pillar I: Minimum Capital Requirement

Pillar II: Supervisory Review Process

Pillar III: Market Discipline

Without doubt, Basel II, which brings fundamental changes to bank capital requirements, has important implications on both banks and on other sectors of the economy. Basel II has many effects on banks, such as changes in capital requirements of banks, increase in effectiveness of risk management activities, changes in IT and governance structure, differentiation in lending costs, changes in lending behavior, and credit pricing, as well as on other institutions, which are customers of banks, on other financial institutions and even on Treasury debt service. For instance, we expect an increase in the need for our corporations to be rated in the following period, because with Basel II, corporations that have high ratings will be in an advantageous position. We expect this issue to constitute a natural incentive for enhancing corporate governance and decreasing unregistered activities in corporations.

On the other hand, various views concerning possible impacts of Basel II on capital flows towards developing countries are also discussed in international platforms. Within this context, when we consider the fact that, in international debt markets major fund providers use sovereign ratings (country risks) when pricing their transactions we do not expect a very important change in our country's foreign borrowing costs stemming only from Basel II implementation.

**BRSA's Approach**

Distinguished participants,

Our basic approach concerning Basel II, with its significant impact on banks and other sectors of the economy, is that Basel II is a step in the right direction and it has to be evaluated as an opportunity for us. When we take into account our aim to increase the competitiveness of the banking sector and also the EU perspective, the necessity of implementation of Basel II is obvious. Within the framework of this principle, our Agency carries out intensive work related to Basel II and I will mention them in a while.

One of the important issues for the developing countries like us is the need for a solid infrastructure for implementing Basel II. This is an issue that we give importance to. In this

framework, for instance “Core Principles for Banking Supervision” which was published by Basel Committee determines the basic infrastructure elements for us. Our Agency made a comprehensive self assessment and continues to work on the issues where improvement is necessary. There are significant issues from our country’s perspective related to Basel II.

We can list them as follows:

-Since we are an emerging-market, we have different characteristics compared to developed countries.

-We don’t have a long history about risk regulations. Introduction of the first regulations on risk management was in 2001. So that, we have a long way ahead to go in the era of risk regulations.

-We have established necessary committees (which I will mention later) to deal with major aspects of Basel II with the attendance of all related parties.

-We are following the international developments (i.e. Basel Committee and the EU) and in close relations with other related parties.

In Basel II, instead of imposing banks a unique approach for risk measurement and calculation of regulatory capital, a menu of approaches are provided. We believe that it is not proper to impose banks certain approaches. For this reason, we expect banks to adopt the most compatible approaches within the context of the quality and level of their risk exposure. Furthermore, we believe that improvement of risk management systems in banks should be compatible with their risk profile. In this framework, we consider that banks, which measure their risks correctly and manage them successfully should benefit from the incentives regarding regulatory capital requirements. However, we also expect some banks to use more advanced approaches for credit and other risks.

On the other hand, we believe that understanding the regulations brought by Basel II as only a formal legislation is improper and even dangerous. It does not mean that a bank is managing its risks well just because its capital adequacy ratio is high. In this framework, we encourage banks to understand the essence of Basel II and we do not encourage them to invest in risk management systems and tools, which they will not use effectively. The important thing for us is the effective use of these systems and tools by banks.

Essentially, Basel II attributes an important flexibility and responsibility to the supervisory authorities in Pillar 2. In this framework, besides the regulations concerning capital adequacy

and risk management, the approaches used in supervision and enforcement will significantly affect the effectiveness of Basel II.

**Work of Banking Regulation and Supervision Agency**

Distinguished participants,

With Basel II, the approach to regulatory capital requirement has changed significantly, and many components like economic capital, detailed supervisory review, market discipline, etc. are introduced. Within this context, improvement of the capacity of banks for effective risk management has gained more importance for supervisors. The improvements in Basel II are closely monitored and different studies are being made. As a supervisory authority, we believe that it is necessary to establish the required infrastructure both in our Agency and in the banking sector. We also believe that banking sector will function in a more strong and secure way with establishing this solid infrastructure and in this way it will make important contributions to the maintenance of financial stability.

The activities that are undertaken by our Agency can be classified in three main areas. These are: Understanding and adoption of Basel-II provisions, ensuring preparation of our banks regarding Basel II and finally the regulatory and supervisory efforts.

Our agency made significant efforts concerning the establishment of awareness and a platform for effectively exchanging views on Basel II until now. In this framework, four important committees, which are active at present, have been established. The two of them are Basel II Project Committee and Risk Focused Supervision Project Committee, which are have representatives from different departments of BRSA. The other two are “Basel II Steering Committee” which has representatives from BRSA, Turkish Banks’ Association and banks and “Basel II Coordination Committee” which was established with the contribution of BRSA, Central Bank of Turkey, Capital Markets Board of Turkey and Turkish Bankers’ Association.

In addition to these, Quantitative Impact Studies (QIS), which enable banks to implement the Basel II approaches are important experiences for us and for banks. In this framework, I would like to express that with our six banks we have participated in QIS-3, which was conducted by Basel Committee at the end of 2002 and afterwards we implemented a more comprehensive domestic QIS-TR with 23 banks, which constitute nearly 95% of the sector. With these studies, we not only find a chance to practice but also gather new statistical information, which is important for our banks and us.

Our agency is continuing its efforts for preparing an update roadmap regarding the transition to Basel II. After completing the evaluation of the road map, for which we have completed the process of taking the opinions of the banks, we plan to share this road map with the members of Basel II Coordination Committee and the public. Our aim is determining the basic strategies, which will be implemented in the transition to Basel II as soon as possible and by this way banks will be able to foresee the future and ensure taking the necessary measures. Another subject, which we plan to implement is to request banks to report their preparations for Basel II regularly to our Agency. In the following period, we aim to give feedback in the light of these reports and guide them.

Finally, we are aware of our Agency's responsibilities in the context of preparation process. We believe that in this framework, the risk focused supervision project will make important contributions to our Agency's supervision system and especially in fulfilling our responsibilities in the context of Pillar 2. On the other hand, our work to make the current regulations compatible with Basel II will be implemented on time as stated in the road map. Along with these, we give importance to education related to Basel II. Within this context, a distance-learning program called FSI Connect developed by Financial Stability Institute of BIS is submitted to the use of our staff. In addition to this, we are planning to organize comprehensive training programs related to Basel II.

**The Issues Related to QIS-TR**

Distinguished participants,

I think we need to clarify some of the issues concerning QIS-TR, the results of which we shared with the public.

Another important issue concerning Basel II (as you all know) is that, with the abolishment of the advantage of being an OECD country, the capital requirement will rise or fall depending on the country ratings. Our country rating is significantly lower than AA, which is necessary for benefiting from % 0 risk weight. Accordingly, the fall in the capital adequacy level due to low country ratings is a very natural and expected result. However, the decrease will not be too high to cause a speculation.

When we analyze the results of quantitative impact studies, we see that Basel II significantly decreases capital adequacy levels however, since actual capital adequacy ratios of banks are currently high, the ratio will still remain above the minimum level after Basel II. The decline in the capital adequacy in our country basically stems from foreign currency Treasury bills

and bonds (except FX indexed ones), which are subject to high capital requirements under Basel II and the newly added operational risk capital requirement.

One of the most important things that should be considered regarding QIS-TR is that the studies are done on the current portfolios, which are formed according to the current credit granting behavior of banks. The most important point here is that the credit behavior and portfolio structure of banks will significantly change with the implementation of Basel II. Although decline in the capital adequacy ratios is not at the levels that we need to worry about, with the reshaping of the bank portfolios according to Basel II, we expect that decline in the ratios will be lower than the one in QIS-TR.

It is also beneficial to express that it is important to improve the repayment capacity of the corporate sector. This issue is far from our responsibility as BRSA and it depends on macroeconomic factors and conditions.

Another issue that I find beneficial to express is that by QIS-TR, a significant level of awareness is established concerning Basel II and its implications.

**Issues Concerning the Implementation of Basel II**

Dear participants,

I would like to mention some of the issues concerning Basel II implementation in our country.

In the implementation of Basel II, costs and benefits should be assessed carefully. Another point that needs to be clarified here is the cost of Basel II. We expect that costs will be higher than its benefits in the short term, however the benefits will significantly rise above the costs in the medium and long term.

Implementation costs can be grouped under two titles when discussing from the perspective of supervisory authorities and banks: physical and non-physical costs. Physical costs consist of investments on IT systems, data base, software and hardware. Non-physical costs include hiring, training and retaining necessary human resource and getting consultancy.

As BRSA, we are well aware of that we are at the beginning of the road, Basel II is a big project and there are lots of things to do on this road.

We are facing many challenges in the implementation process of Basel II as the supervisory authority and as the banking sector. We can list the most important ones as:

-Establishment of a safe and sound banking and risk management infrastructure, increasing risk awareness both in banks and the supervisory authority and enhancing risk culture,

-Preparation of banks and the corporate sector to Basel II,

-Closing the gap in terms of expertise, knowledge and qualified staff in the areas within the agenda of Basel II,

-Establishment of the necessary environment for the increasing role of the efficient functioning of the market,

-Fulfillment of the Basel II data needs,

-Adoption to the risk measurement and regulatory capital calculation approaches,

-Preparation of all necessary regulations concerning Basel II and its implementation in a determined way,

-Encouraging effective operational risk and credit risk measurement and management practices,

-Establishment of banks' internal capital assessment process and ensuring its effective implementation,

-Ensuring that banks' risk assessments are more reliable,

-Compliance of BRSA and the sector with the requirements of Pillar II. (economic capital and risk focused supervision),

-Gaining the necessary competence concerning validation and supervision of the risk measurement models,

-Preparation of banks and financial markets to Pillar III.

As you can see from the long unbinding list, there are many important projects, which need to be carried out urgently concerning Basel II. One of the main advantages from the point of view of our country is that BRSA has started working for these difficult projects in the very early stage and BRSA is determined in continuing this work.

**Last Words**

To summarize, as being the new risk based capital regime, Basel II is composed of many elements new for developing countries like us. As BRSA, we are still carrying out our work

concerning the determination of the important points in the implementation of Basel II, providing the necessary coordination and orientation and resolution of the problems.

Our studies, which started in 2001 with the regulation concerning the internal audit and risk management systems, have accelerated with the publishment of the final text of Basel II. In the implementation of Basel II, we are in the effort of fulfilling our responsibilities through establishment of necessary committees and effective functioning of them, QIS studies, risk focused supervision studies, education and publication activities. As BRSA, I would like to express one more time that we are content to see banking sector's adoption of the issue and its efforts on it. In this context, we appreciate the efforts and the work of especially Central Bank of Turkey, Turkish Banks' Association and banks.

As I finalize my speech, I would like to thank all the participants.

Thank you very much.

**Speech by Dr. Enrique MARSHALL**

**Senior Superintendent-Superintendencio de Bancos e Instituciones Financieras, Chile**

Ladies and gentlemen, first of all, I would like to thank the Central Bank of the Republic of Turkey for the invitation to make a presentation at this international conference. It is, indeed, a great pleasure for me to have the opportunity to visit this wonderful city with such deep historical roots. My presentation will be on the implementation of Basel II in developing countries, with special reference to the case of Chile.

I propose to cover the following topics. First, I will discuss key issues for implementing Basel II in developing countries. Then, I will refer to what we have done in Chile in preparing the transition and, finally, I will comment on Chile's road map, which has recently been presented to the industry.

Basel II promises key advances in risk management and banking supervision around the world. It is a substantial improvement on the existing accord, but it is much more than a new formula for calculating regulatory capital. It provides a comprehensive framework for dealing with risk management and banking supervision and seeks to attain best standards and practices. Implementation will have positive effects for financial stability around the world, some of which are already evident. In the coming years, Basel II will become a global standard. It will be adopted by a great majority of countries. Eighty-eight out of 107 non G-10 countries have expressed their intention of implementing Basel II, according to a survey conducted by the FSI. This high level of acceptance is seen in all regions of the world.

The new framework requires fulfillment of certain prerequisites as regards the existing quality of regulation, supervision and risk management. Prior to implementation, it will be necessary to establish an accurate diagnosis of the state of regulation, supervision and management. In any case, a number of aspects must be examined, including the legal and regulatory framework, the supervisory system, financial infrastructure, corporate governance, financial disclosure and market discipline.

Most prerequisites are contained in the Core Principles for Effective Banking Supervision of the Basel Committee and formal assessment of BCP compliance under an FSAP is a good option since this uses a proven and standard methodology. In general, developing countries show only partial compliance with these principles and this is a key issue for the implementation of the New Capital Accord. As you can see in this slide, compliance in advanced economies reaches 93%, in developing countries 59% and in countries in transition 70%.

Recurrent problems in developing countries include under-estimation of credit risks over-valuation of credit risk mitigants, under-provisioning, absence of capital charges for market risks, under-estimation of capital requirements, accounting rules that are not aligned with international standards, and a lack of consolidated supervision. However, there is a mitigating factor. Most developing countries' capital requirements - the legal capital requirement - are usually set above the minimum 8% ratio.

What are the practical implications of this diagnosis? It can be argued that Basel II implementation should be postponed until satisfactory compliance with BCPs is achieved. However, it can also be argued that Basel II represents an extension and deepening of BCPs

and that the transition should start immediately as part of a wider process of improvement of regulation, supervision and risk management. We in Chile take the second view.

In developing countries, banks are the main financial intermediaries and bank lending is the main source of finance. This explains why Basel II has become such a sensitive issue and why its implementation has raised so many legitimate concerns, mainly as regards its potential macroeconomic effects. The effects that are most often cited refer to the volatility of capital flows and the impact on economic cycles. These concerns have not been fully dissipated and may be settled in the transition to Basel II.

Basel II comprises three equally important and mutually reinforcing pillars. In most developing countries, the main challenges will lie in the implementation of Pillars 2 and 3. It will, therefore, be important to establish the right balance between the implementation of the different pillars.

The proper management of provisions is essential for advancing in the implementation of the new framework. This is particularly so in developing countries, considering their economic fluctuations. Provisions are related to expected risks or losses, which can be assessed using the same concepts proposed by the new framework. In this context, provisioning must, in practice, be considered as a fourth pillar.

In any case, flexibility is key for successful implementation of Basel II. This flexibility is provided for in the new framework and has the support of international organizations like the IMF and the World Bank. Developing countries have achieved different levels of progress on risk management and banking supervision. Each country should come up with the transition road and speed that best suits it. The transition will not, therefore, follow a uniform pattern or time schedule across countries.

Stepwise or gradual implementation seems best suited to the needs of most developing countries. A natural process may include two or three steps starting with the fulfillment of prerequisites, then moving on to the standardized approach and, finally, once the necessary capacities are in place, implementing the advanced approaches. This does not rule out the possibility that some non G-10 countries may proceed to immediate full implementation of the more advanced approaches.

Most of the complexities of Basel II are associated with the implementation of the advanced approaches. Moving from the present capital regime to the standardized approach ought to be reasonably simple and should not impose an excessive burden either on supervisors or banks.

For this reason, some developing countries may decide - based on the structure and risk profile of their banking industry - to keep the standardized approach for a long time and, under Basel II, this is a perfectly valid option.

There are also other critical issues for the transition to Basel II. These include assessing the competitive or level-playing-field implications of different policy options, making a decision regarding the option for small banks, and ensuring cross-border communication and cooperation as well as communication and cooperation with other local financial sector supervisors. Simultaneous advances on other fronts will also be required as, for instance, on the convergence of accounting rules and ongoing improvements in corporate governance. Then, there are the issues of communication and dialogue with bankers, the preparation of a fine-tuned implementation plan, and getting banks and bankers - particularly boards of directors and top managers - involved in the process. In addition, supervisory capacities must be developed for the implementation of advanced approaches, supervisory staff must be trained and retained, and legal and regulatory changes must be prepared.

Let's move on now to the second point of this presentation where I want to discuss briefly what we have done in Chile in preparing the transition to Basel II. In Chile, this has, to a large extent, coincided with a permanent process of integral improvement of regulation, supervision and risk management. This process goes back to 1980's when, after a major financial crisis, the foundations of prudential regulation and supervision were laid. Our preparation has, however, included some reforms as well as specific actions which we have taken recently.

These include an external assessment of BCP compliance under the FSAP program, the implementation of a new risk-based supervisory model, a major reform of the loan classification and provisioning system, and a project for the convergence of domestic accounting rules with international standards.

With regard to the assessment of Basel Core Principles, an external evaluation of these principles was carried out in 1999 and revealed a 76% level of compliance. Then, during the first semester of 2004, a new evaluation carried out under the FSAP program and found compliance of 83%. As a result, critical points and weaknesses have been identified and some are on the way to being resolved. This slide shows the two evaluations that have been carried out in Chile.

The new supervisory model that we have implemented focuses on banks' risk management. This is a major improvement on the traditional rules-based model. Banks are evaluated

periodically and receive an internal rating on a risk category scale. When weaknesses are detected, corrective measures are recommended, the involvement of the board of directors is required, and the implementation of the corrective measures is monitored by the supervisor.

A new loan classification and provisioning system was introduced in January 2004. This system is an effective tool for managing expected losses and provisions. It permits the use of internal models based on advanced credit-risk concepts. A period of consolidation of this reform is now required before moving on to the advanced approaches of the new capital framework.

We consider convergence of local accounting rules with international standards as essential for enhancing financial disclosure and market discipline. Implementation of this project started in 2004. All deviations from international standards have already been identified and are being evaluated. The complete implementation of this project will take two to three years.

The specific actions we have taken in preparation for Basel II include quantitative impact studies, stress testing for capital adequacy and assessment of external credit ratings.

The assessment of the quantitative impact of the new accord was carried out for the whole system, based on the guidelines of the standardized approach. The results show that Basel II would not have a major impact on capital requirements. In fact, using strict Basel II criteria, the exercise shows a slight reduction in capital requirements, as seen in the following slide.

We also conducted a stress-testing exercise to simulate the potential effects of significant macroeconomic shocks on the profitability and solvency of the banking system as a whole. The results show that these macro shocks would have an impact on profitability as measured by return on equity, but only a limited impact on solvency as measured by the Basel I capital index. The specific results are shown in this slide.

Assessment of the quality and penetration of external ratings shows that, in Chile, the external ratings industry has an intermediate level of development, and appears to be prepared to support implementation of the standardized approach to credit risk. The number of corporate and financial institutions with an external rating is growing, while 34% of the loan and investment portfolio of the banks is subject to external ratings.

Let’s move on now to the final point in this presentation - the road map that was presented to the industry in January this year and is currently available for comments from the industry and the market. This provides general guidelines for the transition period and both the Spanish and English versions can be found on our website. This process is being led jointly

by the Superintendency of Banks and the Central Bank, which are separate institutions. Close communication and coordination with the industry will be maintained and the transition will, by definition, be gradual and stepwise.

In the first stage, only the standardized approaches to credit and operational risks will be adopted. The transition to the standardized approaches is relatively simple and all banks will, therefore, be in a position to make it. In the second stage, the option of adopting advanced models will be offered. In this stage, large banks and the branches or subsidiaries of international banks will most probably move on to the advanced internal models, while smaller banks maintain the standardized approaches.

During the first stage, only the regulatory powers of the Superintendency of Banks and the Central Bank will be used. The legal reforms to consolidate the transition will be discussed and will come into force at the end of the first stage.

So, the approaches available in the first stage will be the standardized approach for credit risk and, for operational risk, the alternative standardized approach, although the standardized approach could also be considered. For market risk, we will offer the two options of the standardized methodology and internal models approach.

We have set a timetable of activities for this year, next year and 2007.

The assessment of capital adequacy will be an important additional factor of our risk-based supervisory review. Risk and capital management will be formally considered in the process of assigning supervisory ratings. Banks will have to carry out stress testing for capital adequacy. Capital will be considered adequate if, under adverse conditions, it remains above the required minimum.

In an important consideration for international banks, we are offering these banks and the supervisors of their headquarters all the cooperation necessary to implement the new capital framework in their home countries. I have to say that almost 50% of total assets in Chile are controlled by foreign institutions. We have already established contact and relations with banks and headquarters' supervisors in a number of home countries. However - and this is a very important - all banks operating in our jurisdictions, whether local or foreign, will be subject to the decisions and recommendations contained in the road map.

A proposal for amending Chile's banking act will be drawn up during the first stage of the transition. Amendments will refer particularly to additional capital charges for banks under

certain specific circumstances - as for very small banks - and to the use of advanced models in the second stage of Basel II.

Let me conclude with the following remarks. Developing countries should see Basel II not as a threat, but as a real opportunity to raise standards in risk management and banking supervision. In most countries, the preparation and transition to Basel II must be part of a comprehensive and long-term program that strengthens those standards. The implementation of Basel II will require considerable capacity-building effort on the part of supervisory agencies and banks. Chile's implementation plan is fully consistent with these considerations. Thank you very much for your attention.

## Speech by Ersin ÖZİNCE

## Chairman-Banks Association of Turkey

Dear Governor, dear guests, distinguished colleagues, presenting my most sincere greetings, I would like to thank to the Central Bank of Turkey and the distinguished administrators who organized this conference and invited me to make a speech. My speech will consist of three parts. In the first part, I will discuss financial stability. In the second part, I will give information on risk management and the studies that were conducted concerning Basel II. In the third part, I will try to analyze the implications of Basel II on Turkish banking system.

### Financial Stability and Its Importance

Financial stability means strong and healthy financial institutions, stable markets. In order to discuss financial stability we should discuss a monetary economy and an environment where the money is used in the economy. The main elements of financial system are economic infrastructure, institutions and markets, both public and private sector. We can add them notions like law system, the main structure of financial system supervision, surveillance, continuity of operations. In this context, when we talk about financial system, monetary

system, agreements, institutions and their functioning come into mind. The strong connections between these relations and effective collaboration serve for maintaining financial stability. At any time, financial stability and instability are related to simultaneous movements of individuals and institutions, the harmony between them is very important.

Financial stability and financial instability should be overlapping and carried on together. The concept of financial stability could be understood as financial system's apprehension and prevention of possible risks rather than being a situation, which is compatible with crisis in the absence of financial stability. In a well functioning and stable financial system, this process can be provided by self correction, price discipline mechanism and this characteristic constitutes a resistance towards possible problems.

In a financial system stability is based on expectations, it is dynamic and has a multi dimensional influence. Besides the financial system, well functioning of other subsystems is also important. A stable financial system affects economic performance positively from many aspects and in contrast to this an instable financial system directly affects the economic performance in a negative way. Because of these reasons, financial stability is as important as price stability and fiscal stability. It is expected that these three stabilities exist together because of their nature.

The most important characteristic of financial stability is involvement of the human factor and a time dimension concerning the future. This characteristic is related with the assumption that individuals will fulfill their contracts and repay their liabilities on time. Because of this financial system involves basic uncertainties related to the future. Modern financial system offers risk methods for the transformation of uncertainties in the financial sector into measurable and pricable risks. These methods help measure, price, manage and even audit of the risks such as principal risk, liquidity risk, market risk, operational risk that a financial institution may face. Basel II offers a new dimension on this issue.

**The Things That Have Been Done In Turkey In Terms of Basel II and Risk Measurement**

The works of Basel Committee basically focus on risk management in banks and helps in the establishment of a conscious risk management culture in the banking system. It is anticipated that risk management culture will make banking sector more efficient, a more proper structure will be established with the aim of market protection and when there occurs a qualitative or quantitative problem, this problem will be easily recognized by the risk management.

Establishment of a more flexible and risk sensitive structure, increasing the risk sensitiveness in calculating necessary capital, increasing incentives and compatibility in the regulatory obligations are aimed at with Basel II.

In parallel to international developments, after the completion of infrastructure elements anticipated by Basel II capital adequacy regulation, beginning of the implementation in Turkey will positively affect the financial system's activities and competitiveness. Important steps are already being taken in this direction. As a matter of fact, arrangements that are compatible with the international improvements and applications are made regarding risk management in Banks Act. In the framework of these regulations, banks are working on establishing modern risk management systems. Recently, important studies are done on management dimension of risk management of banks and their technical adequacy. Our banks have assigned important resources for this issue and benefited from important international expertise. Risk management is a well-established concept in the banking culture of Turkish banks.

Risk management is structured independent from execution and as a function connected to Board of Directors. An internal audit function is established within the banks independent from the inspection unit. The main duties of the units executing risk management functions in the bank are: Detection, measurement, management and reporting of risks. Banks are about to complete their work on establishing policies and procedures necessary for the execution of risk management and internal audit functions. The human resources necessary and appropriate for the risk management and internal audit systems in banks are already employed.

Activities by Turkish Banks' Association continue in the direction of improving and sharing the implications for risk management systems. The improvements in the banks' own risk management systems are closely monitored and studies are coordinated within the framework of the work of Working Group in the Turkish Banks' Association.

To inform the banking sector on the Basel Committee's new regulation on capital adequacy, to express the opinion of banking system regarding this regulation and to determine a common strategy, Basel II Orientation Committee is established with the contributions of representatives of banks and BRSA. The Committee is planning the infrastructure preparation activities in the transition process to Basel II, in the light of the results of QIS-TR which is conducted by the large participation of banks to determine the impact of Basel II on the Turkish banking sector.

One of the most important works of the Committee is the preparation of "Road Map of Transition To Basel II", by taking the opinions of banks for effective planning of the transition process. Report is disclosed to public by BRSA. At present, efforts to update the road map is continuing.

QIS-TR is a study, which measures the possible impacts of Basel II for a static portfolio. However, the portfolio changes of banks and changes related to other reasons -some of these changes are macroeconomic improvements, the changes in regulations, consumer preferences, credit behavior of banks- are evaluated under possible scenarios and capital adequacy is analyzed. When the scenario analysis results are evaluated, it was seen that the "increase scenarios" of portfolios has decreased the capital adequacy at a limited level but the ratio stayed very much above the 8 % level. It is evaluated that the increase in the foreign currency public securities is important, the capital requirement will decrease significantly when the foreign currency rating of our Treasury will be BBB or better and the scenarios on unrated firms considering that they will receive a rating in the future, will not affect capital adequacy significantly.

**The Implications of Basel II on Banks**

When the main implications of Basel II on banks are examined, the regulation supports the increase in the importance given to borrower-credit quality and in parallel to this the establishment of a risk culture compatible with rules. An increase in market discipline, transparency and competitiveness are expected along with increased efficiency. Fundamental changes in customer relationship and product pricing are possible. However, as the regulation may generate different implications on internationally operating banks and on the banks, which are not in this category, the implications on the banks of developed and developing countries will be different. The most striking example related to this subject is our country. The capital requirements in the banking sector will increase in the countries, which will lose the advantage of being an OECD country, like Turkey. Since we are an OECD country, at present the risk weight of Treasury bills in balance sheets is 0 %.

As another example, while the risk weights are at present based on the category, which the borrower is included, when the standard approach is implemented, it will be determined according to the criteria of an international rating agency. The use of country ratings as ceiling ratings and unrecognition of local currency ratings of banks for their credits in local currency from their own government will increase the importance of country credit ratings. In

this framework, the increase in the country credit rating is important regarding the Treasury's borrowing costs. Definitely, Turkey's success in maintaining economic and financial stability will support the increase in country ratings and compatibility with Basel II.

Basel II launched the internal rating method where banks can use their own internal rating method for calculating capital adequacy ratio and proposes the use of this method after a specific transition period. Banks' minimum capital requirement will increase when the advanced methods suggested for credit and operational risks in the new framework are not used.

When the standard approach is applied to the banks in Turkey all the firms will be subject to 100 % risk weight, however for the firms which do not deserve this risk weight, foreign banks which apply internal ratings based approach will assign lower risk weights and thus these banks will gain an important advantage compared to banks which are applying the standard approach.

The new risk management concept, which will affect the behavior of banks with the Basel II regulation, will be reflected to the credit customers. Basel II focuses more on well-performing rating systems. In the standard approach, it is suggested that the rating of the firms in the corporate portfolios (including corporate SMEs) is done by independent rating agencies and the firms, which are in the retail portfolios should not be rated but evaluated with a constant weight. When we look at more advanced approaches, it can be seen that banks should have their own rating systems especially related to their credits, instead of this. In this context, in the following years banks are expected to establish and use their own rating systems.

Banks' capital requirement will increase if they are not applying the advanced methods, which are explained in Basel proposal, in measurement of their risks. Reflecting this to the cost of credits, which they extend to firms, will be unavoidable. In our country, with Basel II we will pass to a process where credits will be determined to be good or risky or less risky by subjective methods and pricing will be done according to this, inevitably. This risk focused credit pricing will affect the credit's (which will be used by SME) amount/price in a positive/negative way. Various criteria like type, maturity, collateral and firm's credit rating will be reflected to pricing of the credit the firms will use.

In the current system, while the credits which are extended to private sector firms have generally a 100 % risk weight, considering the collateral but without taking into account the

risk structure, risk weight of firms which are in the corporate portfolios under Basel II will depend on the credit ratings of the firms.

One very important issue for Turkish economy and similar economies is the approach to SMEs. Since the SMEs have an important place in Turkish economy, they have to fulfill some requirements before the transition to Basel II. Since the implementation of the regulations brought by Basel II Accord is planned to be in 2007, banks and SMEs should act proactively, analyze the weaknesses and prepare their plans instead of waiting for the completion of the Accord to start making investments for transition.

True understanding and interpretation of Basel II (by banks and credit borrowers) is very important. Reports are prepared on this subject by the TBA and information sessions are being arranged with the contribution of the relevant representatives of the sector.

**Result**

Instability in the global financial system in recent years brought forward the necessity of robust structuring of the financial sectors of the developed and developing countries. In this framework, the studies that foresee the international collaboration has accelerated. The main elements of the new approach are the establishment of a stable environment for operations, development of financial markets, providing transparency in every area, strengthening of national and international financial sectors, developing competitive structure, making the regulations that arrange the economic activities compatible with each other to provide for the effective functioning of market mechanism, decreasing the share and intervention of government in economic activities, strengthening of supervision structure in the financial system and increasing the effectiveness of supervision. In this context, the restructuring of banks, which constitute the most important institutions of both the economy and traditionally the financial system in developing countries, gained importance. When we consider the Turkish experience, we see that much is done in recent years. Turkish economy is much more stable and banking system is healthier. We observe a similar process in other developing countries.

Naturally, there is a need for reasonable time and high level resources for increased competitiveness and total recovery of the economic structure. This process is not only economic, it also includes social, political and cultural issues. We should be sensitive to the improvement of the process in the positive direction when we are trying to impose standards of developed countries to the developing countries. We should take into account that the

process could be reversed as we try to act quickly. It is possible to change the regulations in a short time but it is obvious that for applying them there is need for public support, time and patience.

When we look at the international economic developments, the most significant events of the last quarter of the century are liberal economy policy implications, increasing international collaboration, special capital movements to developing countries, technological innovations, the increased importance of energy and rapid developments in financial markets. These developments contributed to the improvement of economic performance in many countries.

On the other hand, unemployment, income differentiation, the structural problems in developing countries, keep maintaining their places in the agenda. Increasing international economic collaboration and the rapid movement of capital from one country to other causes movement of risks, making them contingent. More importantly, the regulations of some countries, which have important places in the world, are behind the international standards. In some countries, it is observed that the development differentiation even gets worse.

In my opinion, it is important for all countries to be in an effort and understanding to contribute to international collaboration for ensuring stable growth of the world economy and increasing the trade. I think it will be unfair to expect this effort only from developing countries.

Thank you for your attention.

## Session II: Implications of Basel II (Continued)

***This session is moderated by Prof. Kürşat AYDOĞAN, Vice Rector-Bilkent University.***

**Paper by Prof. Richard Herring[8]**

**Jacob Safra Professor of International Banking**

**The Wharton School-University of Pennsylvania**

Prof. Herring, in his speech titled "Basel II and Market Discipline", talked about direct and indirect channels of market discipline, the conditions for effective market-based self-discipline and supervision versus ideal market discipline. Prof. Herring emphasized the fact that supervision and market discipline should be complementary and discussed the major concerns about market discipline in practice. Prof. Herring also stressed that enhanced market discipline could improve corporate governance, encourage development of more effective risk management approaches, enhance accountability and performance of supervisory authorities and improve safety and soundness of financial system with markedly lower compliance costs.

Prof. Herring based his speech on a paper of his, which could be found in the ANNEX.

[8] Richard Herring, "How Can the Invisible Hand Strengthen Prudential Supervision" from Borio, Claudio, William C. Hunter, George G. Kaufman, and Kostas Tsatsaronis, MARKET DISCIPLINE ACROSS COUNTRIES AND INDUSTRIES, Cambridge, MA: The MIT Press, 2004.

## Speech by Frederik C. Musch

## Global Chairman-PriceWaterhouseCoopers

I am delighted to speak about some implementation and compliance issues and especially as the organizers asked me on the topic of rating agencies in the context of Basel II. This is a rather less developed topic, since the debate on Basel II has so far been focusing on the more advanced approaches, i.e. IRB. Regulators are of the view that the IRB approach is for all sizes and types of banks, and there is less attention for the standardized approach. In reality, banks will be using the standardized approach for a considerable amount of time. This is especially true for banks in the emerging markets and smaller institutions in G-10 countries. It is also the case for a large number of banks, which, although they are in the process of implementing the IRB approach, in the initial phase will be using the standardized approach. Moreover, there will be elements of the standardized approach for banks that are unable to apply IRB uniformly for all businesses.

**External Ratings in Basel II**

Let me first turn to the reasons for the change from Basel I to Basel II to arrive at the motivation for the introduction of external ratings. One of the important obstacles in Basel I was the low risk weighting for exposures to governments and banks in the OECD area, 0 and 20 percent respectively. The government and banks in Turkey, which had been an OECD member for a long time, had been benefiting from this distinction in the beginning of the Accord. In the late eighties, the OECD membership was expanding. In parallel, a number of the new member countries, such as Mexico, Poland, Slovakia, South Korea unfortunately experienced financial crises, each in different ways. This was making it very difficult to keep this OECD distinction in place.

At the same time, and perhaps more importantly for the development of the new capital rules, banks in the US were increasingly focused on risk: especially the LDC debt crisis in 1987,

and the real estate debacle in the early 90's. This led a few US banks to move to more precise risk measurement including the calculation of unexpected loss of economic capital, which introduced (mostly internal) ratings, used for risk assessment and pricing, internal controls, and capital in relation to risk.

The financial world was also growing exceedingly complex. Increasingly complex products, such as structured finance, rendered a more prominent role for rating agencies and led to demand for more transparency. This growing complexity of the financial world played an important role in the creation of the new Basel framework, and in particular the foundation and advanced IRB approach.

However, the question remained how to make the standardized approach more reflective of the underlying risks in a more transparent Basel II framework. This was to be solved by the introduction of external rating agencies and external ratings, in line with the internal ratings in more advances approaches; thus creating a sort of more direct risk-sensitivity in the risk-weight system.

Let me first explain how the external ratings fit into the standardized approach *(see exhibit 1)*. While a logical step forward, some issues remain in the framework itself: Loans to unrated institutions have a lower risk weighting than loans to institutions that are rated B- or lower. Faced with this, banks will choose to lend to unrated companies. The impact of this still needs to be settled, as well as whether the chosen risk weighting system in this respect is really justified.

Moreover, the use of external ratings by banks will only be allowed if rating agencies will be recognized by home regulators as an External Credit Assessment Institution. This might create issues of applicability such as the challenges banks operating internationally will face when using a local rating agency that is not recognized by the home regulator.

It is fair to say that the details still have to be worked out. The Accord Implementation Group, which supports the Basel Committee in implementing the Basel II framework, will have to play an important role in settling these issues.

**Rating Agencies and the Standardized Approach**

There are a number of issues in relation to the standardized approach that will pose further challenges for banks.

Firstly, there are few worldwide rating agencies and the percentage of companies that are subject to a rating is still very low outside the USA and a few western countries. As you know, there are only three internationally active rating agencies: Moody's, Standard & Poors and Fitch Ratings. To say the least, they are not well represented geographically. The proportion of rated corporates is low, in many countries as low as 2% of the companies that banks lend to.

Then there is the issue of the reputation of rating agencies. The importance of rating agencies has declined. Rating agencies, nowadays, are facing competition from independent sources, and from the internal rating models. Subsequently, there is the performance of rating agencies. For decades, rating agencies were known to have a very conservative approach. In the early 2000's, the rating agencies became more active, and we saw a rush of downgrades of ratings across the board, but often after an event had taken place. These changes in ratings and approach point to the increasing importance of testing the accuracy of ratings. However, it is not clear how such testing of ratings could be established especially on a worldwide basis.

Some solutions for the lack of external ratings are found through ratings by local export credit rating agencies, such as in Germany. The penetration of ratings amongst corporates in Germany is very low. Additionally, therefore ratings are used of Hermes, the export credit rating agency. However the main use has been to arrive at more scores, that is more countries for sovereign ratings. Furthermore, Germany will use its AAA rating to allow the more favorable option in the Standardized Approach, but this does not appear to be a solution for the rating of loans to corporates and banks.

**Standardized Approach Implementation Issues**

Implementing the new Standardized Approach well is thus still very important, and cannot be neglected. The approach is based on a set of defined categories and external ratings which a bank will need to map across its businesses. The principle challenge is finding the data but also making the wider process work, and it is a wide process indeed. By the same token, this is an opportunity to review and formalize the wider credit risk management function and to go further to ensure the calculations are an element of a coherent risk management function.

There are a number of advantages to embedding the new Standardized Approach: it provides a good foundation for the more advanced IRB approach, creates the systems to support the new risk management process, offers a wider differentiation of risk categories, and reinforces the need for a solid database.

One can conclude that by adopting the new Standardized Approach a very large number of smaller banks worldwide will be using a risk sensitive system, be it cruder than the IRB approach. Thus, even the Standardized Approach constitutes a considerable change for many institutions as it provides institutions an opportunity to align risk with their business objectives. The challenges are as real for them as taking the IRB path. But the external ratings are an essential element for the incentive system implied in Basel II, and therefore the lack of participation, the quality of ratings and possibly the number of rating agencies will have to be improved upon.

**Implications for the Rating Agencies**

If we now turn to the rating agencies, does the Basel framework open up the possibility for the creation of new rating agencies? Initially, thresholds such as reliability and a track record of several years need to be overcome. There are two ways in which external rating agencies can enter new territories. One of the international rating agencies could establish an affiliation with a local firm whereby the agency could assess the local ratings against its ratings system. In time, the rating agency could even take a stake in the local firm. Another alternative could be for banks themselves to establish their own rating agency. This might create a concern about the agency making better ratings than the banks will want to lend on. The more explicit concern here is the potential conflicts of interest.

**Rating agencies and the higher capital requirements in emerging markets**

There is another issue, which derives from the fact that many regulators in emerging markets set higher minimum capital requirements for their institutions. Typically, these regulators have a higher capital requirement than the Standardized Approach stipulates. Banks are expected to keep a capital charge of for instance 10 percent, which is well above the 8 percent of Basel I. Were these levels to be reduced, through Basel II calculations, rating agencies would be surprised as they judge the bank in the context of the emerging market country. In contrast, the local banks believe that the 10% is not sensible in Pillar I on the grounds that such deviating capital charges belong in Pillar II. This ties into the ongoing debate on whether Pillar I is part of a holistic Pillar II, or whether Pillar II is an add-on.

**Incentives to improve risk management**

In the context of the EU implementation of Basel II, PriceWaterhouseCoopers was commissioned by the European Commission to undertake a study on the macroeconomic impact of the proposed Basel II capital requirements for EU banks and investment firms.

As you know the aim of the New Accord has been to create a risk management continuum and build in incentives to improve risk management. The results of our study show that the system of incentives works. The standardized approach is the simplest end, and banks are clearly encouraged to move along a risk continuum to arrive at lower capital requirements *(see Exhibit 2)* and in the process also get a better grip on credit portfolios, better pricing and be in tune with more complex products.

It is interesting to note that the results of our study also indicate that it is difficult to make generalizations on approaches as the outcomes differ strongly amongst both countries and banks *(see Exhibits 3,4 and 5).*

**Implementation Issues**

A key question for Turkey in implementing the Basel Framework, is whether Turkey's banks should go through a gradual evolvement "touching all the bases" starting with for example gap analysis and then go to duration techniques etc. or whether these banks should go directly to the latest technology for IRB approaches. In any case, the importance of taking a gradual approach, instead of just accepting the latest technology and trying to implement it, should seriously be discussed.

The banking world of credit risk is moving away from the basics of the 5 C's (Character, Capital, Capacity, Collateral and Cycle) towards ratings. Banks worldwide are finding themselves at various levels of a transition process. This it not a simple process for any bank, and the complexity is only increasing. The detailed implementation of the rules is still a moving target. The implementation of the rules, such as for example those for economic capital in Pillar 2, are putting strains on the resources of institutions and create a need for more coherent approaches: only 10% of institutions interviewed by PricewaterhouseCoopers regarded their approach to economic capital as fully developed and operational.

On the corporate governance side, the same PricewaterhouseCoopers' questionnaire, prepared jointly with the Economist Intelligence Unit (EIU) revealed that banks are very uncertain of how to improve their own standards for disclosure and governance. So far, the Sarbanes-Oxley requirements are seen merely as an exercise of ticking the boxes: the rules do not, but should, reflect the quality of controls.

**The Growing Importance of Compliance**

With the increasing complexity of systems worldwide, international standards are regarded as the only way forward. Financial institutions face a major challenge with the sheer complexity

of the wider regulatory environment, at the same time corporate reporting structures continue to be very fragmented. Understandably, compliance is getting increasingly important in this environment.

Where do financial institutions stand in terms of compliance? In May 2005, PricewaterhouseCoopers published a global Compliance Study into compliance functions in the financial sector. The results of the study are based on participation from over 73 internationally active and major regional financial services institutions in 17 countries worldwide including the regulators.

Study results revealed that regulators are increasingly focusing on the role and responsibility of the compliance function, a development that can be observed to extend to international banks with the creation of global compliance functions.

Compliance functions have developed significantly over the last 3 years moving from enforcement towards the role of the trusted adviser and an increasing independence of the function *(see Exhibit 6)* while there still appear to be many challenges *(see Exhibit 7)*. It is interesting to note that most organizations have made minimal efforts in the compliance area until forced by regulatory requirements. Looking into the future, possible pressure may come from other stakeholders such as institutional investors and rating agencies. According to the study, the expectations that industry and regulators have of each other is that both need to firm up on their understanding of "compliance risk".

In our 8$^{th}$ CEO Annual Survey, the majority of CEO's understand that all topics have to be managed in an integrated fashion including the integration of the implementation process. This process is characterized by many variables of regulatory and market changes: the International Accounting Standards, Corporate Governance, Value Reporting, Corporate Reporting, Cost of Capital, Economic Capital, Pillar II of Basel II and the many governance issues in the securities and insurance industry. It is difficult to argue against any of the initiatives individually, but the management issue for banks is that they are launched simultaneously and that they lack coordination.

In this flood of initiatives, it is advisable for a bank to look for adding value from it as a wider agenda. The key will be to recognize that these changes will have a strong impact on the fundamentals and also to recognize the interactions and linkages among the implementation projects. This may require financial institutions to re-orientate and combine the many issues.

At PricewaterhouseCoopers we have started to combine Basel II and IAS work and also economic capital and Pillar II work precisely because of the overlap in individual projects.

The challenge is as much of a management nature as it is a technical one, with significant and explicit demands on Board and Senior Management. Never before have there been so many projects for financial institutions, with the added challenge to turn this new landscape to their advantage in order to get better insights into business risks. Contrary to their European counterparts so far, two to one American CEO's regard compliance as an investment rather than a cost. Whether you see this as a cost or an investment, will be the deciding issue. What is certain is that it is not likely to go away.

Let me conclude. The role of external ratings in the new Standardized Approach needs further attention, to make it a useful tool in the wider scheme of incentives towards a risk-sensitive Basel II framework. Especially emerging markets should focus on this and are in need of further assistance in this area.

Implementation needs banks' attention for all approaches in Basel II, that is also the new Standardized Approach. In this transition process towards the inclusion of external and internal ratings, the ultimate goal should be to aim to make the business and strategy more risk sensitive. Banks should start to "behave" in a more risk aware fashion and to take a wide perspective and only in this context to innovate step-by-step. The agenda of implementation is wide and it is important to step back and look where value will be added on integration and projects.

**Speech by Dr. Aslı DEMİRGÜÇ-KUNT**
**Finance Research Manager, Development Economics,**
**Advisor, Financial Sector Operations and Policy-World Bank**

Thank you very much. First let me thank the Central Bank for organizing such a wonderful conference and also inviting me here. It is always a pleasure to come home. Today for a change of pace I am going to talk to you about banking crises. I was actually asked to talk about determinants of banking crises and recently I have written a survey paper on banking crises with a colleague from the Fund, Enrica Detragiache. So my presentation will be based on that paper which is also being circulated. So for citations of individual papers and more discussions please feel free to refer to the paper.[9]

Before the 1990s, research on banking crises was inspired mostly by the experiences of the 19th and 20th century. Actually, the field was pretty much dominated by studies of Great Depression. But beginning in the 1990s, a resurgence of banking crises provided both new impetus and new materials to researchers, leading to a rapidly growing literature. So in this presentation I will survey this work on causes and consequences of bank fragility and highlight lessons and hopefully conclude by mentioning some directions for new research.

To give you an outline of the talk, I will first discuss different determinants of banking crises and mention how some of these models perform as early warning models. Next, I will also talk about the real effects of banking crises and present some evidence on different intervention policies and their impact on the cost of crises. Finally, I will finish with some directions for future work.

[9] Asli Demirguc-Kunt and Enrica Detragiache, "Cross-Country Empirical Studies of Systemic Bank Distress: A Survey," in "Financial Instability, Asset Prices and Credit" edited by Philip Davis, National Institute Economic Review, forthcoming.

Let us start with some facts. The contemporary crises literature actually starts in the 1980s with the abandonment of lax monetary policy, increasing interest rates and financial liberalization. Thus we started seeing a number of crises around the world which were also accompanied by banking distress. However, bank fragility got little attention during these crises. When you review the literature discussing these crises episodes most of the emphasis is on lack of fiscal discipline, external shocks, exchange rate policy and so on. Of course in the 1980s there was also the S&L debacle, which was a very interesting case study of how declining capital adequacy coupled with a lax regulation and generous deposit insurance conspired to make looting and gambling optimal policy for bankers. In the end the US tax payers did have to shoulder a large part of that cost, but the macro consequences of the S&L crisis was fairly limited.

Then with the arrival of 1990s, financial crises where the banking sector played the central role became widespread. We had the Scandinavian crises, the Japanese banking problems, the Mexican Tequila crisis, and of course the East Asian crises, and the Turkish crisis. And all these crises spurred interest in greater examination of the determinants and consequences of these crises. This led to a number of case studies and some others, which also tried to derive more generalized lessons from these crises.

Two systematic country surveys, one by the Fund and the other by the Bank, undertaken by Jerry Caprio and Daniela Klingebiel, showed that bank weaknesses extended to all regions of the world and all levels of development. Here is a map from their study which shows that indeed bank crises were quite common around the world. For researchers more crises meant more data points and the surveys y provided the raw material to construct a sample of crisis countries and made clear it that bank fragility was pervasive and multifaceted and ripe for more systemic empirical estimation.

In studies of systematic examination of crises that followed, two econometric approaches were mainly used. One is the Signals Approach that was first used by Kaminsky and Reinhart, and the other approach is the Probability Model Approach, which I used with Enrica Detragiache from the Fund.

In their paper, Kaminsky and Reinhart basically study the incidence of currency, banking and the “twin” crises in 20 countries over the period 1970-1995. They describe the behavior of 15 macro variables in the 24 months before and after crises and compare it to the tranquil times. So a variable is said to signal a crisis if it crosses a particular threshold based on the noise-to-signal ratios. If a crisis does not follow in the 24 months after the variable signals a crisis, then the signal is considered to be false. According to this study, the best performing banking

crises indicators, best in the sense of the Type I, Type II error ratios, was the appreciation of real exchange rate, equity prices, which crash right before the crisis, and the high level of money multiplier, which is one of the indicators they use to capture financial liberalization.

Now, one problem of course, is although these were the best indicators within the context of their model, they also had quite high Type I error, in other words using these indicators you missed most of the crises and about 73 to 79 percent of the crises were not signaled as crises. Even if you looked at the indicators with the lowest type I error, which is the real interest rates in their model, type I error is still 70%. So 70% of the crises were not picked up.

This example illustrates some problems with the signal approach. Since each variable is considered in isolation, if one indicator signals a crisis, but the others do not, it is not quite clear what the implication is. Also, the methodology focuses on whether a variable value has crossed a threshold, but not really by how much. This additional information that is not used in the analysis also introduces inefficiencies. And of course the high Type I error is a concern because ultimately this work started as a way to develop an early warning system.

The multivariate probability model approach tries to address some of these issues. First, in this approach you estimate a probability that a crisis occurs as a function of a vector of explanatory variables and the model produces a summary measure of fragility. When we first applied this approach in the 1998 paper, we used a sample from 1980 to 1994. In the survey paper we updated this sample up to 2002 and instead of only analyzing 34 crises, now we include 77 crisis episodes.

Let me summarize you some of the findings of this work. Basically, we find that crises manifest themselves during periods of weak economic growth and loss of monetary control. A higher and more volatile real interest rate is a source of fragility and vulnerability to currency crises also plays a role. Larger banking exposure to the private sector and a rapid credit growth are associated with greater banking fragility, again as indicators of financial liberalization. Another interesting result from the original paper that is confirmed here with the larger sample is that explicit deposit insurance is also associated with a higher probability of crisis, indicating moral hazard. We did much more analysis later on in other papers that confirm this result. And better institutional development, proxied by including indicators like GDP/cap, rule of law, and so on, is associated with lower fragility. These determinants produce a model with pretty good fit. About 70 percent of the crises in the sample were predicted as crisis cases.

Many other studies followed these two initial studies. Those that were interested in identifying crisis determinants used mostly probability models. I will try to summarize their

findings organizing the material based on the category of the explanatory variables they investigated. Please refer to the survey paper for a full list of papers under each category.

First, a number of papers emphasized the importance of using individual bank data. Indeed, when individual bank data was used, the results of these studies suggested that nonperforming loans and capital asset ratios deteriorated rapidly before crises and the CAMEL variables also did well in predicting systemic crises. Second, other papers focused on the impact of financial liberalization. Enrica and I also have a paper looking at this issue where we showed that financial liberalization can significantly increase bank fragility unless mitigated by strong institutional environment. Many other papers later followed this initial analysis and confirmed this result.

Third, there are a number of papers that focused on external shocks. For example, Eichengreen and Rose have a paper where they focus on the OECD interest rates and OECD growth and try to understand the impact of these variables on bank fragility. They find that these external factors are important; in other words what happens in the developed world has an impact on developing countries. However, in later work they showed that the 1990s crises were quite different than the earlier ones because the external factors did not play an important role.

Fourth, there were papers that investigated the impact of the exchange rate regime. The question here is whether having a flexible or fixed exchange rate regime makes countries more susceptible to crises. The evidence on this issue is somewhat mixed. Some papers found no evidence that the choice of exchange rate regime has any impact on crisis probabilities. However, a paper by İlker Domaç and Sole Martinez Peria found that fixed exchange rate diminishes the likelihood of having a crisis, but once the crisis does occur, its economic costs are higher under the fixed exchange rate regime.

Fifth, the impact of bank ownership on fragility is another interesting topic which was addressed. We have seen in the literature that state ownership tends to be associated with unfavorable outcomes and foreign ownership tends to be associated with favorable outcomes. And these papers confirm these results. The literature looking at the impact of ownership on crises finds that state ownership actually increases fragility. On the other hand, when we study the impact of foreign ownership on fragility, we see just the reverse, that foreign ownership is associated with lower levels of fragility. This evidence does not only come from cross-country work but also there are individual case studies from the Asian crisis countries and some Latin American cases that foreign ownership is not associated with higher levels of

fragility. Most studies conclude that at the very least the foreign banks did not exacerbate the crisis situation.

Sixth, there are papers on the impact of market structure. There are often concerns that greater competition sometimes leads to greater fragility. However, in our recent work we found that, that is not necessarily the case. We find fewer restrictions on bank entry and activities and national institutions that encourage competition are actually positively associated with stability so greater competition is good for stability as well as efficiency. We also find that bank concentration is associated with lower fragility but this likely not because concentration is associated with lower competition since when we control for competition the result is still there. So we think this is probably due to better risk diversification by larger banks.

Seventh, there is quite a bit of literature on the impact of institutional development on fragility, starting from the very early work that better institutional development lowers fragility. Many other papers have confirmed this result since then. All indicators that are associated with higher levels of institutional development tend to be associated with lower levels of fragility.

Eight, moving from institutions specifically to deposit insurance, as I mentioned our initial work suggested a correlation between explicit deposit insurance and fragility. In later work, we looked at the issue from many different angles and we still see that poorly designed deposit insurance increases fragility unless mitigated by strong institutions. So that moral hazard element is very strong unless you have well developed institutions that can keep it under check.

Ninth is the impact of regulation and supervision on fragility. You have already listened to Jerry's talk yesterday so I will not elaborate on this issue much. To summarize, Jerry's extensive work with Ross Levine and Jim Barth shows that regulatory and supervisory practices that force accurate information disclosure, empower private sector monitoring of banks and foster incentives for private agents to exert corporate control, lower fragility.

Tenth is the impact of political system on fragility. There are many papers on this again, but Randy Kroszner has this very interesting case study of the US S&L crisis. His results indicate that disseminating information about costs of inefficient government policy, ensuring competition among interest groups, increasing the transparency of government decisions, improving the structure of legislative oversight of the regulatory process are all associated with improved financial sector policy and lower fragility.

I just reviewed very very quickly many papers that focus on determinants of fragility banking crises. But of course initially this whole literature started with the goal of not only better understanding fragility but hopefully to develop models to better predict crises so that regulators and supervisors have a chance to prevent them from occurring. Both the Signal Approach and the Probability Approach were used in developing early warning systems. Indeed the Signal Model was explicitly developed to put together an early warning system. But unfortunately neither approach had much success. The one problem is that in-sample prediction accuracy cannot be replicated out-of-sample. New crises tend to be different than those experienced in the past. There is always some additional twist and after all crises are rare events, so in-sample estimates are based on few data points and the models don't seem to be very successful in predicting crises.

To improve prediction accuracy it might be possible to develop alternative scenarios – low/high forecasts for the explanatory variables as is done in the stress testing exercises. It is also possible to explore movements in high-frequency variables such as spreads on the interbank market, on commercial paper issued by banks, stock market valuation of banks, and corporate vulnerability, but of course all this requires significant amount of data analysis.

Let me now turn to studies looking at the real effects of banking crises. There is a significant literature testing the credit crunch hypothesis. The question here is whether bank fragility has adversely affected economic growth or the impact goes the other way around, in that exogenous growth slowdowns lead to greater fragility. So, of course, it is very difficult to disentangle the causality in these cases but obviously the answer would have very important policy implications because if crises have real costs then the case for rescue operations is much stronger. Again unfortunately in this literature there is somewhat of a mixed evidence; there are papers that argue that there is no crunch after crises, and there some others that found credit crunch after crisis, although this effect seems to be much more prominent for small and medium enterprises and in the first few months after the crisis. So this is certainly an area where more work would be useful.

Related to these studies there are also some empirical studies looking at the impact of intervention policies on crisis costs. The results of this literature indicate that the more generous the intervention policies, the higher the fiscal and economic costs of the crises. Again this is an area where the causality is very very difficult to identify because you could easily think that those crises that are likely to cause high fiscal and economic costs are precisely those crises where the regulators are likely to intervene in the most aggressive and generous way. So although all authors acknowledge this issue and try to deal with it, this is

another area where it is very difficult to disentangle the causality. Further evidence on fiscal costs of the crisis and the politics was provided by Phil Keefer, who looked at the political economy of the crisis resolution. And his findings suggest when voters are better informed, elections are closer, the number of veto players is large, governments make smaller fiscal transfers to the financial sector and are less likely to exercise forbearance.

So what do we conclude from all this empirical evidence? Clearly, cross-country econometric research on crises has progressed rapidly in the recent years. And thanks to all this work, we have a much better understanding of the causes of crises. Unfortunately, empirical models have been more useful in identifying factors associated with crises rather than predicting them but this is some what expected.

The question is what else can be done going forward? It is possible to do more work on definition/identification of different types of bank crises – some crises tend to be due to sudden events caused by severe exogenous shocks, and others are due to long-simmering problems. However of course one word of caution here; it is very difficult to identify between these two types of crises. Although some crises may be revealed by severe exogenous shocks, they may surely be due to long-simmering problems. So it will not be easy to distinguish between different types of crises. For better prediction and search for early warning indicators, we would need to move towards high frequency data and more accurate dating of the crisis episodes. And going forward again, in trying to think of different indicators explaining the crises or crises determinants, it would be interesting of course to look at some institutional variables as the topic of this conference would suggest. Impact of Basel II on fragility in developing countries seems to be a very interesting area for future work. Again, related to the trends of globalization and consolidation in the world in banking, it would be very interesting to see the impact of these trends and resulting market structures on bank fragility. And finally studying banking crises requires an understanding of open economy macroeconomics and the microeconomics of banking and regulation, so better incorporating these two fields is likely to be very fruitful for the future. Thank you very much.

## DAY 3

## Session I: Sharing Experiences on Assessing Financial Stability

***This session is moderated by Fernando MONTES-NEGRET, Sector Director-World Bank.***


**Speech by Sir Andrew Large**

**Deputy Governor-Bank of England**

**Vulnerabilities in financial stability**

It is clear that rapid growth in size, complexity, and diversity of global financial markets has added new dimensions and challenges to the process of maintaining financial stability.

Traditional concerns remain that unwise credit exposure can result in insolvency, and systemic instability. But today there is a new series of hazards. Credit risk transfer has introduced new holders of credit risk, such as hedge funds and insurance companies, at a time when market depth is untested. Systemically

significant issues could increasingly arise from market-related risks, or from single point of failure risks in the market infrastructure as ever-greater volumes of transactions pass through. Equally the growth of derivative instruments and advent of a range of new asset classes, despite added dispersion and better risk management, have added to the risk of instability arising through leverage, volatility and opacity. No wonder that those involved in financial stability work have much to think about.

**Introducing a framework for financial stability**

The purpose of my remarks today is not to analyse these threats. Instead I want to discuss how to approach some of the challenging issues faced by many central banks as we seek to decide how best to organise our work and to allocate resources in order to promote financial stability.

Given that, we need to be clear, accountable and transparent as to how we devote our resources in this area. And just as the financial system becomes more complex, so the judgements as to what we do and what we do not do are increasingly difficult. That is why we need a framework — a set of organising principles — that enables us to provide context and understanding to our endeavours, to provide a source of focus and rigour to our approach, and to motivate our people.

The issues are, I believe, of general application. Though you will forgive me I am sure if I start by looking at the framework within which the Bank of England, as a non-regulatory central bank with a remit for system-wide stability, addresses the vulnerabilities.

Challenges in creating a framework

**Monetary policy**

I want to start by considering the governance of the Bank's accompanying mandate, the conduct of monetary policy. This highlights the clarity of our accountability in the monetary policy arena. In line with many central banks, we have a mandate in statute — the Bank of England Act — to conduct monetary policy. The Government sets a target inflation level, which we are required to meet.

Importantly we — and you — can see how we are performing month by month in relation to our mandate. We also have a tested analytical framework. We model possible future outcomes and we look at the balance of risks around a central view. We can rely on experience and judgment to make regular policy decisions. And we can alter our policy decision on interest rates each month as the data and circumstances evolve.

## Financial stability and why it is different

If financial instability occurs, costs to society may be high. Damage to our reputation could be potentially high too. Yet judging the optimal amount of resources to devote to prevent crises is problematic.

What degree of resilience do we want? And what should we be prepared to pay for insurance? This is a familiar problem in public policy — what is the optimal size of the fire brigade or army?

The challenges we face in seeking to maintain financial stability are very different to those in the monetary policy arena.

First, there is neither a clear over-arching analytical framework nor a commonly agreed set of indicators of incipient financial instabilities.

Second, the task is made harder because we are dealing with tail events — low probability scenarios— rather than central projections. It is about aberrant rather than normal behaviour and situations: less predictable and harder to model.

Third, there are a number of different potential policy instruments that can affect the financial environment in various, sometimes conflicting, ways. And by no means are all in the hands of central banks.

Fourth, national financial stability responsibilities are often shared. In the United Kingdom we work with Her Majesty's Treasury (HMT) and the Financial Services Authority (FSA). For cross-border activities we operate alongside overseas central banks and supervisors.

Fifth, although the roles of the United Kingdom authorities are outlined and published in a Memorandum of Understanding (MoU), this gives little guidance as to what financial stability is or a clearly identifiable target.

And, last, it is harder to get motivational feedback — unless in unwelcome form should a crisis occur.

## Defining our role in financial stability oversight

These factors pose a number of challenges in defining our role in financial stability oversight — what activities should we as a central bank undertake? To make these decisions, firstly we should identify the main functions that need to be performed in each jurisdiction to promote

financial stability. Then we can look at the Bank's own institutional mandate. And finally we can determine the most appropriate way to fulfill it.

**Three essential functions for public authorities**

There seem to me to be three essential functions to be carried out in securing financial stability: I think this is the case in most jurisdictions. First, there are the roles relating to supervision of firms and markets where financial instability could arise.

Second, there is the oversight of the financial system as a whole — the systemic issues which could impinge on society. And, third, there is the fiscal underpinning which may exceptionally be required to restore confidence in the event of failure.

The fiscal underpinning is a role for Ministries of Finance. The other roles can either be combined institutionally or separated. I am sure each model is represented here today. In the United Kingdom, HMT has responsibility for the fiscal underpinning, FSA for the supervision of firms and market regulation, and the Bank of England for the stability of the system as a whole.

**The 'must dos' for the Bank of England**

The roles as such are set out with slightly more precision in the MoU, and it is from there that we start on our quest to decide what initiatives we — the Bank of England — should undertake, and how far we go with each. The MoU highlights three 'must dos'

for the Bank. I expect that these are similar in many central banks. They really define our mandate.

**(a) Assessment of threats to financial stability**

First, we need to assess the threats to the financial system. We need to be in a position to inform ourselves and to advise HMT at all times on the implications for UK financial stability of developments in both the domestic and international market places. We do this by continually assessing threats to the system as a whole — 'oversight of the systemic conjuncture' if you like.

So we look beyond the risks in relation to individual institutions, to the aggregate problems that can arise: through networks and single points of failure; through dependencies and interdependencies of firms and markets. In other words to areas where, if market forces and market participants are left to their own devices, problems could threaten the stability of the system. This means that we need to have our finger on the pulse and to maintain regular

contact with key firms and infrastructure providers. Market intelligence is vital in this area: it is not enough to read about issues, we need to be learning about them first hand from key players and analysing our findings from a financial stability perspective.

The FSA also shares responsibilities in this area. They too will be asked for advice by HMT. Their starting point is the assessment of the strengths and weaknesses in the individual institutions and markets they supervise, and the potential consequences of problems or failures at individual institutions.

An important factor for the Bank relates to London's position as a major financial centre. Although our specific focus and interest is the systemic conjuncture as it affects the United Kingdom, possibilities of contagion in an increasingly global market mean that we have to be alert equally to developments in global capital and financial markets. And it means we have to understand the dynamics and interrelationships of markets; how new products work; and the possible behaviour patterns of intermediaries, investors, and borrowers. Above all we need to be focused on where major risks are most likely to emerge and the market dynamics if those risks start to crystallise. And we need to distinguish those which are systemic from a myriad of fascinating developments, many of which are just 'noise' but which could otherwise distract us.

**(b) Risk reduction: oversight of payment systems**

The second area where we, and typically other central banks, are required to perform is oversight of payment systems. Payment systems facilitate economic transactions of goods, services and financial assets and are an essential component of a well functioning financial system. So reduction of risks in these systems, for example through the introduction of our Real Time Gross Settlement system, is clearly a priority from a systemic perspective.

**(c) Provision of liquidity and preparation for a financial crisis**

And, third, the MoU stipulates that we need to be in a position to inject liquidity at all times. This means that we must be able to provide liquidity in normal times, as well as in times of stress or crisis. This puts an increased onus on well developed and tested crisis management plans, and a particular focus on ensuring that we are able to undertake a range of official financial operations in exceptional circumstances.

Financial stability: parallel processes

Recognition of these three 'must do' areas is a starting point in deciding the scope of our financial stability work and in enabling us to fulfill our MoU mandate. But it does not provide a clear steer on what we actually have to do to carry out our functions efficiently and effectively. Regarding long-term thinking, which might one day lead to an analogue to monetary policy, we are undertaking a research project. This is separate from our day-to-day activities where a set of organising principles can be used operationally to handle today's issues.

**Research and Development (R&D): creation of an analytical framework**

The research project is an attempt to devise an analytical framework as an analogue to that in monetary policy: to help clarify some of the differences I outlined earlier and to provide greater certainty and focus. As with the development of monetary frameworks, this will be a medium to long-term endeavour. This may sound over ambitious. But even modest achievements towards it would enhance understanding of what financial stability oversight is about, and what our priorities should be in seeking to ensure it. And so it could assist our quest for clearer accountability and more transparent governance arrangements.

This quest gets to issues such as how to define our financial stability objective, how to articulate indicators of financial stability, and how they relate to each other. It provides the possibility of calibrating systemic risk and developing tools that could potentially be deployed to reduce such risk, and will include scenario analysis and macro-stress testing.

In reality, it is unlikely we will converge on a single model which captures systemic risk in its entirety. But by developing and calibrating a suite of models we hope to make some progress towards gauging fragilities and frictions in the financial system better — how likely they are to arise; on what they depend; and, ultimately, what pre-emptive mitigating action might be feasible. This could put financial stability analysis on a more similar analytical footing to monetary policy — albeit with a greater amount of uncertainty regarding eventual outcomes.

With time we can review the outputs of this research work. We can then operationalise those that are relevant and robust to help decide our ongoing activities. In other words, the outputs of this R&D activity could become inputs to prioritising our day-to-day risk reduction activities.

**Ongoing activities: organising principles**

In the meantime we have to address the real risks of today. How are priorities to be set? Financial stability is an area where there are so many things we could do. So we need to have

a set of organising principles to help us prioritise and focus. I'd like to describe the process we go through in addressing the difficult decisions — how much to do, and how far to go.

One could make a case for a huge empire of threat assessment on the basis that seemingly remote events or threats could crystallise into a financial crisis. For example, what resources would it have taken to foresee that default of the Russian government on its debt in1998 would, through a complex chain of events, eventually result in the failure of the hedge-fund Long Term Capital Management in New York? A failure which importantly was judged as having wider significance for financial stability. Equally what resources could it be wise to devote to assess what implications, if any, the downgrades of General Motors' and Ford's debt this month might mean for the financial sector and ultimately for financial stability.

Alternatively one might take a hardline view that unless an activity falls fairly and squarely, in the short run, into one of the 'must do' categories, it should be discontinued. For example, we could in theory simply ignore risk emanating from overseas — even in an international financial centre like the United Kingdom — on the expectation (or hope) that others would take care of these risks on our behalf.

Common sense suggests that the answer lies somewhere between the two. But difficult judgements are involved. So we have to devise a rigorous process to scrutinise our actions. A valuable approach is to set out the practical actions we intend to achieve — the 'outcomes' or 'deliverables' — and then to challenge them. We do this from two points of view.

First, we need to be clear why we are pursuing a particular deliverable. Is it a market failure justifying any intervention at all? What real impact will the work have on fulfilling our mandate? How closely does it relate to the 'must dos'?

Second, we need to think through the costs, benefits and risks associated with the action from the points of view of both likelihood and impact. What will be the risks to society, the economy and even the Bank if we do not do it? How might these risks be reduced if we do it? How well placed are we to do it as opposed to others? How confident are we of achieving the intended deliverables — particularly when we need to rely on others? Do we have influence to ensure action is taken?

The answers — difficult as they may be to define — help us in prioritizing and resource allocation; and provide sunset provisioning in deciding whether to continue with particular strands of work.

Ongoing activities: the matrix

**Uses for the matrix**

There are many types of activity, and many sources of threat where we could be active. So we need organizing principles to make sense of where particular actions fit into the landscape of our financial stability work. It is only then that we can evaluate competing priorities, by subjecting each 'bid' to a common set of challenges. To do this we find it helps to use a simple matrix. This adds objectivity to what is in many senses a subjective process. Here is an example:

**Matrix: organising principles for financial stability**

| | **Sources of threat** | | | |
|---|---|---|---|---|
| **Activities** | Credit risk | Market and Liquidity | Infrastructure (including payment systems) | International architecture |
| Assessment of threats to financial stability | | | | |
| Risk reduction | | | | |
| Preparing for and managing a financial crisis | | | | |

The matrix is a common sense map, which enables us to visualise why something is being done, and where it fits into the overall financial stability effort. The specific activities and deliverables that are located in each of the boxes can be scrutinised to see if they meet our objectives or if they should be discontinued.

This helps us decide on the level of resource and the nature and qualities of people we need. It also helps with budgeting, and provides a basis for motivating good performance.

To explain the relevance of the boxes let us look first at the columns: sources of threat. Our desired end objective is to promote financial stability by seeking to prevent threats from crystallising, or at least to reduce their impact. Then we will look at the rows — the different types of activity we undertake: the means if you will to achieve our ends.

**Sources of threat**

First, the columns: the sources of threat.

**(a) Credit risk**

Financial crises have traditionally arisen where the solvency of one or more institutions either crumbles, or is perceived to be in danger of doing so, in a way that threatens the financial system. So we need to focus on credit concentrations, credit aspects of prudential standards, credit pricing and terms etc. We need data and intelligence to do that. Understanding credit conditions and vulnerabilities is quite well developed territory. But new threats have arisen, particularly from sophisticated credit transfer instruments. This is a tricky and opaque arena. It is hard to know where concentrations of credit risk actually reside and even where credit risk ends and market risk begins. In addition there is the increasing range of participants who are also taking on credit risk. Of course in addition to this we can — and do — think about credit risk standards like

Basel II. We focus on the systemic aspects of prudential design since in the UK the supervisory issues are focused on by the FSA.

**(b) Market and liquidity risk**

As the global capital market has expanded on the back of securitisation and derivatives increasing vulnerabilities arise. Change has been so rapid and development so fast that it has been hard for any of us to keep up. Given the multitude of new instruments and new markets that have appeared and the resulting increase in risk, this is a significant area of work for us. There is of course much to be done in understanding the complex interdependencies and concentrations, and how these might impact on financial stability.

So we need data and market intelligence in this area. And we need to improve our ability to make *ex ante* judgments about the possible behavior of both investors and intermediaries, as well as the potential depth of markets. Equally we need to be sure we would have relevant information and understanding of markets and agents should problems arise.

**(c) Infrastructure (including payment systems)**

Focus is also important in the field of payment, clearing and settlement systems. Historically payment systems were primarily domestic entities, but as markets have become more globalised so too has the underlying infrastructure. This has helped to enhance efficiency, but leads also to added network or ‘single point of failure’ risks. As 9/11 showed, when problems arise in this area liquidity injection may be needed to prevent market or institutional failure, and risks of instability to the financial system could mount swiftly. This brings us to one of our ‘must dos’ — oversight of payment systems. Based on adequate data and understanding

we work here on enhancing interoperability, strengthening risk management, strengthening business continuity resilience, and improving governance.

**(d) International architecture**

International architecture and emerging markets exposures are a broad arena where there are particular risks and complexities which lead us to look at it separately. In response to the wider environment, constant adaptation is needed both of the architecture itself and the institutions within it, such as the IMF. In terms of our quest for financial stability, this focuses specifically on sovereign debt, crisis prevention and resolution. Progress has been made since the Asian Crisis, but significantly more is needed to build on the emerging elements of the exceptional access framework, and the Fund's lending-into-arrears policy, but also Collective Action Clauses, and the recently devised Principles for Stable

Capital Flows and Fair Debt Restructuring in Emerging Markets. In using the matrix to categorise sources of threat there are of course a number of ways one could cut the cake. Credit exposure to emerging sovereign debtors for example can appear both in the 'credit' and 'international architecture' boxes.

**Activities**

Now we can move to the rows. To use the matrix as a location device to focus our efforts, decide on deliverables and enhance our resource allocation, we need to create the 'boxes' by considering the types of activity we could undertake to address each main source of threat — the rows.

**(a) Assessment of threats**

First, we need to evaluate threats to the system. We need a process of data collection and assessment to analyse information and market intelligence from multiple sources. This 'horizon scanning' enables us to get early warning of how and where threats could appear.

We cannot do all this without knowing how markets work. Typically we obtain intelligence about what is going on from a number of sources, including a group of experienced staff who are operationally active in financial markets. We then evaluate and assess the threats from this intelligence. This needs people who are motivated to think through and identify new aspects of risk and threats, who can move with intellectual agility and flexibility between risks as they arise. This enables us in turn to judge the risk and allocate resources accordingly for risk reduction — as well as stopping work if threats no longer seem relevant.

A key challenge here is distinguishing between slow burn issues (such as a gradual shift towards more exotic financial instruments) and the more immediate issues relating to, say, the prospect of a major market default. In each case it is important to understand the potential threats to financial stability: but the timescales and tools are different. The matrix helps to start the process.

Above all we have to clarify the types of threats we are looking for. An issue here is the risk of 'missing something'. Not acting on something seemingly minor may have significant consequences for financial stability and costs compared to the resource saved by ignoring it. So the stakes are high in getting this right — though we need here to be realistic as particularly in the early stages the significance of developments can be hard to read.

**(b) Risk reduction**

Second, risk reduction or mitigation. Here we seek to make the financial system more resilient. This is the world of risk management, prudential standards, liquidity standards, resilience of payment systems etc. It can involve the promotion of codes and standards over a wide field ranging from accounting to improving legal certainty, and management of countries' external balance sheets.

Decision-making about priorities is particularly challenging because we cannot be clear *ex ante* how well the mitigation techniques will work, and we often need to rely on others to implement them. In addition we need to ask whether we are the right party to act.

We also need to think about the relevance of our activities to our mandate — or 'must dos'. In some areas, for example payment systems — one of our 'must dos' — it is clear that we have a responsibility to reduce risks. In this case the questions we need to answer relate to the degree, methods and resource implications.

But in other areas whether we should act is less clear-cut. What particular contributions can we make and are there any areas where we can sensibly act alone? We need to ascertain areas where we can achieve results both domestically with HMT and FSA, and internationally with organisations such as the Basel Committee, the Committee on Payment and Settlement Systems and the Financial Stability Forum.

Perhaps I can mention one area to which the challenge process suggests we should devote considerable resources — global institutional liquidity. As I have said before this is an area of potential vulnerability that has developed alongside the rapid globalisation of markets and of firms operating within them. I personally feel that it has been somewhat overshadowed in

recent times by work in other areas such as capital adequacy. We feel that we can make a particular contribution here — both owing to our position in such a major global financial centre and because, in sterling at least, we are a potential provider of liquidity. So we justify devoting significant resources to the analysis of liquidity issues, and the development of potential risk reduction strategies for liquidity problems — nationally and in particular internationally.

At the other extreme, whilst we feel strongly about the desirability of robust and widely applied accounting standards — and are prepared to express our views on the big picture aspects of this from time to time — we do not devote significant resource to analysis, or lobbying in this area.

**(c) Preparation for a financial crisis**

And finally, tail event territory though it may be, we need to undertake preparation for financial crises. We need to think forward to being 'in-event' where instability has actually been triggered, whether by a business failure of a firm or firms or by a terrorist or other disruptive event. We need to prepare now, in advance, to enhance predictability at what would be a time of great uncertainty. We need to know how we will work and communicate with public authorities and with the private sector.

There is a different set of factors which impact our decisions in this area. First, our 'must do' roles are dependent on crisis preparation and an adequate general understanding of how the financial system operates, with all the complexities entailed.

Second, while each national authority has its specific responsibilities to fulfill, the speed with which decisions would then need to be made and actions implemented make it also essential to act effectively as a single operational unit. In the United Kingdom the FSA, HMT and the Bank have developed mechanisms designed to turn this into reality and to provide necessary confidence to the market.

And, third, through testing programmes, we can obtain feedback as to whether our efforts are likely to prove successful and to refine preparation as we go along.

The costs to the economy of failure would be high and the expectation is that we would be well prepared. This puts a strong onus on collecting in advance up to date information on firms and markets, or being confident of its availability and source. And also of regular and exacting testing programmes — working with other authorities and with the private sector.

**Conclusion**

So in conclusion, the field of financial stability oversight presents us with plenty of challenges. Not only is the world more complex, but we need to devote real thought as to how best to operate and organise ourselves so as to contain risks.

Defining the resources you need, and how to deploy them is challenging in itself. My prediction is that as the system's complexity increases all of us involved in the oversight of financial stability will find ourselves asking the same questions: Just what should we do? Why? And what effect will it have?

**Speech by David MARSTON**

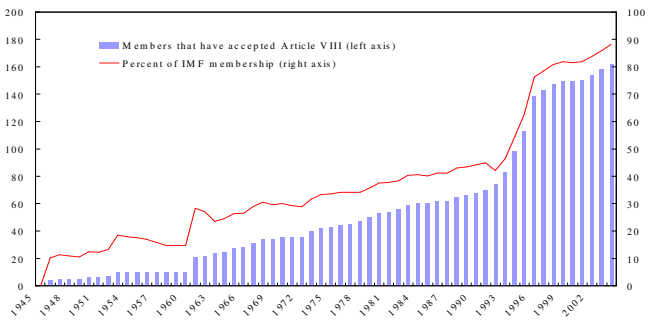
**Assistant Director, Monetary and Financial Systems Department-IMF**

Governor Serdengeçti, distinguished guests, I would like to congratulate the Central Bank of Turkey for this extremely well organized conference and the hospitality that has been extended to us all while we've been here. I also wish to thank you for the honor to speak at this forum. With such a distinguished panel of speakers over the last two days, the challenge of speaking on the last day is to find something to say that hasn't been already said by other speakers. I hope that my remarks will provide some added perspectives on some of the themes that have already been raised

I will first make a few observations on changes occurring in financial intermediation. I will then briefly look at how stakeholders, standard setters, national authorities, the international financial institutions have responded to these changes. I suggest that the World Bank and IMF's FSAP program, the Financial Sector Assessment Program, is just one of several responses that are underway. I will focus on some of the results of these FSAPs, drawing on information compiled for the 80 assessments completed across a whole range of countries. I will then with a few observations on the implications of these results for Basel II.

Initially, I'd like to make a few observations about the global financial intermediation environment and how it has evolved My remarks are focused on capital movements, cross border activity, the growth of conglomerates and risk transfer issues. There is now free flow of capital across a range of countries. Using the acceptance of the eighth article in the Articles of Agreement (Figure 1). With this, there has been increased cross border activity and the share of bank assets owned by nonresidents has been increasing in Europe, in the Middle East, Latin America and in North America.

Figure 1. Article VIII Acceptance, 1945–2004




Source: IMF, *Annual Reports on Exchange Arrangements and Exchange Restrictions*

It was only yesterday over lunch that Vice Governor of Serbia and I were discussing the role of Greek and Austrian banks in Central and Eastern Europe. Financial conglomerates have been playing an increasing and important role in this increased cross border business and the size of these institutions have grown in recent years. For supervisors, another challenge in this changing environment has been that risks are increasingly managed off-balance sheet as evidenced by the growth in the global derivatives market. This is no longer a G7 activity and many institutions across the world are actively hedging through OTC derivates markets. In fact from this chart you can see that in every region of the world OTC derivative market activity has doubled (Figure 2). A further dimension of this trend of balance sheet risk management has been the increasing use of off-shore centers to book many of these structured products. This poses an additional challenge to consolidated supervision and raise issues for home-host supervision and information sharing. For several countries dollarization/euroization is also increasing. In addition, despite waves of privatization over

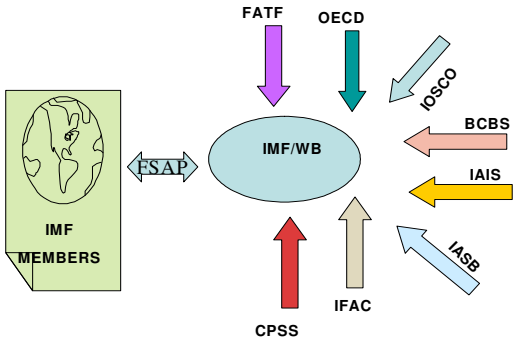
Figure 2. Distribution of OTC derivatives Market Activity

| | Apr-98 | Apr-01 | Apr-05 |
|---|---|---|---|
| G7 | 1247 | 1389 | 2398 |
| Other Regions | | | |
| Latin America | 4 | 8 | 9 |
| Middle East | 2 | 3 | 4 |
| Asia & Pacific | 187 | 191 | 287 |
| Africa | 6 | 8 | 11 |
| Europe | 239 | 264 | 378 |
| Total | 1685 | 1863 | 3087 |

the years, a survey conducted in 2003 of 90 countries suggests that in a third of these countries the state owned banks accounted for more than 50 percent of banking assets.

Standard setters have been responsive to these new complexities in the landscape. Among the initiatives, there is Basel II and , the Basel Committee's Core Principles are currently being revised. In Europe, in the insurance industry there is Solvency II; the International Association of Insurance Supervisors (IAIS) has issued their Insurance Core Principles; and, the IAIS has also recently issued its paper called Cornerstones of Insurance, which is aimed at trying to identify a common method of assessing the solvency of an insurance institution. IOSCO has its core principles, the FATF has issued a revised methodology and in accounting, fair value discussions are underway.. National authorities too, have responded and in a number of countries, following the more notable cases like the FSA in the UK, a number of countries have established unified supervisory agencies. Internally, both central banks and supervisory agencies have focused on capacity building. Early warning systems, prompt corrective action frameworks and consolidated supervision are being strengthened, and stress testing is now a part of the jargon of financial stability. In cross border information sharing a number of MOUs have been established to facilitate information sharing. I also wish to highlight in particular the increased participation of countries in the standard setting process. This has been facilitated by a much more inclusive consultative process by standard setters.

Figure 3. IFIs in the Global Oversight Architecture




The World Bank and IMF have also responded and since 1998 the Financial Sector Assessment Program has become the main instrument of IMF financial sector surveillance. What is this FSAP? Briefly, the Financial Sector Assessment Program is a framework which aims at identifying the strengths and vulnerabilities of a financial systems. It assesses the observance of implementation of relevant international financial standards, assists in analyzing overall financial stability and helps in identifying appropriate policy responses (Figure 3). In operation, the FSAP is almost like a peer review to the extent that both the assessors and subject experts are often drawn from central banks and supervisory agencies across the world. To date some 60 to 70 countries have participated in providing expertise in doing these

assessments. As noted earlier, some 81 countries that have undergone this FSAP process and a number underway planned. Some countries that have already completed this FSAP are now doing an update of the original FSAP exercise.

Having completed these FSAPs, what are some of the broad themes that we found? The most common recurring themes in FSAP assessments relate to credit risk, governance, supervisory resources and issues related to conglomerates. Credit risk is an old issue. It is not surprising that issues of credit risk are common in a number of countries. But one new dimension that has surfaced in a number of FSAPs relate to the situation where while banks are matched in currency, their borrowers are unhedged. This has been a situation for a number of dollarized and euroized countries. So whilst credit risk as a core feature of intermediation, this dimension of unhedged credit risk is a nuance which we have discovered in the course of doing these FSAPs. With respect to governance, another old issue, the specific concern raised in a number of FSAPs relates to governance in state owned financial institutions. One concern here is the absence or weakness in practice of a supervisory framework for state owned banks. The context is that while the Basel Committee provides guidance in fact in Basel I, the Basel Core Principles has an annex which implicitly suggests that state owned banks should be

Figure 4. Main Findings – Banking (BCP Assessments)

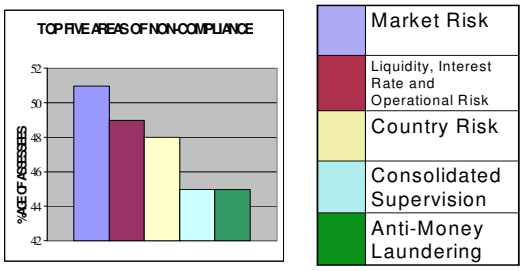
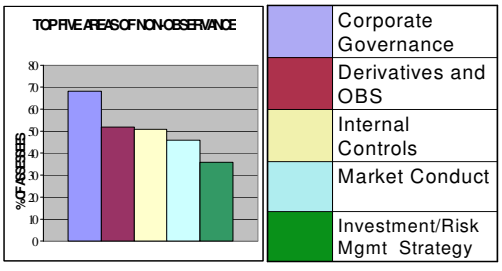



Figure 5. Main Findings – Insurance (ICP Assessments)

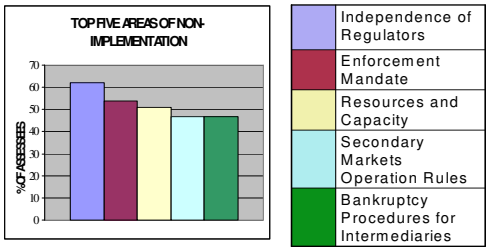



treated like any other bank. The realities for many national supervisors is that the ability to effect or to achieve corrective action in state owned institutions is not always easy. Shareholders are the government and issues of what is capital and when capital is to be injected, are always issues.

With respect to conglomerates, in many of the FSAPs, the issue goes beyond issues of consolidated supervision. For several countries there are concerns regarding the design of safety nets when you have active cross border conglomerates. Who provides liquidity when there is stress? Whose deposit insurance scheme applies in instances where the conglomerate

incorporates itself as a subsidiary or branch? Who has responsibility in terms of home or host issues, and issues of too big to fail, and too big to supervise  With respect to supervisory resources again, another speaker raised issues of  the independence of supervisors and one theme which has come out in many FSAPs has not been simply the independence of supervisors, but the accountability of supervisors. Perhaps in 50 percent of the FSAPs, adequacy of supervisory data and reporting systems has been an issue and more recently there has been discussions in several FSAPs on the adequacy of AML frameworks.

Figure 6. Main Findings – Securities (IOSCO CP Assessments)




How are these risks and issues managed? This is where we look at the observance of standards, given the risks. With respect to banking, using the results for the Basel Core Principle Assessments, the top five areas of non-compliance or the most common areas of low compliance of the Basel Core Principles are in areas related to risk management, market risk, liquidity risk, country risk. In insurance, using the insurance core principle assessments, corporate governance and managing the risks in derivatives are big items. In securities markets, securities regulators, the authority to effect corrective action, noting this enforcement mandate, both independence of the regulator and the authority to affect corrective action are areas in which most frequently the countries assessed are not compliant (Figures 4, 5, and 6).

How does this relate to Basel II? I think one theme which has come out of the discussions so far has been that as countries prepare for Basel II there is a recognition that supervisory challenges remain in relation to existing risks. As we think about Basel II, the reality is that the landscape is not one where there is uniform strength in supervisory processes.

Figure 7. Relevant CP's for Basel II

| | % observance | | |
|---|---|---|---|
| | Advanced | Developing | Transition |
| Capital adequacy | 95 | 55 | 74 |
| Assets evaluation and provisions | 84 | 58 | 79 |
| Country risk | 84 | 24 | 32 |
| Market risk | 95 | 31 | 42 |
| Other risks | 95 | 36 | 47 |
| Consolidated Supervision | 95 | 27 | 16 |
| Information requirements | 99 | 67 | 73 |
| Formal supervisory powers | 89 | 53 | 64 |
| AVERAGE | 92 | 44 | 54 |

In preparing for Basel II this chart tries to capture some of the pressure points (Figure 7).

Some of the key pressure points that exist in preparing for Basel II, relate to the data issues needed to calibrate credit default probabilities for the various methods and options in calculating capital. A related issue is the supervisory resources and capacities needed to validate the processes or to validate many of the options in Pillar 1. With respect to Pillar 2, strong supervisory arrangements are crucial. In fact, many supervisors are of the view that Pillar 2 perhaps has been overshadowed by the discussions in Pillar 1. The strength of this platform of Pillar 2 really is crucial to Basel II implementation and as suggested earlier there are still areas where there are weaknesses in the supervisory process. With Pillar 3, the accounting platform and having common definitions of financial soundness indicators, common measures of loan classification, and provisioning, are still challenges as is the issue of the powers of the supervisor to require banks to dispose information.

In concluding, then I just wish to a look at a few issues going forward. The observations that I tried to share points more to some of the challenges we're all going to have going forward with respect to Basel II. But I'd like to close with the sense of optimism which was expressed by Dr. Marshall from the Superintendence of Chile yesterday. The interest expressed in Basel II is a real opportunity. It is rare to have such convergence between politicians who are concerned about the fiscal cost of financial crises, supervisory agencies who want to promote sound intermediation and bankers who will see the opportunity of aligning economic with regulatory capital. This coincidence of interests present a rare opportunity to strengthen supervisory frameworks and risk management.

If we can take that opportunity, the issue is really one of prioritization. I am suggesting that Pillar 2, strengthening Pillar 2 is critical to moving forward. There are also issues of more effective collaboration amongst institutions who are involved in supervision. Issues of more effective home-host supervision, more effective information exchange across national boundaries, and understanding each others' national discretion should be focused on , and importantly I think we need to learn from each other. There are a number of initiatives which are on the way by several regional supervisory groups where each country is not trying to reinvent, country A is sharing information with country B as to what they are doing, regulations are being drafted in one country which they are sharing with others. In several regional supervisory groups, there is a lot of information sharing which is occurring. As well, and our speakers have mentioned earlier, there is the Accord implementation group which has been established amongst the Basel Committee members, but I think one thing which we'd want to encourage is for many regional groups to set up their own Accord implementation

committee to learn from each other. I wish to end on that note and thank the Governor of the Central Bank and the distinguished audience for their attention. Thank you very much.

**Speech by Zsigmond JARAI**

**Governor-Bank of Hungary**

**Institutional framework for promoting financial stability**

First, let me start with a brief overview of the institutional arrangements for safeguarding financial stability. In Hungary, three institutions are responsible for promoting and maintaining financial stability, namely the Hungarian Financial Supervisory Authority, the Magyar Nemzeti Bank and the Ministry of Finance. The detailed scope of responsibilities and tasks related to financial stability are regulated in the relevant statutory provisions of these institutions. The relevant institutions' approaches towards the common aim of stability differ in accordance with their specific functions. However, their tasks are closely interrelated, and their activities have important synergies thus the strengthening of the cooperation is of primary importance.

Since September 2004 the cooperation between the three authorities has been governed by a high-level agreement on the coordination of tasks to promote financial stability. The agreement defines four core principles, i.e. cooperation, transparency, efficiency and exchange of information. The Trilateral Agreement clearly draws the line between institutions as regards the scope of tasks and responsibilities in promoting and maintaining financial stability. In the interest of the efficient coordination of financial stability tasks, the three parties agreed to set up a Financial Stability Committee. The Committee is a consultative forum with a task to discuss and overview the various issues related to the stability of the financial system. Besides the Trilateral Agreement, there is a Memorandum of Understanding in place between the central bank and the supervisory authority as well, which is more focused on operational issues.

These agreements meant a great step forward in the cooperation of institutions with financial stability tasks. However, some challenges still remain to increase the efficiency of this cooperation, especially between the central bank and the supervisory authority. These partly concern operational issues, particularly in the area of information exchange between the two institutions. Another area where efficient cooperation is essential concerns the improvement of the crisis management framework. For this purpose, in line with the international best practice, crisis simulation exercises will be carried out involving the relevant authorities. Another type of challenge stems from the different approaches followed when pursuing the goal of financial stability. Whereas the financial stability mandate of the central bank calls for a systemic and more forward-looking approach, that of the supervision mainly relates to supporting the prudent and efficient operation of individual institutions and monitoring the compliance with prudential regulations. It should be noted, however, that the different approaches (micro vs. macro) followed by the two institutions also have important synergies.

**Financial stability functions of the Magyar Nemzeti Bank**

Before giving a more detailed description of financial stability functions of the central bank I shall clarify what is meant by financial stability in the Magyar Nemzeti Bank. According to our *definition*, financial stability is a state in which the financial system - such as key financial markets and financial institutions - can fulfil its key functions smoothly, i.e. intermediating financial resources, managing financial risk and processing payment transactions, as well as has the ability to withstand economic shocks.

The central bank's tasks related to financial stability can be derived from the above definition. Formally, the role of the Magyar Nemzeti Bank in promoting financial stability is defined in the Central Bank Act and the Trilateral Agreement on co-operation between the Hungarian Financial Supervisory Authority, the Ministry of Finance and the Magyar Nemzeti Bank. In line with the prevailing international best practice, the Central Bank Act stipulates that "the MNB shall promote the stability of the financial system and the development and smooth conduct of policies related to the prudential supervision of the financial system". The implementation of this broadly defined financial stability function is based upon *three pillars*:

In the course of its macro prudential analysis, the MNB focuses on the systemic effects and assesses the potential risks on the financial system. The MNB shall issue a report on the stability of the financial system semi-annually.

The MNB expresses its opinion on draft decisions and legal regulations related to its tasks and to the operation of the financial system. When giving an opinion on such proposals, the MNB shall primarily strive to improve the efficiency of the financial system and to enforce aspects of systemic stability.

Development and regulation of domestic payment and settlement systems and the support of the safe and efficient operation of such.

Another key responsibility related to financial stability derives from the central bank's lender of last resort function. In circumstances due to which the operation of a credit institution may endanger the stability of the financial system, the MNB may provide emergency liquidity assistance to such credit institutions.

**Financial stability analysis at the MNB**

Let me now concentrate on the first pillar of the central bank's financial stability function, i.e. *macroprudential surveillance*. A wide range of macroprudential indicators is used for the Bank's financial stability monitoring. These indicators cover macroeconomic and financial market developments, as well as non-financial corporations and households. Another set of indicators is used to analyse banks' risk exposures and their ability to withstand shocks. In addition to monitoring trends on a sectoral level, it is also necessary to use measures of dispersion and concentration. Given the shortness of time series of banking sector data, it is also important to relate these indicators to some kind of a benchmark. In the case of cross-country comparisons, the Bank refers to the banking systems of EU-15 countries and the new EU Member States at a similar stage of development.

Beyond the "standard" macroprudential indicators, stress testing exercises applied to the banking sector play a very important role within the set instruments used for financial stability analysis. They add a dynamic element to the analysis of macroprudential indicators, as they help to assess the banking sector's ability to withstand potential future macroeconomic shocks. The main types of shocks included in these scenarios are exchange rate, interest rate and credit shocks.

Analysis of macroprudential indicators and stress testing exercises are also supplemented by qualitative information gathered from different sources. Surveys carried out by the Bank on banks' risk management practices constitute an important input for the macroprudential analysis. The importance of these surveys is given by the fact that they provide insight on

banks' risk management on a micro level. They have covered various types of risk, including credit, exchange rate, interest rate, liquidity, operational and group-level risks.

**Main risks in the banking system**

After drawing a general outline of the financial stability work in the MNB now I turn to the key risks Hungarian banks face currently.

***Risks implied by the rapid credit growth***

The depth of financial intermediation in Hungary, like in most of the new EU member states, is still low compared to EU-15 countries. Looking at the dynamics, however, a rapid credit growth can be observed in recent years. While it is seen as a natural development and the part of the catching-up process to more developed countries, high lending growth may also pose some risks to financial stability. Bearing this in mind, credit risk is given key importance in our banking sector stability analysis.

In our latest financial stability assessment, two main risk factors were identified. First, a rapid growth of foreign currency borrowing by small and medium-sized enterprises (SMEs) and households has been observed recently. Most of the foreign currency loans taken by retail borrowers are presumed to be unhedged against exchange rate risk. This increases borrowers' exposure to adverse exchange rate movements, and consequently banks' credit risks. Second, there are indications of banks' increasing risk appetite and loosening credit standards in order to gain market share. Banks increasingly target retail market segments, i.e. the SME and household sector, with a short credit history which makes their risk assessment more difficult. Thus, it is important to monitor that banks are able to price additional risks accompanying the entry into new market segments.

***Risks related to foreign currency lending***

Let me elaborate on the risks of foreign currency lending in more detail. Foreign currency borrowing by the private sector has been increasing dynamically recently, contributing to growing exposure of the private sector to adverse exchange rate movements. Moreover, it may carry an additional risk that in the case of foreign currency lending even those customers with liquidity constraints who would otherwise be excluded from financing might obtain credit due to lower installments.

What are the main factors behind the rapid growth in foreign currency lending? On the demand side, low financing costs play an essential role with the interest rates of foreign

currency loans being several percentage points lower than that of domestic currency loans. This was supported by relatively stable exchange rates, thus the risk of a major deprecation may have been perceived very low by borrowers. A third factor boosting the demand for foreign currency loans was that due the significant curtailment of - formerly rather generous - housing subsidies, housing loans granted in domestic currency became unattractive to customers. On the supply side, banks' intention to gain market share in the rapidly growing household lending market and relatively high margins on foreign currency loans were the main motives. By the end of 2004, the ratio of foreign currency loans exceeded one quarter of all outstanding borrowings of households.

It should be noted, however, that a significant proportion of foreign currency lending in total loans is not unprecedented among the new EU Member States. The Baltic states, in particular, have experienced a large increase in foreign currency lending in recent years. Since these countries maintain currency boards or similar exchange rate arrangements, their experience is not directly comparable to the Hungarian case. A more relevant lesson might be drawn, however, from the experience of Poland where the dynamic expansion of foreign currency lending was disrupted in 2003 due to the significant depreciation of the zloty.

Based on the Polish experience, in Hungary, a significant exchange rate depreciation could probably lead to a sudden deterioration in loan portfolio, a decline in households' credit demand and thus to a considerable fall in banks' profits. A decline in Hungarian households' foreign currency loan demand would also have a negative impact on exchange rate and yields through a shift in the financing structure of the high current account deficit. The likelihood of emerging financial instability would depend on the extent and duration of a possible forint depreciation.

**Future challenges**

Notwithstanding the significant progress made so far, important challenges remain in the period ahead for both the financial institutions and the authorities responsible for promoting financial stability. Let me now mention some of these challenges.

*Challenges ahead of banks: a need to enhance cost efficiency*

Hungarian banks enjoyed high profitability in recent years, supported by high lending growth but also relatively high interest margins. In the years ahead, however, some developments point to a change in the environment conducive to high margins. First, monetary convergence is expected to continue thereby causing a further decline in interest rates. Second, as the

degree of competition among banks strengthens the interest margins may narrow substantially. These two factors together put pressure on the largest source of banks' earnings, net interest income.

Thus, it is important to monitor how banks adjust their strategies to the new environment in order to maintain profitability. Notwithstanding improvements recently, the efficiency gap to EU-15 banks is still substantial. Therefore, enhancing cost efficiency should be a priority for banks in the medium to long term in order to maintain sound profitability.

*Challenges for authorities: implications of high foreign ownership for financial stability monitoring*

Another important feature of the Hungarian banking sector, like in most of the new EU Member States, is the high foreign presence. Dominant foreign ownership in these countries is seen as a stabilizing factor in the banking system. This is indicated by improved asset quality, partly due to more developed risk management methods and a strengthened capital position. The entry of foreign owners through privatisations and greenfield investments brought benefits in areas such as the development of risk management systems and the technological infrastructure, and the transfer of management expertise.

Notwithstanding the mostly positive stability implications of high foreign ownership in the banking sector, this structural feature also presents a challenge for authorities responsible for safeguarding financial stability. In particular, a potential conflict between home country control in micro prudential supervision and the host country responsibility in maintaining financial stability might arise. Subsidiaries (or branches) may have systemic importance in the host country whereas they only represent a relatively small proportion of the parent bank's operations. Thus, enhanced efforts on cooperation and information sharing between the home and host authorities are needed to facilitate an efficient financial stability monitoring in host countries. This supervisory challenge might be made more difficult in the case of a potential change in the structure of foreign banks' presence towards branches.

*Challenges in financial stability analysis*

As indicated by the Bank's assessment on the main risks to financial stability in Hungary, some issues emerge as key areas for deeper analysis in the medium term. These include the quantification of banks' credit risk as well as a more detailed analysis of risks stemming from increased foreign currency borrowing. In addition, the methodology used for financial stability analysis should be broadened further to include more empirical modeling. As a

longer term challenge, based on the experiences gained from credit risk modeling, building and embedding a banking sector model into macroeconomic models should also be considered.

Due to the special characteristics of catching-up economies, however, a number of difficulties arise in the practice of empirical credit risk modeling. First, only a short time series is available for banking sector analysis. As for Hungary, because of the transformation crisis in the first half of the 90s "clean" data series begin only from the mid-90s. Second, due to the lack of several business and credit cycles, the separation of the cyclical component in banks' activity is made difficult. Third, macroeconomic and financial sector developments have been characterized by profound structural changes. This too, adds some problems to the investigation of the cyclicality of banks' behavior. Notwithstanding these limitations, however, we see great use of applying empirical modeling techniques in analyzing credit risk.

**Speech by Grzegorz BIELICKI**

**Director, Banking System Off-site Analysis Division in the General Inspectorate of Banking Supervision-Bank of Poland**

Governor, ladies and gentlemen, it is my great honour to be here and speak to the distinguished audience at this high level conference. I would like to express my appreciation to all the staff of the Central Bank of the Republic of Turkey for their hospitality, personal kindness, and organizational effort put into this conference. This is a huge event organised really very well.

To start off, I would like to present the outline of the presentation covering general content of what I prepared for today. I will not speak on all of these topics due to time constraints. Instead, I will highlight some main issues and message, which I want to give. I hope my presentation also to be important and interesting for Turkey as such as we have many problems, which will become more and more similar when Turkey approximates EU accession in terms of the financial sector and banking supervision.

I would like to start by describing financial system in Poland first. It is quite small. Polish financial system constitutes only 80 percent of Polish GDP, of which: 75% - banking assets. On one side it is small, but on the other side it shows there is a lot of potential for further development. Banks are definitely dominant in Polish financial system. Nevertheless, we can see that every year the proportion of other institutions is increasing in the entire financial sector. A few years ago, Poland carried out pension system reform, abandoning, at least partly, "pay as you go" system, and adopted three-pillar system, where pillars II and III give possibility to an individual to select privately managed fund where his or her contributions will be placed. Both pillar I and II contributions are mandatory. After a few years since the system was put in place, we observe quick growth of those assets. This trend is also accompanied by increase in insurance business and investment companies – assets of both segments grow much faster than banking assets. However, banks still remain the predominant part of the financial system in Poland. It is interesting to note that currently a large Polish bank – in terms of assets - is bigger than any other part of the sector. Investors in the Polish banking sector are mainly large international groups and they hold significant stakes in the Polish banking assets. However, concentration is not very high and close to EU average. In Poland, more than 70 percent of banking assets is under foreign control. Currently Bank Gospodarki Żywnościowej (BGŻ) - the tenth largest Polish bank - is under the process of controlling stake acquisition by Dutch Rabobank.

Such a substantial level of foreign owned banks, higher than in most of EU countries, is subject to heated political discussions in Poland and the sale of the Polish banks to foreign investors is sometimes attacked politically by various parties. The politicians often like to suggest that central bank or supervisors were involved in the process of selling out "country's best financial assets" but - in fact - it was the State Treasury who was in charge of privatisation and sale to foreign investors. These days, foreign controlled banks make their lending based on decisions governed by business motives. There is an issue how foreign controlled banks are eager to lend to corporate and SME clients. That issue was raised today by Governor Jarai. From the perspective of the bank supervisors as well as from that of the central bank in charge of financial stability, the role of renowned foreign banks in our market is important. They give not only technology, risk management techniques, and new products but they offer also - what is very important - capital. We had a number of cases that demonstrated foreign banks role. For example, in a number of situations when foreign owned banks had problems with capital due to deterioration of asset quality, the parent bank

contributed a new capital. Apart for the initial period of 1989-1992, most of the bad events in the banking sector concerned local banks. That is why – as far as depositors are concerned - we are very satisfied with foreign presence and also diversification of investors (the market is not dominated by banks from one country but from a number of countries). .

Nowadays, as regards concentration of the Polish banking sector, 5 major banks represent 50% of the banking sector assets, which is close to EU average.

Concentration of foreign ownership has some implications for financial stability and for supervisors. The structure of the system adds a new dimension to the supervision as we have to look also at the position of the parent bank. This is because the position of the parent bank may affect easily the stability of the financial system in host country and, in fact, the real economy of the country. It refers both to the parent bank and also economy of the parent bank i.e. of the country of incorporation where usually most of the entire Group business is located. Therefore, growing foreign presence in local market really changes the perspective of the local supervisor who needs to look also at the safety and soundness of the parent bank. I will elaborate on this later on while presenting the strategic issues related to the home - host relations.

While talking about financial stability it is worth mentioning the cost of the Polish banking crisis in the mid 1990s. This was one of the least costly crisis resolutions and amounted only to 3.5 percent of GDP according to the World Bank estimates. Our internal estimate shows even slightly lower costs.

Let me turn now to our institutional framework. In Poland, the supervisor and regulator is the Commission for Banking Supervision, which is a collective body separate from the central bank. However, its executive arm, i.e. the General Inspectorate of Banking Supervision is part of the Polish central bank. This means that we are employees of the central bank with double reporting lines: one to the central bank management board and another reporting line to the Commission. I would say none of them is dotted but perhaps more important is the reporting line to the Commission for Banking Supervision which is chaired by the Governor. Our model is similar, though not exact, to the French one with the Commission Bancaire.

There are also separate supervisory agencies for pension funds and insurance (Polish Insurance and Pension Funds Supervisory Commission) and securities (Polish Securities and Exchange Commission). There is also cross-participation of certain members of those institutions in bodies of other commissions. For example, the head of the General Inspectorate

sits in the Securities and Exchange Commission and also in the Insurance and Pension Funds Supervisory Commission. Also, it refers to other members of each commission, who sit in other commissions as well. This model works and provides good basis for consolidated supervision of mixed groups. There are no plans to change it and to convert into a FSA type supervisory agency. Banking sector is really dominant in Poland and insurance and banking business are - at this stage - quite separate. It results from the fact that in many cases there are almost no direct links between banks and insurance companies in Poland. Such links are usually abroad at foreign group level. There are MOUs between those three agencies and cooperation between them is really very good.

Our bank supervision model is very intensive, not based on work of auditors but our own examiners. It was built in the early 1990s and consumed our own experience as well as some other countries. In certain sense, it is close to US model of supervision run by the OCC and Fed. Our advisors in 1990s in building up supervisor capacity were former US supervisors from OCC, FED and FDIC. The idea of supervision is to have close insight in the manner how banks manage risk and also to have independent view on the amount of risk. We put a lot of attention to test asset quality. To do this job we have 270 on-site examiners all over the country and they conduct many on-site examinations. As I stressed we do not use auditors (nevertheless, there is of course a statutory audit in each bank). We carry out full scope examinations during which most of the time is spent by examiners on reviewing loan portfolio (particular loan files) as credit risk continues to be the main component of the bank's risk. As a result we arrive at our own assessment of loan quality and have opinion on the amount of the missing specific provisions. All in all, this gives us an excellent understanding of risk inherent in bank activities and management processes in banks.

As regards the financial stability monitoring in the National Bank of Poland, the key player - together with bank supervisors - is the Financial System Department. In fact, it is financial stability wing of the central bank. This department has perhaps longer time approach while we – as supervisors - run operational supervision on daily basis. In that context, I should add a few words about the FSAP. We were FSAP'ed in 2001. The main conclusion was that no major immediate issues in terms of systemic stability were apparent. We thought it was very good conclusion for 2001. We will have another FSAP planned for early 2006, what is a new challenge for us.

During our supervision process we try to supplement quantitative information with qualitative one. We have our supervisory rating system, which is used internally but disclosed

to the individual institutions, auditors and home country supervisors. This is not public information but as we want to be transparent to supervised institutions we inform them about our findings and ratings on individual basis. All the components are rated as a result of the on-site examination. These are: capital, quality of assets (credit risk), management, earnings, liquidity, and sensitivity to market risk. We do not have a separate component for operational risk; though certain elements are rated in the area of other components (within risk management assessment for individual risks). Operational risk might become a new component in the future. After every on-site examination, these component ratings are given, as well as a composite rating. The latter one is based on the component ratings, but it is not a simple average but judgmental composite rating. Let me add that we also assign ratings on quarterly basis based on off-site analysis. The rated components are: capital, assets, earnings and liquidity. Other components like market risk and management are difficult to be rated off-site.

We prepare many publications and do a lot of analytical work, e.g. "macro" analysis of banking system on quarterly basis. Summary of the analysis is published on our web site. English version of the Summary is translated into English twice a year: end of year and June end.

Next important areas are outsourcing and consumer protection. Nowadays, they are of growing importance. I want to highlight only some aspects, especially chain outsourcing and outsourcing of some key functions like IT. It should be stressed that this area is difficult to supervise. The real challenge comes when banks put pressure on outsourcing of core functions. Last year, our Parliament adopted amendment to the Banking Act which forbids outsourcing of core functions like risk management and internal audit. Such functions in banks are considered necessary to sound management of the bank and cannot be outsourced even to the parent company. The local management needs these functions to fulfill its legal and corporate responsibilities and they are critical to ensure that banks are run in safe and sound manner. That is why they need to be performed locally in the bank. Certainly, we do not exclude "second line of defense" at the group level and consolidated risk management but the latter cannot eliminate core functions from the banks, especially from systemic ones; all of them are separate legal entities and not branches. Other important issues are contingency planning and crisis management. Here let me mention EU-wide MOUs. As far as I know, the second one, memorandum of understanding on corporation between banking supervisors, central bankers, and finance ministers is being signed these days. These MOUs are initial step

in establishing more robust framework for cooperation. It is not legally binding document. And probably it is not the only mechanism we need to have in place when the real crises happen.

Other challenges like IAS implementation, now called IFRS, are also a major issue, under dispute in the European Union, especially with regards to fair value. We believe that fair value is a good approach and in the longer run will give really comparable data. In fact, IFRS delivers data reflecting much better what is going on in the financial markets and showing actual volatility of the financial markets. However, for the purpose of prudential supervision it should be filtered through so-called prudential filters for regulatory capital purposes. But - let me stress again - from the perspective of true and fair presentation it is much better to present the volatility as it is instead of using historic accounting, which simply pretends there is no volatility. Volatility exists and that is why it is difficult to agree with some concepts that there is artificial accounting volatility in the fair value concept.

At the moment, Basel II is probably the biggest challenge due to its high complexity. We are in progress of preparation to Basle II like all other European countries.

As regards Pillar 1 of Basel II we did QIS 3 some time ago and its results were very encouraging. I think that today the results will be even better because the data for this time was really from the bottom of the cycle. We will see the results of QIS 5 probably by the end of this year or early next year.

Pillar 2 is a very important area. There is a lot of discussion regarding supervisors' ability to assess all the components of Pillar 2, especially review internal capital of the bank. I would like to make a point here that economic or internal capital is a bank's internal process and number. Under Pillar 2 we will be analysing its adequacy. Supervisors should review this process, form their own opinion, and assess capital adequacy with regard to risk profile of the bank. But it is the banks` obligation to be able to assess the internal capital first. In many banks, this process is not advanced and probably not in line with the expectations of Basel II. Many of them have limited or no assessment of such risks like reputation or strategic risks. The economic capital more than regulatory capital might incorporate such factors like desired rating or acquisition plans. My feeling is that at this stage we will not find in banks entirely complete Pillar 2 models and robust consideration of major Pillar 2 risks. Let me stress that this will be also a great challenge for the supervisors.

One of the consequences of Basle II and Capital Requirements Directive (CRD), now still in a draft form, is much more power shifted to home supervisors. Directly or indirectly both Basle and Brussels expanded the role and powers of home (or "consolidating") supervisor in case of international banks operating in various host jurisdictions. This fact will affect cross-border banking and its supervision. Moving model validation process, for models also applicable in host jurisdiction, at group level highlights more prominent role of consolidating supervisor than it happened in the past. This is a crucial change. In fact, this approach really changes the perspective to such extent that probably the international arrangements for home-host relations should be revised or at least revisited seriously. It seems that a lot of power is to be transferred to home supervisors (centrally developed models validation) while local supervisors role might be practically limited to assessment of the local calibration of the central model and its local use test. We need to remember that such model will eventually produce most probably lower capital requirements that standard one which in many countries will be predominant option for smaller and medium size banks. I do not want to sound pessimistic but realistic. Of course, host supervisors would look into the model used by the local bank to ensure that it properly reflects the local circumstances and whether the risks are not understated due to being developed in home. And, as far as the EU CRD is concerned, even much more powers and authority, but not responsibility, are given to the consolidating (home) supervisor with famous and hotly debated Article 129 of proposed CRD. We believe it quite unfortunate that after 6 months of discussions in the college of supervisors of the international group, the final decision on the validation of the group-wide model is made only by the consolidating home supervisor. And host supervisor has nothing to say. In business as usual environment and on the basis of to-date experience, we do not expect major problems, and hope to have excellent cooperation. I don't believe there will be any dispute in practice but we consider it very dangerous to give this authority and power to the consolidating (home) supervisor with no responsibility. It is worth reminding here the basic principle "one who gets more powers and ability to act he also takes more responsibility". This responsibility includes also potential costs of dealing with a problem bank. "One-stop shopping" concept which is so heavily lobbied by international banks and which was important factor to bring to the EU table the concept of "lead supervisor" might simply bring us to undermining some existing division of powers and responsibility leaving a lot of legal uncertainty.

Why do we have serious objectives as regards this new model of sharing responsibilities? We can say that it is because supervision is just one element of the broader framework. If we look

at the other elements like deposit insurance, potential budgetary costs (fiscal costs) in case of major EU groups (including foreign subsidiaries), Emergency Liquidity Assistance, such coordinated and comprehensive system does not exist on the international level. If it comes to responsibility and real costs it is all within national arrangements. There is no legal liability of the parent bank for its subsidiary – neither deposit insurance nor liquidity support. It's just a moral responsibility. In this context, it is worth remembering that most of the funding in large foreign banks in most of the Central and Eastern Europe comes from depositors and not shareholders. Let me stress that we had many cases of the support given by parent bank (capital injection) in case of problems of their subsidiaries. But it does not mean it has to be always like that as it is purely on voluntary basis, motivated by care of reputation. We need also to remember that there were cases in Europe where the parent banks having problems in its own home market (bad loans) did not care about its ailing, foreign subsidiary. I am talking now about AAA rated bank which left its subsidiary in Croatia and did not support it in time of trouble. In was no longer than 3 years ago (see *The Economist*, September 12, 2002 "Rogue trader, rogue bank"). What is quite important here is that this subsidiary was of systemic importance (3rd largest bank) in host country – Croatia. Thus, local central bank and government had to deal with this problem on its own. That is why, with all the positive elements of the foreign ownership, we believe that the sound local risk management, compliance to local laws, and strong adherence of local management to corporate governance principles is very important in terms of all the arrangements. And it should be always understood that the banks have to comply with capital requirements on an entity basis not only consolidated basis. Also, there should be enough robust internal controls in place on an entity basis as well as sound corporate governance. Let us look at the size of foreign subsidiaries in countries of Central and Eastern Europe like Poland. The share of foreign subsidiary in the Polish banking sector is always much bigger than in the banking group itself. Let me give you some examples. Polish subsidiary of ING Bank - ING Bank Śląski S.A. – constitutes just 1% of the balance sheet of the overall group. However, this subsidiary represents as much as more than 6% of the Polish banking system assets, while Polish subsidiary of Unicredito – Pekao S.A. represents more than 11%. These are all systemic establishments but almost immaterial from the group perspective. They might not get enough attention of home country supervisors and parent bank. Next slide compares the entire Polish banking system to all these five international banking groups; all of them are much bigger. For example, the entire Polish banking system assets represent mere 12% of Citigroup assets. These proportions are even more drastic for some of the new EU member states. Such foreign

subsidiaries are of key importance for local banking systems. You can also note that nowadays it regards not only new member states but also Finland and Denmark due to famous Nordic case. As you may realize there is a lot of discussion in Europe due to the hot question of the European company and possibility of turning banks into branches while transforming into European company. If we have like potentially in Finland 51% of the sector being a branch, and bear in mind that in EU by law a branch is supervised directly from the home country, then this becomes a big issue for both home and host supervisors as well as for country's financial stability. This is because it's also a question of resources and again question of sharing responsibility, including potential costs of dealing with problem bank or crisis. In time of stability, there is no problem but in time of crisis the problem may arise as there is a question of tax payers' money involved or liquidity assistance to be offered from another country.


Now, I would like to move to some information on Polish economy. All this information tells us that Polish economy is on good truck, perhaps not as good as the Turkish economy at the moment. However, in Poland there are also significant risks to growth and economy. Let's start with the efficiency of legal framework. We perceive this as a crucial risk and impediment to development. Legal proceedings in Polish courts take a lot of time. On one hand it results from the complexities and inconsistencies in laws, but on the other hand it is because of the poor efficiency of the courts. And this is a significant problem as it takes thousand days in Poland to work out the bad debt. It is average period of workout of debt. What does this mean? It means that one of the major problems is collateral valuation. In general, valuation of collateral for banks, if it is done on arms` length basis and reflects market value, should be sufficient for provisioning. In fact, due to prudential reasons we apply in our supervisory regulations significant haircuts for collateral. However, in practice, even this size of haircuts appears sometimes not sufficient to reflect the reality what the bank can really get realised out of the collateral. Collateral in arms`

length transaction may be quite valuable, but in a workout process it appears to be just liquidation value, and it's much less. That is why we are looking at this very closely now. Especially, we monitor the banks which accept a lot of collateral and offset it against provisions, so the level of actual provisions is relatively low. In last years, banks became much more aware of the problem; also we have changed our regulations to reflect this in a way that after some period of time the loan is past due, and collateral is no longer considered eligible.

The second main risk to banks` position and performance is economy as such. As I said there were a lot of slides with positive picture of the economy, its growth, inflation under control, current account. Still there are some negatives in the area of public finance, basically (e.g. high public spending, public sector debt and especially low working activity). It is not only unemployment that is one of the highest in Europe. But it's also pensions and handicapped benefits which were easily given away to people just to reduce unemployment. This is a huge cost of the budget. And, as you can see, in Poland working activity is dramatically low and really affecting also long-term banking. Another factor is also aging of the society, which seems to be even more an issue for the European Union (the old EU), as it will change the structures of the balance sheets and the products offered by the banks. Working activity is a big problem for Poland and is very difficult from political and social reasons to have this changed because in fact we should increase the retirement age for women to 65 and reduce all these special extras for people below 65 and 60 including public servants. These benefits are not possible to be maintained in the longer run.

Now let us move more to financial risks. Next risk, which I would like to highlight, is the FX lending. It's especially important in the mortgage lending. Corporate lending is really flat for the last few years in Poland but what is growing quickly is lending to households, mainly FX lending for mortgages. It constitutes a significant part of the portfolio and as it was also mentioned today in the context of Hungary, it poses real risk. Even if the banks have their FX positions more or less squared in Poland it is the FX position of the borrower which might convert into credit risk for the bank in an adverse scenario of long lasting Polish zloty depreciation against foreign currencies. Borrowers are just households whose revenues are in local currency and they are not linked to foreign currency. Thus, they don't really have possibility to hedge for 20 or 30 years. A lot of lending is in Swiss Franc. Part of it is however in Euro. As regards Euro we think it is less dangerous because in a few years we hope to join the Euro area. Also, we see that some banks are very aggressive in selling these products and

we are not sure if they are really making aware the customers of the risk they take. I am raising this problem not from the consumer protection perspective because it is not our mandate but rather from the perspective of the banks. There are clear risks the bank takes: reputation risk and credit risk, as I said. That is why we are very vigilant to these risks. We have been reacting and continue to do so by sending special letters and questionnaires to banks involved in this business which is kind of "moral persuasion". We also examine the risk management systems to deal with this risk during on-site visits, requesting banks to demonstrate the results of their stress tests. In 2002-2003, we already experienced some kind of real case FX shocks as Polish zloty depreciated by some 30% against Euro within several months. Finally, nothing really happened. No material effects on the portfolios were noted, especially that the trend reversed and in 2004 Zloty in nominal terms has significantly appreciated. The factor, which is still of great importance, is interest rate differential between PLN and Swiss Frank. It is worth noting that banks claim that if the customer doesn't take FX risk, he takes the interest rate risk because the Zloty lending is basically floating rate. As 2004 was a very good year, the banks are very optimistic and they attack the market very aggressively by lending both in Polish zloty and in foreign currency. We increased our monitoring of the banks to ensure if there was no real easing of credit standards what could result in problem crystallising in crisis time.

Let me come then to conclusions. In short term, we think that the outlook is very positive. However, public finance is still a danger and it should be remembered, as it was mentioned in a number of presentations here, supervisors cannot prevent crisis in case there are structural problems in the economy. IAS implementation and Basel II are biggest challenges and in the context of Basel II and cross-border banking, the home-host relations are a crucial issue. We think it should really be addressed in a way that all countries think that the treatment is fair, both from home and host perspective. I showed a slide with the foreign presence in the banking system of the new EU member states and in Poland, but unfortunately I have no slide with the foreign ownership in the old EU and developed markets such as the US and Canada. But this is nothing comparable in terms of the foreign ownership. It shows how we have really opened our market to FDI and acquisitions in contrary to developed countries. We are very happy with such a situation in Poland but – on the other hand - we expect fair treatment in terms of corporate governance and compliance on the local market both for the locally incorporated banking subsidiaries and local regulators.

Thank you very much for your attention.

**Speech by I. Hakkı ARSLAN**
**General Manager, Banking and Financial Institutions Department**
**Central Bank of Turkey**


Ladies and Gentlemen,

It is a pleasure for me to speak in front of such a distinguished audience. In my presentation, I would like to address the role of the CBRT in financial stability and assess recent developments in the financial system.

First, I will briefly discuss the developments in last years and what kind of role the CBRT has undertaken. Then, by using financial soundness and macro indicators, I will give an overview analysis of Turkish financial system.

Today, as all you know, for each central bank attaches importance to safeguarding financial stability in ensuring their monetary policy towards price stability, which is her primary objective. Stability of financial system and smooth functioning of payment institutions are vital factors for price stability. Therefore, the CBRT monitors financial markets and analyze financial developments constituting threat for the whole system, while the Banking Regulation and Supervision Agency (BRSA) is the main responsible authority for banking sector since September 2000, by the empowerment of its Law.

Parallel to this structural engagement, the CBRT essentially deals with overall health of the financial system, instead of individual financial institutions that comes under the scope of the BRSA.

In order to achieve its goals, the CBRT started to issue semi-annual Financial Stability Report. The Financial Stability Report (FSR) adopts a “balance-sheet effect” approach in order to regard the intersectoral links and implications. Such an approach requires including firms, households, government, and external sector to the analysis in addition to the financial sector. View to the fact that banking sector accounts for the big share of Turkish financial

system, the FSR places the banking sector in the center of analyses. The FSR assesses vulnerabilities of the banking sector that is generally emerges in the forms of credit, market and liquidity risks. At this point, there needs to explore main sources of such risks and this in turn, creates an incentive to include intersectoral linkages to the analysis. Besides testing the resilience of the banking sector to various shocks by developing stress tests is among the goals of the FSR.

Both domestic and external events can be taken into consideration as possible shocks to the banking sector in addition to the past experiences brought up by recent twin crises of 2000 and 2001. Sluggishness in bringing structural reforms into life, a banking sector having a high risk appetite but being far from sophisticated risk management techniques and unfavorable external developments led to a sharp capital outflow that was ended up with 2000-2001 crises.

These developments reinforced the demands of the policy makers to give pace to the structural reform process. In the aftermath of the twin crises, a new economic program was put into effect to restructure the banking sector and restore the confidence in the markets, together with the application of other structural reforms. The banking sector restructuring reform was basically based on four pillars: 1) Financial and operational restructuring of the state banks, 2) resolutions of the banks under the management of the SDIF, 3) Strengthening of the private banks and 4) Further improvement in the regulatory and supervisory framework.

This shift in economic policies resulted in better and more sophisticated economic and financial environment, i) the more market discipline and transparency was achieved, ii) more efficient supervision was enhanced, iii) risk control mechanisms are strengthened by new regulations to better identify weaknesses, iv) state banks no longer distort the markets, and iv) SDIF banks are resolved through M&A and liquidation.

I should add that risk culture underlies both price and financial stability. One of the main lessons drawn from recent crises is that economic agents should have adapted their risk perceptions to dynamic financial and economic conditions. It can be emphasized that Turkish financial system's effort to improve risk management techniques and related infrastructure is highly satisfactory.

**Macroeconomic Soundness**

Today, no doubt, early detection of crises has become an exclusive goal for policymakers. To this end, a set of macro and aggregated micro prudential indicators constitutes the main tool.

The problem of calibrating this set of variables is, in practice, seemed to be solved as choosing macro or micro variables showing contemporaneous or leading characteristics. *While aggregated micro indicators are primarily contemporaneous or lagging indicators of soundness; macroeconomic variables can signal imbalances that affect financial systems and are, therefore, leading indicators*[10].

From a macroeconomic standpoint, recent developments signal a success in establishing macroeconomic stability. In this regard, four macroeconomic factors come into front and help to assess soundness conditions of economy: price stability, growth, public finance and balance of payments. In order to analyze these developments, several macroeconomic indicators are employed (e.g., dollarization and real interest rate), which are also commonly agreed variables in international literature.

**A) Price Stability and Sustainable Growth**

Due to weakening link between inflation and exchange rate, and structural reforms (including central bank independency, public finance discipline), significant steps has been taken forward in order to provide price stability. Inflation annually declined to 9.7 %, in 2004, recording almost 60-point decrease from 2001. 2005 inflation target is % 8.

After 1990s (even after launch of the economic program in the beginning of 2000), economic growth rate continued to follow a volatile path. Today, because of structural reforms and economic agents' improved risk perceptions, economic growth is higher, more sustainable and less volatile. At the end of 2004, GDP growth, on annual basis, reached to level of 8.9 %.

**B) Sustainable Public Finance**

Another factor, which is important for providing macroeconomic stability, is sustainability in public debt stock. The ratio of total public net debt to GDP declined from 90.5 percent in 2001 to 63.5 percent in 2004. This has been mainly arisen from the increased primary budget surplus analyzing the composition of debt stock, it can be observed that short-term debt (including both public and private debt) has been increased. However, as an indicator showing the ability to meet these short-term liabilities, international reserves (covering both the central bank and banks reserves) increased from 30 billion US dollar in 2001 to 53.6 billion US dollar in 2004.

[10] IMF, Macroprudential Indicators Financial System Soundness, Occasional Paper 192, 2000.

The ratios, interest expenses to tax revenues and interest expenses to GNP, generally show to what extent borrowers are able meet their obligations. Debt service ratios have been declining since 2000, indicating good debt service capacity.

The improvement in public borrowing cost is evident from decline in ex-ante interest rates (İstanbul Stock Exchange Government Securities' compound interest rate) from 20.7% in October 2001 to 10.5%, which depends on expected inflation.

**C) External Balance**

Developments in the external balance indicate deterioration in current account balance. Rapid economic growth played an important role in the expansion of current account deficit from 0.9 percent in 2002 to 5.2 percent in 2004 especially through increased intermediate goods demand. On the other hand, the ratio of exports to imports kept being robust due to strong exports growth. Also, flexible exchange rate regime and the level of international reserves keep current account deficit in a sustainable path.

While capital inflow has expanded broad money supply, M2X that is a proxy for obligations of banking system, international reserves are sufficiently high. The policy measures and structural reforms enhanced confidence on Turkish economy. This reflects on external balance as i) more capital inflow (especially foreign direct investment), and ii) appreciation of Turkish lira and de-dollarization.

**D) De-dollarization Process**

Above-mentioned positive developments regarding macroeconomic stability has been observed to bring about de-dollarization process that can erode directly effectiveness of monetary policy and price stability, and indirectly financial stability. In the first quarter of year 2003, de-dollarization process gained pace and the share of FX deposits (opened in banks) declined to 46.2 percent at the end of 2004.

Analysis of the composition of FX deposits, FX demand deposits compared to time deposits are in low levels, suggesting that FX demand is mainly led by savings motive (not because of transaction purposes). Enhanced price stability is expected to give pace to the de-dollarization process, considering the past experiences that economic agents were motivated by inflation to keep their savings in foreign currency.

## Financial Soundness Indicators

Financial soundness indicators are calculated for the purpose of supporting macroprudential analysis. This is the assessment of the strengths and vulnerabilities of financial systems with the objective of analyzing financial stability. Financial soundness indicators largely focus on information about banks, but include some key information on corporate and household counterparties. The indicators are identified by considering international best practices and national needs. In addition to financial soundness indicators that are used to understand the financial system's vulnerabilities, stress testing is used to assess its capacity to absorb potential losses.

## Banks and Nonbank Financial Intermediaries

The relative importance of the non-bank financial institutions in Turkish financial system's total assets is very low. Banking sector constitutes 91,7% share of total system. Therefore, banking sector is the core part for the overall analysis of financial sector soundness in Turkey.

Moreover, compared to the size of the economy, Turkish banking sector is still relatively small: total assets stood at some 70% of GDP at the end of 2004, which is less than EU averages. However, it is expected that financial development will strongly benefit from macro-stability.

## A) Banking Sector

## Capital Adequacy

Turkish banks have strengthened their capital since 2001. Capital adequacy ratio[11] is 28,7 % for the Turkish banking sector at the end of 2004 while it was 9,3% as of 2000. Obviously, this reflects the large share of government securities (with a zero-weighting in bank assets) and a change in the composition of bank assets in favor of loans to private sector would lower CARs. In addition to regulatory capital to risk weighted assets, the simple ratio of capital to total assets, without risk weighting also improved and it increases to 15% as of December 2004 while it was 6,9% at the end of 2000. Although the capital adequacy ratios look healthy, free capital[12] across the sector still remains modest although it improved. While free capital was negative before 2002, it is now 7,5% as of December 2004. The strengthened capital base

[11] Capital as defined in the 1988 Capital Accord of the Basel Committee on Banking Supervision (and revisions) divided by the risk weighted assets.
[12] Free capital is equity less unreserved NPLs, participations and fixed assets.

has now made Turkish banking sector better prepared to deal with potential future shocks and the improved free capital will have a positive effect on future profitability.

**Asset Quality**

The positive economic environment contributes to the acceleration of the loan growth. Loan to deposit ratio increased from 43,1% at the end of 2002 to 55,3% by the end of 2004. Nonperforming loan ratio decreased because of the decline in NPLs and growth of loan portfolios. The share of the problem loans in the total loan portfolio decreased from 25,2% at the end of 2001 after the crisis to 6,0% by the end of 2004. and higher profitability has allowed banks to set larger provisions (88,1% of NPLs). The potential impact of net NPLs on equity has also decreased. Because of the high provisions, decline in NPLs and increase in equity, net NPLs to equity ratio decreased from 35,6% at the end of 2001 to 1,7% as of 2004. Although NPL ratio is still higher than EU average[13] which is 3,7%, it is better than the Emerging Europe average[14] which is 7,8%.

**Earnings**

Banks' profitability has staged a strong recovery since 2001. Return on assets (after tax) and return on equity (after tax) both improved spectacularly. Return on assets is 2,1% and return on equity is 14,0% for the Turkish banking sector at the end of 2004. Profitability of the banking system exceeds EU average (Mean of the ROA for the fifty largest European banks is 0,4%, mean of the ROE for the fifty largest European banks is 9,4% and the mean of ROA for Emerging Europe is 1,7%). As inflation has declined, banks' net interest margin has fallen. The narrowed margins were offset by increased net trading gains. Falling interest rates generated trading gains. Such gains were particularly pronounced in 2003. Although net trading gains are not so much in 2004, banks offset this decline by increasing their net interest margin (utilizing their maturity mismatch structure while interest rates are decreasing) and improving their non-interest earnings. Net interest margin which is 5,8% at the end of 2004 has continued high which leave margin for error in terms of financial asset valuations (Mean of NIM for the fifty largest European banks is 1,6%). Although the current profitability is strong, about half of the income is still founded on government securities though it is decreasing. Cost/Income ratio of the sector decreased to 51,7% at the end of 2004 and it is lower than fifty largest European banks' average, which is 66,9%. However, as the level of

13 Fifty largest European banks as of 2003. / Global Financial Stability Report, IMF
14 As of 2004 / Global Financial Stability Report, IMF

bank intermediation increases, the ratio may be higher in the future, considering the banks' large government securities, which do not require a large overhead structure.

**Liquidity**

Banks' liquid assets declined as volatility reduced in the financial markets. Core liquid assets[15] decreased from 19,2% at the end of 2001 to 10,8% by the end of 2004 and short-term assets to short term liabilities ratio[16] decreased from 49,9% at the end of 2001 to 45,0% by the end of 2004. Short-term customer deposits are the main source of funding which creates a significant maturity mismatch. The weighted average maturity of deposits is 2,7 months for the sector. However, liquidity risk is mitigated to some extent by the banks' core deposit base.

**Sensitivity to Market Risk**

Net open FX position to capital ratio for the sector decreased from 50,9% at the end of 2000 to 0,9% by the end of 2004. A very low level of FX open position between assets and liabilities limits currency risk from any sudden change in the value of Turkish lira. However, given that 35% of the banking sector's loan portfolio (41% for private sector banks) and 33% of the government securities portfolio (48% for private sector banks) are in foreign currency, this means that it is important for firms to manage their foreign currency risk.

Banks are significant holders of government securities and banks have benefited from falling interest rates. However, banks might be adversely affected by a reversal of low interest rate environment. High share of government securities portfolio increases the importance of interest rate management. The share of securities in total assets of state banks is significantly higher than for private banks.

**B) Firms and Households**

Information on borrower is useful as it provides some indication on emerging credit quality trends.

Continued improvement in the balance sheets of the corporate sector has contributed to the resilience of the financial system. Corporate leverage has been decreasing, firms have been using their equity more efficiently and firms' capacity to cover their interest expenses has been increasing since 2001.

[15] Cash balances and loans to banks
[16] Assets and liabilities up to 3 months

Level of household indebtedness commonly related to consumer loans as a share of GDP has increased though the level is still low. Total of consumer loans and credit cards to GDP increased from 2,8% at the end of 2001 to 6% by the end of 2004. Consumer loans have been the major profit drivers of Turkish banks because of the high interest margins and credit card businesses drive considerable fee and commission income. So far the performance of consumer loans has been relatively good. By the end of 2004, NPL ratio of consumer loans is 0,7%. On the other hand, NPL ratio of credit cards is 4,6% for the sector.

**Signs of Distress in the Banking Sector: Turkish Experience**

Most of the financial soundness indicators are typically backward looking indicators; in other words, these indicators show deterioration when problems emerge. However, some financial soundness indicators are found to be banking crisis symptoms in the light of Turkish experience. These early warning signals help to predict stress in the banking sector. To better monitor risks and vulnerabilities in the financial system, it is important that more transparency through better disclosure has been achieved.

Rapid credit growth is among the most robust symptom of the stress in the banking sector. Rapid credit growth could mean lower lending standards on the part of the banks, i.e. loan applications are not adequately analyzed. However, in many emerging countries the level of financial intermediation is lower than in developed countries, so that rapid credit growth may be structural. So, the rapid credit growth alone is not enough to predict stress in the banking sector. In addition to rapid credit growth, a non-profitable banking sector, shrink in free capital, a sudden drop in deposits (especially in TL deposits) and an increase in net FX open position are signs of trouble while the sector is increasing its loans.

**Conclusions and Expectations**

The resilience of the Turkish financial system has improved largely because of the improved macroeconomic conditions, improvement in the balance sheets of the corporate and financial sectors. Lending to private customers is becoming to be the prime source of business. Improved capital position, asset quality, earnings and low level of FX mismatch are the main strengths of the Turkish banking system. A healthier competitive environment following the closure of weak banks and the restructuring of state banks and the better risk management and regulatory framework contribute to the resilience of the Turkish financial system. On the other hand; banks continue to carry high share of government securities and short-term deposit structure limits liquidity profile of banks and raises vulnerability to interest rate risk.

Considering the FX share of loan portfolio, it is important for debtors' to hedge their FX risks in the derivatives market. In addition to these, developments in external balance should be closely monitored for the soundness of the financial system.

The decision of EU Council about opening accession negotiations between EU and Turkey and the continued IMF support to the economic program are encouraging events for Turkish economy and the financial system. In fact, these factors have already started to produce their positive effects as increased sovereign creditworthiness and growing interest of foreign banks in banking sector and foreign direct investments. Basel II will be expected to increase the risk awareness and measurement. Also, with enhanced macroeconomic stability, the level of financial intermediation will continue to increase. On the other hand, it is beneficiary to monitor external threats, especially increasing energy prices and narrowing international liquidity, and to take measures beforehand. Also, the rapid credit growth is expected to test banking sector's credit management. Lastly, continuing high level of profitability might be a challenge for the Turkish banking sector in a low interest rate and competitive environment. Government securities still represent a high proportion of interest revenues and it seems that there is no longer possible to achieve this level of return from investing in government securities. This will force banks to change their asset composition towards loans, improve their non-interest earnings and tackle their costs more vigorously.

Thank you very much for your attention.

## Speech by Dr. Peter PRAET

## Executive Director-Bank of Belgium

### Introduction

In recent years, central banks have attached growing importance to the promotion of financial stability. Two main developments are at the root of this new priority.

First, the sheltered environment which, after the second world war, had governed financial

market operations for so many years now really belongs to history. Instead, the system is learning to live with bouts of instability, episodes of large scale failures, and asset price bubbles. This was probably an unavoidable price to pay for the introduction of deregulation and new technology, which have so greatly contributed to the emergence of a more open, competitive and globalised financial system. Nevertheless, the transition from the sheltered to the open environment has not been smooth; on the contrary, it has been fraught with difficulties.

Instability is nothing new for central banks. In the conduct of their monetary policy, they are used to facing large fluctuations in the real economy. Through those experiences, central banks have learned the hard lesson that their best means of encouraging a more stable growth path for the economy is to safeguard price stability.

At this level, there has been a second recent development. Central banks have become increasingly aware that monetary stability is no absolute guarantee of financial stability. True, stable prices help eliminate a major source of disturbances on financial markets by reducing the risks linked to an unexpected upsurge in inflation. But although this condition is necessary, it is not always sufficient. While inflation is now well contained in the real economy, the same could not be said for the financial markets, which regularly have to cope with very large fluctuations in asset prices. By helping to remove an important source of uncertainty and reduce the nominal level of interest rates, the credibility gained by central banks in their fight against inflation may also, paradoxically, have fostered the appetite for risks on financial markets.

As a consequence, central banks have been recently building up or strengthening the resources devoted to financial stability. In so doing, they have had to rethink their relationship with the authorities in charge of micro prudential supervision. Be it part of the central bank or separate from it, e.g. in an integrated financial service authority, this micro prudential supervision has to be closely coordinated with the surveillance of macroprudential stability by central banks.

This paper does not aim to elaborate on the practical organisation of this cooperation, nor to design the best model of banking supervision, as such a model is most probably elusive. Rather than focusing on the operational dimension, this paper will address the conceptual challenges facing central banks.

In the conduct of their monetary policy, central banks put forward the concept of a reference value for the inflation rate. The idea is to "anchor" expectation, the analysis being centred on the likely outcome. In this framework, central banks' annual reports or inflation reports quite naturally provide single figures or a narrow range of forecasts for inflation rates or GDP growth. No such headline figures are to be found in the Financial Stability Reviews nowadays published by most central banks. Instead the focus, here, is on the unlikely, the unexpected. The attention is shifting from the centre to the tails of the probability distribution. The analysts are not asked to forecast the future but, on the contrary, must be encouraged to "think the unthinkable". In short, and this is a theme which will run through the remainder of this paper, the key word is risk.

The first section reviews how this concept of risk is integrated into the three building blocks of financial stability. This will help to illustrate more precisely the role of central banks in this field. The second section examines the evolving role being performed by leverage in containing financial risk. While the primary objective of Basel I was to reinforce banks' solvency, the changing scope of banking activity has called for a more refined approach in the form of Basel II. The third section briefly considers some of the elements that could guide supervisory authorities in rethinking the concept of risk. This third part will try to pave the way for future conceptual analysis and policy developments in the area of financial stability.

**The three building blocks of financial stability**

The concept of risk is rooted in the three main areas covered by financial stability, i.e. prevention, surveillance and crisis management.

Prevention refers to the design of rules, regulations and standards. The framework governing this activity has changed significantly in recent years. In parallel with the internationalisation of financial markets, the rules are increasingly being designed from a multinational perspective. One of the best examples is the work of the Basel Committee on Banking Supervision. The revised framework for the calculation of banks' solvency requirements has been established by all the G10 countries in close consultation with the financial sector. At the EU level, the Financial Services Action Plan has, through a corpus of 42 directives, endeavoured to set up a harmonised set of rules applicable to all member countries.

At the same time, another trend is emerging ,towards a more diversified approach to prevention. As financial markets are changing very rapidly, it is no longer possible to rely exclusively on "hard laws". Regulation must also incorporate "soft laws" in the form of

recommendations and general principles. One of the major developments in this field is that supervisors try nowadays to import the best risk management practices from the private sector. This new approach has clearly shaped the new Basel II Accord. As those best practices are evolving very rapidly, this must be a dynamic process. Regulation is constantly trying to catch up with innovations. As a consequence, regulators have to adapt their methods continuously in order to keep up with the private sector.

The second building block is surveillance. This requires combining the macro and the micro monitoring of financial stability already mentioned in the introduction to this paper. Those two approaches in fact refer to two complementary components of financial risks. Micro prudential authorities try first and foremost to prevent individual failures, the primary objective being to protect depositors. Central banks endeavour to complement this control by surveillance of the global financial system in order to prevent systemic crises that could disrupt economic activity.

Those two dimensions are not always easy to distinguish. This is certainly the case in Belgium, where the four major banks represent about 80 p.c. of the market. In this context, it is rather difficult to exercise macroprudential surveillance without being close to the supervisory authorities. While the macroprudential approach does not require obtaining all the data that supervisors collect from individual banks, it is nevertheless greatly enhanced by good information on governance issues, or on major problems or frauds that may be detected through bank inspections. Central banks could obtain an intimate knowledge of what is going on in the banking sector through a candid dialogue with banks. But ideally, this should be complemented by close contacts with supervisory authorities. This is the framework adopted in Belgium through the institutional links established between the National Bank of Belgium and the Banking, Finance and Insurance Commission.

Even by combining good prevention with efficient surveillance, prudential authorities will never prevent all accidents in all circumstances. Crisis management must be the third building block of financial stability. When financial risks materialise on a large scale, the main question will be how to organise an orderly exit. The traditional debate on the role of central banks in such situations has become all the more complex with the development of cross-border banking.

This is an area where there is still a lot to do. One of the key points in the management of a crisis affecting very large institutions is to ensure the operational continuity of the critical

functions performed by such institutions while, at the same time, letting market discipline play its full role. This challenge is especially acute when a financial institution has become a key component of the market infrastructure. This is the case in Belgium, in particular, with the presence of Euroclear Bank, a major market infrastructure for payments and settlements, handling both national and international securities.

**Capital and structure of banking activities**

The most traditional and, at the same time, logical way to cover risk is through an adequate degree of capitalisation. A high level of own funds will reinforce the solvency of the institution; conversely, the leverage effect, achieved by reducing capital in proportion to debt, is associated with an increase in risk taking.

The required level of capital will depend on the kind of activities and the incentive structure. In a traditional bank, both of those factors would, a priori, be grounds for strong capitalisation. On the asset side, there are mainly illiquid assets originated by the bank and held to maturity. Those assets are financed by liquid liabilities, mostly collected from uninformed depositors. In these circumstances, there is what we could call a "high powered" incentive structure.

In traditional banking markets, managers cannot easily transfer their loans and are, in fact, stuck with the risk, so they have a big incentive to monitor those loans. When, at the same time, liabilities are liquid and in the hands of uninformed depositors, managers have a strong incentive to maintain an extremely good reputation.

In such a risky institution, we would expect leverage to be very low. This was indeed the case in the past, but during the last century we have observed a gradual erosion of the equity base of banks. At the beginning of the 20th century, the debt to equity ratio was close to 50 p.c. for the majority of banks, but it has since declined continuously from that high level.

Such a trend was sustainable as long as banks' activities were tightly regulated and subject to strict limitation. However, the deregulation of financial markets, already alluded to in the introduction, has simultaneously eased those constraints and increased competitive pressures. The objective of Basel I was to impose a minimum level of capital with the 8 percent capital requirement.

While Basel I tried to link this capital requirement to the risks actually incurred by banks, this link was rather loose. The rapid changes taking place in the financial markets has called for the more refined approach designed by Basel II.

Besides a mere change in the method of calculating solvency requirements, Basel II has introduced more far-reaching concepts which have already been mentioned, i.e. the necessity to import best practices in risk management (through the IRB approach of pillar I), the dialogue with prudential authorities (pillar II), and the role of market discipline (pillar III). It is those new devices, which will help authorities to keep pace with the changing scope of banking activities.

In terms of significance, the major evolution is that banks' risk profiles are changing much more rapidly than in the past. By using derivative products, financial institutions can quickly adapt their market and interest rate exposures and, increasingly, their credit risk positions. The technology is constantly improving and the markets for those risk transfers are expanding. This is impacting on the culture of supervision, as it is becoming increasingly inappropriate to monitor banks merely on the basis of quarterly balance sheet data. Banks' balance sheets are managed much more dynamically, and this clearly hampers data monitoring.

This first development has been all the more challenging since it was combined with a second one, i.e. the diversification of the risks endorsed by financial institutions through cross-sectoral conglomerations. The present model is far removed from the narrow bank model advocated by many analysts some year ago. In return for their privileged role in the collection of deposits and their close involvement in payment systems, those narrow banks would have limited their assets to liquid and low risk securities. In fact, markets have gone in the other direction with the development of very complex and diverse institutions, combining insurance, security services and traditional commercial banking.

While some firms have become more risky through the diversity of their activities, for others the risks are due more to their relative size in certain specialised segments, which makes them more and more akin to market infrastructures. For such firms, the concepts of expected and unexpected loss as defined by Basel II are not sufficient. The real risks relate to business continuity and the occurrence of the most extreme events.

While banks are forming conglomerates, which combine various activities and their associated risks, they are at the same time transferring certain activities or risks to other players through two specific developments.

One is the outsourcing of some critical activities, such as IT or even part of the risk management, e.g. back-office functions. In such an environment, it becomes quite difficult to

define the extent of a bank's control over its activities and, by the same token, the appropriate scope of the supervisors' monitoring activities.

The second development is the transfer of more financial risks to the final investor. This does not mean that financial institutions no longer assume any responsibility when selling risks to customers. On the contrary, they still have an important fiduciary role and have to remain fully aware of the potential consequences, most notably in terms of their reputation, of mis-selling products, giving bad advice or neglecting their duty of care.

**The way forward in the approach to risk**

How should supervisory authorities react to these various changes? They need to keep three main issues in mind when upgrading their risk monitoring and management systems.

The first essential is to keep open the discussion on the very notion of risk. All the instruments, procedures and models currently being designed rely on a probabilistic concept of risk. But that single approach could be questioned by introducing a distinction between risk and uncertainty, in accordance with the typology of Frank Knight. While risks are associated with events for which a kind of probabilistic distribution curve can be drawn with a confidence interval, uncertainties refer to situations for which it is very difficult to assess probabilities. This last kind of situation corresponds more closely to business continuity issues.

The second question to address is the nature of the financial structure carrying the risks. The same portfolio of credit or market risks can be endorsed by a bank, an insurance company, a hedge fund, a mutual fund or even a special purpose vehicle (SPV), such as a collateralised debt obligation (CDO). It is important to have a good understanding of the structure of the corresponding liabilities of these various devices. Retail depositors, subscribers to life insurance contracts or investors in mutual funds, hedge funds or SPVs all have different expectations and different protection and information requirements. Yet, superficially, the balance sheets can look rather similar. As an example, a CDO composed, on the asset side, of a portfolio of bonds and financed, on the liability side, by AAA, mezzanine and equity tranches looks very much like a bank's balance sheet. Indeed, a bank also finances a portfolio of credit risks through a combination of highly secure retail deposits, long term bonds and own funds. Supervisors need to have a very good understanding of the differences in the balance sheet structure of the various institutions carrying financial risks.

The third issue is the nature of the governance system which controls risk taking and risk management. It is becoming increasingly difficult for supervisors to track the risks endorsed by financial institutions. As already mentioned, a bank's risk profile can change very rapidly and the internal models put in place to control the risks are increasingly complex. Faced with this challenge, supervisors should focus more closely on the governance of risk in private institutions.

In fact, this issue boils down to finding the right balance between two kinds of asymmetric information. Banks have superior information on their clients. So they are normally able to get a better estimate of their portfolio risk than their regulator. This is the main rationale behind the use of individual banks' internal risk models by Basel II. However, such an approach makes supervisors more sensitive to a second source of asymmetry in information, i.e. the risk preference of bank managers and shareholders. Supervisors have to protect themselves against this second source of vulnerability. They could try to maintain close supervision over the risk management methods put in place by financial institutions. This is the purpose of the validation process. However, this function is quite technical and complex and places heavy pressure on scarce supervisory resources. An alternative - or rather, complementary approach is to check the integrity of the rating process within the institution.

**Conclusion**

Among the many challenges facing supervisors and central banks, four main issues stand out.

Firstly, it is becoming increasingly difficult for authorities as well as for markets to track the circulation of risks. Banks can nowadays easily shed certain elements of a loan portfolio. But this is not necessarily the end of the story. Since hedge funds acquiring those elements could themselves leverage their positions by borrowing from banks, the latter could very well end up financing the very elements of the portfolios that they have previously securitised in the markets.

A second issue is the possible excessive reliance of supervisors or banks' top managers on the results of models that have not been sufficiently tested. Faced with that problem, supervisors must maintain a close dialogue not only with the model builders but also with the managers of the institution. They need to acquire a good understanding of the general organisation of risk management procedures and the institution's governance structure.

A third challenge is that risk management is still highly compartmentalised. Supervisors calculate separately how much capital is needed for credit risk, interest rate risk or other

market risks. However, the total risk is not equal to the sum of the parts. It is necessary to take into account the interactions, interdependencies or interrelationships between the various risks. In other words, tools need to be designed to calculate how much capital is required for the integrated risk.

The last issue is how to deal with the tail risk. By this, I really mean the tail of the tail, the part of the distribution curve, which falls outside the limit of even the most conservative Value-at-Risk intervals. It is in those tail events that we find the very rare occurrence of huge losses. It is there that risk meets uncertainty. It is there that central banks still have a very important role to play.

**ANNEX**

- Paper by Prof. Richard Herring, Jacob Safra Professor of International Banking
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- Paper by Dr. Gerard CAPRIO, Jr., Director, Financial Sector Operations and Policy Department-World Bank (co-written by James R. Barth and Ross Levine)

# How Can the Invisible Hand Strengthen Prudential Supervision?*

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## 1.Introduction

The Basel Committee has placed market discipline in a symmetrical position, alongside minimum capital standards and the supervisory review process, as one of three complementary pillars in the proposed new capital adequacy framework (Basel II). The reality of the proposal, however, falls short of this rhetorical symmetry. The space allocated to market discipline in the most recent restatement of the proposal (Basel Committee 2003) is less than a tenth of the overall proposal. (Pillar 2, the supervisory review process, fares only marginally better.) Moreover, the attention to market discipline is, at best, incomplete. The proposal focuses exclusively on disclosure, which is arguably a necessary, but surely not a sufficient condition for effective market discipline. Nonetheless, a properly formulated market discipline policy, strengthened by an appropriate supervisory review process, holds the promise of greatly enhancing the safety and soundness of the financial system without imposing the heavy compliance costs inherent in the complex capital charges laid out under Pillar 1.

In this paper I will examine the case for market discipline in principle and consider concerns raised about the operation of market discipline in practice and how they could be addressed. Next I will consider the Pillar 3 proposal to improve disclosure. Finally, I will conclude with a consideration of how enhanced market discipline could achieve the Basel Committee's (BIS 2001, p.1) stated objective of "strong incentives on banks to conduct their business in a safe, sound and efficient manner including an incentive to maintain a strong capital base as a cushion against potential future losses arising from risk exposures."

## 2. The Case for Market Discipline vs. Official Discipline

Although I will later argue that market discipline and official regulation and supervision can and should be complementary policies, I will first consider the case in which they are alternative ways of achieving financial stability. In order to make the best possible case for market discipline I will make several very strong (and demonstrably dubious) assumptions. These will be relaxed in the following section when we consider the operation of market discipline in practice.

### 2.1. Conditions for Ideal Effective Market Discipline

First, assume banks have transparent risk and capital positions so that it is easy for market participants to evaluate the adequacy of capital relative to risk exposures for each bank. Second, assume that market participants have the incentive to process this information

because they believe they will suffer loss in the event that a bank should default. Third, assume that market participants are able to process this information to achieve unbiased estimates of each bank's probability of default and employ these estimates to price claims to reflect each bank's probability of default[17], which are adjusted as soon as the bank's probability of default changes. Fourth, assume that banks respond to an increase in the price and/or a reduction in the availability of funds by reducing exposures to risk or increasing capital.[18] Under such circumstances banks will be deterred from taking imprudent actions by market discipline exerted through an increase in the price or reduction in the quantity of funds. Indeed, the anticipation of an adverse market response may often be sufficient to deter imprudent behavior.

2.2. Direct and Indirect Market Discipline

In principle, any claimant on the bank who satisfies the first three assumptions may exercise effective market discipline. This might include depositors, bondholders and shareholders as well as counterparties of the bank in OTC markets. Kwast et al (1999) describe these price and quantity sanctions on the bank as "direct influence." The disciplinary influence of these transactions, however, may extend beyond the pricing of a particular transaction with the bank.

Even though they do not conduct direct transactions with the bank, other market participants also exercise influence over the bank and may rely to some extent on observations of market prices or quantity sanctions in evaluating the bank. For example, the financial press, securities analysts, ratings agencies, and the supervisory authorities may all make use of the prices in primary or secondary markets to assess the prospects of a bank. Kwast et al (1999) describe this as "indirect influence" because it is exercised by an entity that was not party to the original transaction. Indirect influence may be even more powerful than direct influence. For example, a fall in share prices on the secondary market will affect managers to the extent that their compensation is tied to share prices and may even lead to a hostile takeover bid.[19] And, the supervisory authorities could initiate prompt corrective action measures in response to market signals.

[17] The first four assumptions will assure the existence of what Bliss and Flannery (2002) call market monitoring.
[18] This corresponds to the Bliss and Flannery (2002) notion of market influence. It is difficult to measure because the anticipation of an adverse market res2onse should be an important disciplinary force that will dissuade management from initiating imprudent action. Of course, actions not taken cannot be observed. See Hamalainen, Hall and Howcroft (2001) for a far-ranging survey of market discipline.
[19] Hoggarth, Jackson and Nier (2003) cite the case of Nat West, which was subject to a takeover bid when the report of relatively modest shortfall in profits because of an error in pricing options led to a fall in shareholder prices and a successful takeover bid. In most markets, regulatory inhibitions stifle the market for corporate control which could, otherwise, be a very powerful source of market discipline.

Of course, mechanisms of market discipline can extend beyond price and quantity sanctions that are the usual object of analysis. For example, bondholders may negotiate covenants designed to constrain the bank's leverage, ownership structures, dividend policy or asset substitution possibilities and counterparties may demand additional collateral. Similarly, shareholders, through their ability to elect the board of directors, have a voice in corporate governance and, *in extremis*, may choose to wrest corporate control from the incumbent management team.

Much of the power of market discipline derives from the ability of the price system to aggregate information from a diversity of sources and price transactions at which funds are allocated and risks are exchanged.[20] But an efficient price system presumes a considerable amount of financial infrastructure that should not be taken for granted. For example, it requires reliable accounting practices that reflect the true state of a bank's balance sheet and risk exposures and timely disclosure of this information to market participants. In addition, it requires a legal framework and judicial system that will enforce financial contracts with reasonable predictability and without undue delay

2.3. Market Discipline versus Official Supervision.

This ideal system of market discipline has many attractive features relative to the kind of official oversight that most countries have devised. Market discipline is forward-looking and inherently flexible and adaptive. Market surveillance is continuous, impersonal and non-bureaucratic. Motivated by the objective of maximizing risk-adjusted profits, market participants have strong incentives to draw information from whatever sources they find relevant and process the information using whatever model seems appropriate to price risk taking properly and to withdraw funding promptly when a bank's risk profile seems excessive relative to its ability to bear loss.

In contrast, official oversight is usually rule-based, episodic, bureaucratic and slow to change. This is particularly troublesome in a rapidly evolving financial environment characterized by financial innovations. As Evanoff and Wall (2001) observe supervisors can acquire access to proprietary data, but they are more constrained by law, regulation and data availability to keep models constant for long periods. Official discipline tends to be more intrusive and burdensome. Official sanctions are difficult to fine tune to small variations in risk-taking, giving rise to significant compliance costs for regulated firms and potentially important distortions in the allocation of financial capital and real resources.

[20] Andrew Crockett (2001) made this point eloquently in his lecture on the distinction between microprudential and macroprudential objectives.

Moreover, efforts to shift from traditional, rule-based regulation and supervision to more flexible, market-mimicking regulation may impose even greater compliance costs. One aim of the Pillar 1 capital charges is to make capital adequacy regulation more sensitive to market judgments about risk as embodied in external and internal ratings of default risk. Leaving aside the important questions of whether the officials have gotten the absolute and relative risk weights right (Altman and Saunders ( 2001)), the enormous complexity of the Pillar 1 capital charges raises a serious question about whether efforts to make regulation and regulatory sanctions more risk sensitive justify the additional compliance costs.

Regulators and supervisors have an objective function that differs from that of most market participants. The precise nature of that objective function is subject to dispute although it certainly is more complicated than the maximization of risk-adjusted profits. From a public interest perspective, officials are assumed to take a systemic view of banking problems and act to minimize spillover costs to the rest of the economy. Regulation and supervision are intended to cause banks to change their preferred behavior to minimize the externalities of banking panics. From the perspective of public choice theory, however, several less public-spirited motives may influence regulatory behavior even though official actions may be cloaked in the rhetoric of the public interest. Public choice theory views regulation as the outcome of efforts of interest groups, politicians and bureaucrats to use the political process for their own personal benefit taking advantage of the significant agency problems between the taxpayer principals and regulator agents (Kane 2001 and 2002).

In order to guard against the arbitrary use of regulatory and supervisory power, most countries subject disciplinary decisions by officials to some sort of judicial or administrative review. This places a burden on official oversight that does not encumber market discipline. In order to discipline a bank, a supervisor must not only know that a bank is taking excessive risk, but also the supervisor must be able to prove it to the satisfaction of the reviewing body -- perhaps beyond a reasonable doubt. This leads to a natural tendency to delay disciplinary measures until much of the damage from excessive risk-taking has already been done and impedes the deployment of regulatory sanctions that are finely calibrated to small changes in risk-taking. It also leads officials to react mainly to what has already happened (and is, therefore, objectively verifiable) rather than acting on the basis of expectations about what may happen (which are inherently subjective and disputable). As Lang and Robertson (2000) have noted, "While bank regulators have fairly broad authority to invoke sanctions, they generally prefer to do so in response to a clear violation of an objective rule or standard rather than because of a subjective assessment that bank risk has increased."

One of the principal merits of market discipline is that bank directors and managers are faced with the burden of proving to the market that the bank *is not* taking excessive risks rather than subjecting officials to the burden of proving, in a review process, that the bank *is* taking excessive risks. This surely places the burden where it belongs and facilitates better corporate governance by making clear that the directors and managers of a bank are responsible for its risk exposures and ability to bear loss, not the regulatory and supervisory authorities.

In summary, ideal market discipline can ensure that bank directors and managers take full account of the bank's risk exposures in operating the bank. Impersonal market forces, unencumbered by the bureaucratic processes that characterize the supervisory and regulatory process, should be able to monitor the insolvency risk of banks more efficiently and discipline banks that take excessive risks more promptly than the official sector. Moreover, the substitution of market discipline for official discipline would eliminate compliance costs, which are often heavy, and would facilitate a more efficient allocation of resources.

2.4. The Contemporary Example of New Zealand

One country has reduced bank regulation to a bare minimum and replaced conventional banking supervision with a regime of market discipline. New Zealand began to formulate this new approach in 1991 (at a time when most New Zealand banks were locally owned) because of a concern over rising compliance costs and regulatory distortions in the allocation of resources.[21] Moreover, they were skeptical that conventional regulation and supervision would actually succeed in producing a sound and efficient financial system. Indeed, they harbored a suspicion that intrusive approaches to regulation and supervision could undermine the soundness of the banking system by reducing incentives for bank directors and managers to make prudent judgments about risk exposures and capital adequacy. Finally, they were concerned that if a bank should fail at a time when bank supervisors had access to information regarding bank soundness that was not shared with the market, political pressures for a taxpayer bailout would be harder to resist.

New Zealand began by making clear that taxpayers were not prepared to bailout a failing bank. All such assertions by officials are subject to significant skepticism because they appear to suffer from a time-inconsistency problem. While governments have a clear interest in setting such a policy *ex ante*, before a crisis happens in order to minimize moral hazard, governments have often found it expedient to provide a bailout *ex post*, after the crisis

[21] The following paragraphs on the New Zealand model are based on Brash (1997).

has happened. But in the context of the other changes in regulatory and supervisory policy in New Zealand, market participants are likely to have taken the government at least somewhat seriously.

In order to provide the transparency necessary to enable market participants to monitor and discipline risk taking, New Zealand introduced a new disclosure regime that involved both a Key Information Summary for depositors and a much more detailed Quarterly General Disclosure Statement. Not only did these new disclosures produce much more information about the current condition and risk exposures of each institution, but they also included attestations by the directors of the institution concerning the compliance of the institution with prudential requirements, the adequacy of systems to monitor and control risks, the effectiveness of the implementation of risk management systems, whether exposures to related counterparties were contrary to the interests of the institution, and whether disclosures were false or misleading. If any of these attestations were to be found false, the directors who signed the attestations would be subject to substantial criminal and civil penalties.

The intent was not only to ensure accurate disclosure, but also to provide the market with greater capacity to hold directors and managers accountable for the sound management of the bank. Although the regime has not yet been tested by a sharp downturn, the former Governor of the Bank of New Zealand, Donald Brash, has expressed satisfaction with the results. Banks are providing the market with broader, timelier information and stronger banks are benefiting from lower operating costs, while weaker banks are experiencing pressures to reduce their risk exposures or increase their capacity to bear loss. Moreover, it appears that the threat of bad publicity surrounding the disclosure of bad news has been a more potent form of discipline than the standard supervisory sanctions for breaches of regulatory requirements.

Although New Zealand has many special characteristics[22] that set it apart from most other countries, the experience does demonstrate that under some circumstances market discipline can be an effective alternative to conventional regulation and supervision.

## 3.0. Concerns about Market Discipline in Practice

It is convenient to organize the concerns about the way market discipline works in practice with regard to the four conditions for ideal market discipline because most concerns can be related to doubts about whether one or more of the conditions for ideal market discipline are met.

[22] For example, most banks in New Zealand are now foreign owned. In addition, New Zealand has not had deposit insurance nor a tradition of placing a priority on depositor protection as an objective of prudential policy.

3.1. Lack of transparency

Concerns about the transparency of bank operations and risk positions find support in the fundamental theory about the role of banks. As providers of finance to borrowers who cannot gain access to the securities markets, banks specialize in holding illiquid, imperfectly marketable claims that are very difficult for outsiders to value. In addition, the increasing importance of trading and especially the development of the OTC derivatives business, has raised concerns that even if one could obtain a true snapshot of a bank's condition, it could change drastically within hours. Morgan (2000) has shown that these theoretical concerns about the transparency of bank risk-taking have empirical validity. His study of bond ratings has shown that the ratings agencies disagree more about ratings for banks (and insurance companies) than for any other kind of firm.

Disclosure is incomplete as evidenced by the fact that in nearly every country (but New Zealand), regulators and supervisors require the disclosure of considerable information of presumed relevance to the current and future condition of the bank that is not shared with the market. Moreover, the data available to the market is backward looking and released only with a lag – even though some of the most sophisticated institutions are, in effect, marking themselves to market every day for internal management purposes.

Accounting conventions often seem to conceal as much as they reveal about the current and future condition of the bank. In many countries bank accounting is a peculiar mix of accrual, historical cost and mark-to-market accounting that can facilitate income smoothing and, indeed, the concealment of deteriorating credit quality through ever greening.[23] Moreover, the distinction between the banking book and trading book, based not on the objectively verifiable nature of the financial instrument, but upon the unobservable intent of bank management, invites "gains trading" or the selective realization of capital gains and deferral of the recognition of capital losses.[24]

One way to address these concerns is through mandatory disclosure of information concerning a bank's current condition and prospects. This is the approach taken by the Basel Committee. We will discuss that policy and disclosure more generally in section 4. Of course, mandatory disclosure requirements are likely to be a second-best approach since they are an attempt by officials to anticipate what the market should want to know about an

[23] Evergreening is the practice of making additional, negative net present value loans to borrowers who are unable to repay in order to avoid the necessity of reporting a loan as non-performing. Of course, not all loans to borrowers who are experiencing repayment difficulties are negative net present value (Herring (1989)). That's why the practice is so difficult for outsiders to monitor.

[24] See Carey (1993).

institution, moderated by a sense of what is politically acceptable to banks. Disclosure requirements tend to be rigid, slow to adapt to market changes and may produce considerable, irrelevant information and, therefore, impose unnecessary compliance costs on banks.

Disclosures demanded by the market, on the other hand, are likely to be more efficient and more relevant since they will address precisely the information market participants believe they need to evaluate the bank. And so, it is useful to ask why market demand does not elicit sufficient information. One possibility is that market participants feel protected by the safety net in varying degrees and thus do not press their demands for adequate information. Similarly, under these conditions, banks would not perceive any clear advantage in providing such information because it would have little, if any impact on their operating costs. This leads to the next concern about market discipline in practice – that market participants may lack a compelling motive to discipline banks.

2.2. Inadequate Incentives to Discipline Banks

For market discipline to be an effective force for controlling a bank's risk of insolvency, at least some market participants must have an incentive to demand information and monitor and evaluate that bank's probability of default. Fear of loss is perhaps the most powerful means of motivating market participants to price claims on the bank to compensate for the expected probability of default. In principle, fear of loss is relevant for all holders of claims on a bank, but in practice the incentive has often been dulled for most creditors of large, internationally active banks by policies of official support aimed at safeguarding financial stability.

Explicit deposit insurance relieves insured depositors of the fear of loss.[25] Moreover, the enhanced prudential supervision required to protect the deposit insurer may convey the impression that official oversight has been substituted for market oversight. Indeed, on-site bank examination and the practice of sharing confidential information concerning the soundness of the bank with official supervisors creates an impression that official supervision is the first-line of defense against imprudent risk taking and implies a quasi-official certification of the soundness of a bank. This may add to political pressures to provide broader assistance that extends beyond explicit deposit insurance in the event an institution experiences financial distress. In many countries officials have often provided what amounts to implicit insurance for most or all creditors through forbearance of prudential rules, liberal discount window lending, guarantees, official capital infusions, or the arrangement of assisted

[25] Unless deposit insurance is structured to include a deductible or an element of coinsurance and the authorities employ resolution techniques that actually may impose losses on depositors.

mergers in which an acquiring institution purchases some of the assets and assumes all of the liabilities of a faltering institution. Direct official support for holders of equity claims is rare (but not unknown).

To the extent that claimants on the bank expect to be protected by an official safety net in the event that the bank falters, the potentially strong connection between a bank's portfolio risk and leverage choices and funding costs is weakened. The powerful motivation for market discipline provided by the fear of loss is weakened. Fitch, the ratings agency, has attempted to assess the likelihood that individual banks would receive official support should this become necessary. As the analysts at Fitch observe (Andrews, Moss and Marshall (2002, p. 1) "…whether or not banks default on their financial commitments is often a function not only of their intrinsic creditworthiness but also of the readiness and capacity of some outside agency, usually the state, either to support them by some form or subsidy, perhaps based on a guarantee, and/or to rescue them it they get into trouble." Hoggarth, Jackson and Nier (2003) have examined the correlation between the Fitch Support Ratings and the average capital ratio (the leverage component of overall risk) and found a strong negative correlation, which is consistent with the hypothesis that a greater likelihood of official support reduces the force of market discipline on bank risk taking.

In order to restore an incentive for market discipline, it is essential that at least some uninsured counterparties of the bank perceive a risk of loss. Given the time inconsistency issue referred to above, officials face a challenge in making a credible commitment not to bailout large institutions that may be considered systemically important. The US attempted to achieve this with the Federal Deposit Insurance Corporation Improvement Act reforms in 1991. In particular, Congress instituted a system of prompt corrective action to enforce capital requirements and remove the option of forbearance. In addition, the Federal Deposit Insurance Corporation is mandated to choose the method of resolution that is least costly to the deposit insurance fund of all possible methods for meeting the FDIC's obligation to protect insured depositors, which will normally forestall bailouts of uninsured creditors.

The credibility of these restrictions is enhanced by an explicit provision for a systemic risk exception that is limited in scope. The systemic risk exception requires concurrence by two-thirds of the Federal Reserve Board, two-thirds of the FDIC Board, and the Secretary of the Treasury in consultation with the President that conformance with least-cost resolution would "have serious adverse effects on economic conditions or financial activity." Only then can the FDIC depart from the least cost resolution technique. This decision is subject to review by the Comptroller General who will make a report to Congress. Since any losses to

the deposit insurance fund will be recovered by a special assessment on all depository institutions if the systemic risk exception has been invoked, the banking industry is unlikely to press for frequent use of the systemic risk exception. Regulators are quick to add that even if the systemic risk exception is employed, there should be no expectation that uninsured creditors will be made whole. FDICIA requires only that the uninsured creditors be made no worse off than if the bank were liquidated. Since the FDIC has the authority to create a bridge bank it has the capability of keeping an institution in operation so that it can be wound down in an orderly way, even though shareholders lose their total investment, management is replaced and uninsured depositors suffer losses.[26]

Flannery and Rangan (2002) provide evidence that this change in policy in the United States may have succeeded in strengthening market discipline on US bank holding companies. They attribute the substantial build-up in capital at large US banks, well above regulatory minimums, to enhanced incentives to monitor and price default risk. The new Fitch Support Ratings for US banks are consistent with this hypothesis as well. The analysts at Fitch have assigned even the largest US banks the lowest Support Rating indicating, "Support from an outside source is possible, but cannot be relied upon."

### 3.3. Biased prices and destabilizing flows

Assuming that market participants have sufficient incentives to discipline banks, some observers have raised concerns about the quality of market discipline in practice. In the face of growing evidence that market prices reflect actual or prospective bank risk to some extent,[27] attention has shifted to potential errors in such prices.

Some of these concerns involve whether default risk is factored into market prices appropriately. Other concerns involve the disruptive nature of quantity sanctions that are often deployed instead of price sanctions.

Three kinds of questions center around market prices: (1) Do market prices reflect default risk correctly? (2) Do they respond to changes in risk-taking ex ante? (3) Do they undermine the stability of the banking system?

#### 3.3.1. Pricing errors

The first concern about market prices is that even if they accurately reflect the probability that a bank will default, they will reflect only the anticipated, private costs of

[26] The depositor preference provisions of the Omnibus Budge Reconciliation Act of 1993 also provided a strong incentive for foreign depositors to exercise market discipline over US banks since they will stand behind all US depositors, both insured and uninsured, in the event of a default.

[27] See, for example, Flannery (1998), Evanoff and Wall (2001), Swidler and Wilcox (2002) and the references therein for evidence regarding US banks. See Sironi (2003), Nier and Baumann (2003) and Hoggarth, Jackson and Nier (2003) for evidence regarding European banks.

default, not the social costs. Market participants lack incentives to take a systemic view of the probability that a bank may default and therefore may be willing to accept a higher probability of default than is socially optimal. While this concern is part of the fundamental rationale for prudential supervision, its contemporary relevance is open to doubt. Currently most major US banks maintain capital ratios that are well above regulatory minimums, indeed, even above the standards necessary to earn a regulatory designation of "well capitalized." Thus it appears that the market demands a higher degree of safety than the regulators require.

Option pricing theory (Merton 1974) implies that both bond and equity prices incorporate market expectations of the probability of default. Indeed, in a frictionless world, with complete markets, theses probabilities would be identical. But comparisons of implicit default probabilities extracted from bond prices and equity prices are far from perfectly correlated (Bliss and Flannery 2002). Indeed, Kwast and Hancock (2001) have shown that inferences about the probability of default based on debt instruments issued by a particular bank may differ from instrument to instrument or across different data series for the same instrument.

Extraction of default probabilities from equity prices requires several very strong assumptions that may not always hold. On the surface, the process would appear to be much more straightforward for debt instruments. Unfortunately, several factors in addition to the probability of default affect yields and spreads in bond markets. Elton, Gruber et al (2001) have examined spreads in rates between (non-financial) corporate and government bonds across rating classes and attempted to identify the portion that can be accounted for by expected default loss, the tax premium (which arises because corporate bonds are subject to state and local taxes while US Treasury obligations are not), and a risk premium to compensate investors for the higher systematic risk associated with corporate debt. While default risk is significant, it accounts for a smaller proportion of the spread than the tax premium and risk premium.

Similarly, Collin-Dufresne, Goldstein, & Martin (2001) attempted to explain *changes* in spreads based on proxies for credit risk and liquidity. They find default risk explains only about one quarter of the variations in the changes in spreads

. While liquidity factors explain a bit more of the remaining variation, most of it is explained by a component that is unrelated to firm-specific or macroeconomic factors.

Like regulatory models to identify problem banks (Evanoff and Wall 2001), market price signals (and the techniques used to extract default probabilities from them) are subject to

both Type I errors (prices incorporate a default premium that is too high relative to the true probability of default) and Type II errors (prices incorporate a default premium that is too low relative to the true probability of default). Type I errors can impose unwarranted costs on banks and lead to misguided regulatory actions. But Type II errors can also lead to a misallocation of financial and real capital. Flannery (2001) has observed that optimal supervisory policy will minimize the social costs of anticipated Type I and Type II errors. Unfortunately, we are long way from being able to specify the social costs or the respective sizes of the two kinds of errors with any precision.

3.3.2. Responses to changes in *ex ante* risk taking

In section 2 we argued that ideal market discipline responds to increases in risk *ex ante*, before the dangers of excessive risk taking have been realized, and rewards banks promptly for reductions in risk. In practice, however, the market response to increased risk is too often *ex post*, after losses have occurred rather than *ex ante*, when riskier positions are taken. (This may be a consequence of the first concern, inadequate *ex ante* disclosure of risk exposures. But it may sometimes be the reaction to an unanticipated risk.)

Similarly, once established, risk premiums tend to be sticky. When default premiums ratchet up, it takes a very long time for them to return to normal levels even though a bank may take dramatic corrective action. This is observable in interbank markets with regard to the phenomenon of tiering.[28] When concerns arise regarding the creditworthiness of a particular bank or group of banks, these banks will be obliged to pay a higher spread over the base rate. Typically, banks will remain in that tier above the benchmark rate for a very long time.

While sticky, *ex post* sanctions are less efficient in disciplining bank risk taking than *ex ante* sanctions that can influence bank decisions before losses are incurred, they are not without value. The anticipation of sticky, *ex post* sanctions by banks may also be a powerful deterrent to imprudent risk taking *ex ante*.

3.3.3. Destabilizing flows

The main concern about market discipline was recently articulated by Arnold Schilder (2002, p. 4), Chairman of the Accounting Task Force of the Basel Committee on Banking Supervision: "Once the risks start to materialize, and the market is aware that the bank's position is weakened, it may react excessively. Banks may then be subjected to high interest rates or ultimately be excluded from the market, possibly even regardless of their

[28] In the late 1990s Japanese banks were subject to tiering in international interbank markets because of concerns about their solvency.

performance. This could spread to other banks and jeopardize the stability of the banking system." The concern is less that market discipline won't work, than that it will work too disruptively, with potentially heavy spillover costs for the banking system.

Some observers find support for this view in the history of banking in the United States in the nineteenth century. New Zealand is, of course, not the first country to employ a regime of market discipline. During the nineteenth century, banks in the US and many other countries were disciplined mainly by the market, with government oversight limited basically to the chartering function. In some respects the system functioned well. Brokers and other arbitrageurs established discounts on the notes of individual banks that broadly reflected default probabilities. Banks, in turn, competed in building reputation and capital strength. Indeed, banks advertised and maintained very high capital ratios. But the system was also plagued by periodic banking panics and bank failures that amplified shocks to the real economy. Whether these panics were a consequence of the inherent defects of the regime of market discipline or a reflection of the inflexibility of the supply of currency is debatable. But the subsequent erection of the various components of the safety net is based on the premise that market discipline was at least partly to blame.

These concerns apply less to market discipline through price sanctions than to market discipline through quantity sanctions. The fundamental problem is that banks find it costly to reduce the scale of their balance sheets rapidly and so a herd-like withdrawal of funding in response to bad news may cause such substantial losses that even a well-capitalized institution may be forced to default. Short-term financial claims give the holder the opportunity to run in the event that concerns arise regarding a bank's solvency. And once a run begins, all others who can redeem their claims at face value have an incentive to do so. Thus quantity sanctions tend to be like a binary switch that is turned either off or on. This is market discipline at work, but it is discipline so harsh that it is likely to be lethal rather than instructive.[29]

In contrast, price discipline tends to be less disruptive and more like a rheostat. If a bank is forced to pay a higher price for its funds, its profits will suffer, but it should have time to make appropriate adjustments in its leverage and scale of operation or risk exposures without incurring a fire-sale loss on forced liquidation of its assets. Price sanctions are administered mainly through long-term claims.

These considerations suggest that market discipline is least likely to be destabilizing if it is channeled through holders of long-term claims on the bank – either equity or long-term,

[29] Still one should not dismiss the demonstration effect altogether. Napoleon's notion of a hanging an admiral "pour encourager les autres," was probably an effective, if draconian, teaching tool.

subordinated debt – who cannot impose quantity sanctions. As noted earlier, there are theoretical reasons to believe that the prices of both equity and debt contain information about the market expectations regarding the probability of default. Although the interpretation of either becomes difficult when a bank is very near the point of default because the value of put option implicit in the price of equity rises sharply so that the value of equity may increase with an increase in the volatility of the bank's assets and deep discount, low quality bonds tend to be priced more like equity. Nonetheless, either equity prices or subordinated debt should yield useful information until the point at which default is perceived to be imminent.

Most attention[30] has been focused on subordinated debt as a preferred channel of market discipline, but the liquidity of equity markets is generally substantially more robust than that of secondary debt markets and so equity prices may be more informative. Both may provide useful information. Mandatory, periodic issues of subordinated debt could provide a powerful source of direct discipline, while equity prices may be a more reliable source of information for indirect discipline.[31]

3.4. Market discipline may not influence bank behavior

The preceding section has considered circumstances in which market discipline may be destabilizing. In this section we consider the opposite extreme, the circumstances when it may be ineffectual. Berger (1991) raised this issue when he noted that it was important not only to assess whether the prices of liabilities reflected risk perceptions, but also whether such price changes influenced bank behavior.

This problem is most likely to arise when a bank feels securely protected by the safety net, but the market perceives that some categories of claims may be subject to loss. If the bank has easy access to insured deposits, then any increase in default premiums demanded on uninsured liabilities (or equity) may simply lead to a substitution of insured deposits rather than a reduction in portfolio risk or leverage.

The concern is also raised with regard to direct market discipline if new issues of securities are a relatively small component of the cost of funds. Under such circumstances, even if market prices fully reflect expected probabilities of default, they may have so little impact on the bank's average cost of funds that the disciplinary impact is negligible. The concept of indirect market discipline, however, opens the range of possibilities for increases

[30] See, for example, Horvitz (1986), Evanoff and Wall (2000), and U.S. Shadow Financial Regulatory Committee (2000). Herring (2003) contains an analysis of the Shadow proposal in the context of a broader assessment of Basel II.

[31] See Bank for International Settlements (August 2003) for a recent survey of subordinated debt and equity markets in the member countries of the Basel Committee.

in the default premium to influence bank behavior even if the bank makes no new issues of securities at the less favorable price. As noted above, equity prices may have a direct impact on bank management even if the bank issues no new shares. Similarly, to the extent that the financial press, security analysts, ratings agencies and the supervisory authorities monitor secondary market prices to assess the current condition and prospects for a bank, indirect market discipline may be quite powerful. Indeed, if the supervisory authorities wish to increase the influence of market discipline they can do so quite readily by linking supervisory and regulatory sanctions to secondary debt or equity prices.

More broadly, most of the concerns about the operation of market discipline in practice can be dealt with by suitable changes in regulation or supervision. If market participants lack sufficient information to price default risk, then disclosure can be improved. If market participants lack incentive to price default risk because they expect to be protected by the safety net, then the supervisory authorities need to develop ways to deal with systemic risk without protecting some categories of market participants, particularly holders of subordinated debt and equity. If quantity sanctions by market participants are thought to be too destabilizing, then market discipline can be channeled through holders of long-term claims who cannot engage in herd-like behavior. The Basel Committee's efforts to enhance market discipline, however, focus exclusively on improving disclosure and so we will turn to disclosure policy in the next section.

## 4.0. Disclosure policy for internationally active banks

The rationale for mandatory disclosure has both an efficiency and an equity dimension. Since the efficiency of the allocation of resources depends critically on the quality of information available to those allocating resources, there is a presumption that disclosure of better information will enable investors to make better decisions. In addition, since information tends to be unevenly distributed between insiders and outsiders, disclosure helps protect insiders from being taken advantage of by better-informed insiders. (This should also increase the willingness of outsiders to supply funds.)

Banks have traditionally been subject to lower disclosure requirements than other firms. This is partly because official oversight has substituted for market oversight and rendered it unnecessary. Moreover, supervisors (who derive much of their power from access to information not shared with the market) often argue that fuller disclosure of banking data may prove destabilizing because banks are especially vulnerable to a loss of confidence. Indeed, until recently several countries encouraged banks to maintain hidden reserves that could be used to smooth income in times of stress in order to reassure market participants. A

series of banking crises over the last twenty years, however, has raised serious questions about the adequacy of official oversight. Moreover, since bad news cannot be suppressed indefinitely, it is at least arguable that prompter disclosure of even damaging information could help stabilize the system by discouraging the build-up of excessive exposures to loss. In the United States the Securities and Exchange Commission (SEC) has long pressed for better disclosure, often over the protests of the banking agencies. Indeed, the SEC is probably the leading force for better disclosure standards among internationally active banks since the lure of US capital markets has led many leading banks to voluntarily disclose much more information than they have traditionally shared with the markets in order to qualify for a listing on a US stock exchange.

4.1. The Basic Economics of Disclosure

Over time a ratcheting process has characterized the evolution of disclosure. Disclosure tends to notch irreversibly upward in the wake of a shock that reveals the inadequacy of prior disclosures. But this means that rather than being forward looking, changes in disclosure policy are usually designed to prevent a recurrence of past problems.

The demand for information regarding the creditworthiness of a bank will depend on the expected gain (or avoidance of loss) from additional information. Demand is likely to rise when there is a perception of an institutional weakness or when there are systemic concerns. This is, of course, when disclosure of adverse information is most likely to lead to damaging, herd-like behavior. Demand will also depend on the cost of acquiring, organizing and interpreting information relative to other strategies of avoiding loss such as keeping maturities short in order to have quick access to the exit in the event of trouble. Advances in telecommunications and information technology have greatly reduced the costs of acquiring and organizing information, although interpretation remains a challenge.

The supply of information regarding creditworthiness depends on the expected benefits relative to the costs. It would appear that a prudently managed bank would have a clear self-interest in supplying information in order to reduce its funding cost. (Of course, if it is securely protected by safety net there will be little reason to demand or supply information.) In fact, the voluntary supply of information seems to be relatively meager. This may be due to the structural vulnerability of banks to a loss of confidence. The high degree of leverage and dependence on short-term liabilities with fixed face values makes disclosure of bad new especially costly to banks.

But why not adopt a policy of disclosing only good news? This sort of disclosure policy faces a credibility problem unless the information can be verified by a trusted third

party or made believable by attestations subject to serious legal sanctions. Moreover, if the bank adopts a policy of disclosing only good news, it may find that market participants respond to some events by interpreting no news as bad news. Thus it may find that it needs to disclose neutral news to prevent its misinterpretation as bad news. But if both good news and neutral news are disclosed, then bad news is implicitly disclosed by its omission. Thus a bank may prefer a policy of no disclosure over even selective, self-serving disclosure.[32]

Paradoxically, mandatory disclosure, moreover, may convey some net benefits that cannot be realized with voluntary disclosure. The value of information depends on the availability of comparable data from a peer group.[33] Comparable data are easier to interpret. Moreover, the bank may find such peer group information to benchmark its own operations. This enhanced ability to learn from others may also allay some concerns about the loss of proprietary information. When competitors are subject to the same disclosure requirements the loss is offset to some extent by a gain in proprietary information about peer banks.

These reflections on the basic economics of disclosure suggest three guidelines for the formulation of disclosure policy. First, disclosure policy should be anticipatory rather than reactive and attempt to provide information before a crisis generates a demand for it. The accumulation of a time series of observations provides a better basis for evaluating new information. Moreover, bad news may be less likely to lead to herd-like behavior if it can be interpreted in the context of time series of normal variations. And, it is even possible that enhanced market monitoring made possible by additional information will deter the bank from taking excessive exposures.

Second, the range of information disclosed should be quite broad including virtually any information that may help forecast the distribution of future market values of the institution. This should include not only factors that help forecast the mean, but also factors that help forecast the dispersion around the mean.

Third, data definitions, formats and reporting intervals should be standardized to facilitate comparisons across institutions. The understandable resistance to "one-size fits all" requirements should not be met by tailoring requirements for each institution. Instead, institutions should be encouraged to supply whatever additional information they think

[32] See Guttentag and Herring (1985) for a similar argument.

[33] This was a point made effectively by Britain's Financial Services Authority (2000): "market participants and consumers alike may find it difficult to interpret information from firms which do publish information unless a sufficient number of similar firms also make comparative disclosures. This would be particularly true if other firms responded by making selective and partial disclosures to present themselves in the most favorable light possible."

relevant as well as any narratives they believe will help the market interpret the information appropriately.

4.2. Pillar 3

In light of these considerations, how does the Basel II proposal measure up? Pillar 3 would require the disclosure of substantially more information than banks currently disclose. Specific required disclosures include the scope of capital requirements across the holding company, the terms and conditions of all capital instruments, exposures to credit, market, operational and interest-rate risk. Banks that qualify for the internal ratings based procedures determining capital charges under Pillar 1 will be required to disclose inputs into their credit rating models. Qualitative disclosures are to be made annually, capital disclosures, semi-annually and capital adequacy disclosures, quarterly. In addition, banks are to make quarterly disclosures of any information subject to rapid change. It is unclear why all the quantitative disclosures should not have been made on a quarterly basis.

Enforcement of disclosure requirements would depend primarily on "moral guidance" or "dialogues" with bank management with the possibility of official sanctions. But additional capital would not be imposed when disclosures are inadequate (although to the extent that additional disclosure is a prerequisite for us of the IRB approach there is an implicit capital benefit for improved disclosure). Moreover, if a bank believes that a mandatory disclosure would reveal proprietary data, it may omit the disclosure and include a statement about why it is omitted. This could lead to substantial variation in disclosures. No audit of Pillar 3 disclosures is required unless it is otherwise subject to legal requirements and so the quality of disclosures may also be subject to substantial variations.

Unfortunately, considerable risk-relevant data has been omitted from required disclosures. These include foreign/domestic currency breakdowns of assets and liabilities and exposures to sovereign borrowers, publicly controlled corporations, and commercial real estate, all of which have a played a central role in banking crises in the recent past.

And comparability of data remains constrained by national differences in accounting, provisioning and statistical standards.[34]

In one key respect, Basel II represents a retreat from a level of transparency achieved by the original Accord. One of the principal achievements of the original Accord was a straightforward (if deeply flawed) way of comparing the capital adequacy of internationally

[34] In addition to these points, the Staff of the IMF (Kohler 2003) noted that "Significant additional benefits can be achieved through use of standard formats for presentation of metadata (textual descriptions of data), internet-based data collections systems, application of Extensible Markup Language (XML) techniques, flexible database construction, and data gateways."

banks. Many banks chose to report their Tier 1 capital ratios, although it was not required. Although these ratios are based on accounting conventions and supervisory standards that vary across countries, they did provide a crude measure of capital adequacy. Despite the expanded disclosures regarding capital instruments and ratios, that will no longer be true. Banks are provided with so many options under the Pillar 1 capital charges, including the use of internal models, and are potentially subject to additional, but not necessarily disclosed, capital charges under Pillar 2, in addition to many other details subject to national discretion, that it is no longer possible to compare capital adequacy across institutions in a straightforward manner.

Thus, although the Basel Committee may have made progress in terms of the range and quantity of data disclosed, the comparability of data remains a concern. In addition, the treatment of the possible dispersion of outcomes with regard to market risk falls short of its earlier agreement with IOSCO.

4.3. Limited progress regarding measures of dispersion

In typical fashion the main improvement in disclosing market risk was in response to an SEC requirement introduced in 1997 after a series of problems with derivatives. Several US bank holding companies have disclosed Value at Risk (VaR) measures of their exposure to market risk. Jorion (2002) has shown VaR disclosures by eight U.S. banks do indeed predict realized market risk.[35] It was not possible, however, to make meaningful direct comparisons of VaR disclosures across institutions. The sophisticated transformations that Jorion performed to extract useful comparative information indicate some of the limitations in current disclosure practices. VaR data were reported for different intervals – as period averages or end-of-period levels or as graphs of daily levels – and with different underlying assumptions about the holding period and confidence level.[36] Berkowitz and O'Brien (2002) compared daily VaR forecasts with next day trading results using a sample of large U.S. banks containing confidential supervisory data. While the VaR models provided a conservative estimate of the 99% tail on average, there were substantial variations across institutions.

The recent Basel Committee (2002, p. 12) survey of public disclosures by 48 banks from 13 countries indicates that the challenge of making meaningful *international*

[35] Hirtle (2003) finds that reported market risk capital is useful for predicting changes in market risk exposure over time for individual banks; however, such disclosures provide little information about differences in market risk exposure across banks.

[36] Hoggarth, Jackson and Nier (2003) report similar diversity across VaR disclosures by the five largest British banks.

comparisons across banks is even more difficult. Although almost all of the surveyed banks use VaR to assess their market risk, the details they disclosed about their VaR estimates varied considerably. While 96 percent of the banks disclosed the confidence level used for VaR estimates, only 89 percent disclosed the holding period assumption and 74 percent disclosed the observation period on which the VaR estimates were based. Forty-seven percent provided a graph of daily profits and loses on trading activities combined with VaR. Fifty-one percent provided summary VaR data on a weekly or monthly basis. Nonetheless, this survey indicated an increased level of transparency of position risk exposures relative to a similar survey conducted two years earlier (Basel Committee & IOSCO, December, 1999).[37] In 1998, only two-thirds of the firms reported VaR measures and only a quarter reported VaR results on a weekly or monthly basis.

The Technical Committee of IOSCO and the Basel Committee have agreed to a set of recommendations for public disclosure of trading activities of banks and securities firms (Basel Committee & IOSCO, February 1999) that would enhance transparency and provide a sounder basis for market discipline by customers, creditors, counterparties and investors. The two committees agreed that information should be: (1) provided with sufficient frequency and timeliness to give a meaningful picture of the institution's financial position and prospects; (2) comparable across institutions and countries and over time; and (3) consistent with approaches that institutions use internally to measure and manage risk, thus capturing enhancements in risk management practices over time. Their specific recommendations with regard to market risk disclosure include:

- Description of the major assumptions used to estimate VaR including the type of model, holding period, confidence level, observation period and portfolios covered.
- Daily information on profits and losses on trading activities, combined with daily VaR.
- Summary VaR results on a weekly or monthly basis.
- Average and high/low VaR for the period.
- Results of scenario analysis.
- Discussion of the number of days actual portfolio loss exceeded VaR.

Unfortunately, the Pillar 3 VaR disclosure requirements appear not to go quite as far as a set of joint principles agreed with IOSCO in their recent working paper on Pillar 3, market discipline (Bank for International Settlements, April 2003). Quantitative disclosures

[37] The results are not directly comparable because the sample included forty banks and investment banks from twelve different countries.

include only (Bank for International Settlements, April 2003, p. 15): (1) the aggregate VaR; (2) the high, mean and low VaR values over the reporting period and period-end; and (3) a comparison of VaR estimates with actual outcomes, with analysis of important "outliers" in back test results.

Despite these concerns, Pillar 3 will, on balance, improve disclosure of data relevant to assessing the creditworthiness of banks. But, as we have seen, that is not all that could and should be done to strengthen market discipline.

5. Concluding Comment on the Relative Advantages of Enhanced Market Discipline

In order to enhance market discipline, the Basel Committee should not only improve disclosure standards but also strengthen the motives for a least some claimants to exercise discipline over banks and amplify the impact of market discipline by linking it to supervisory actions. This enhanced market discipline would in turn strengthen prudential regulation and supervision.

Additional disclosure will have little impact unless at least some market participants have an incentive to collect, analyze and monitor the new data. For several banks, including some of the largest most internationally active banks, there is reason to doubt that the strength of the motive for market participants to exercise discipline over debt instruments. For example, Fitch (July 2003) rates over 400 internationally active banks as having an "extremely high" or "high probability of external support" – roughly equal to the number for which external support, "although possible, cannot be relied upon." This is a problem that can and should be fixed. Indeed, if Pillar 2 had been tightened to include a genuine prompt corrective action component, substantial progress would have been made.

What is needed, ultimately, are better resolution tools so that even a very large institution can be resolved with minimal systemic spillovers. It should be possible in the event of insolvency to eliminate the claims of shareholders, replace managers and imposes losses on at least some uninsured creditors, without disrupting the essential operations of the bank. The bridge bank model in the United States holds promise as a way of accomplishing these objectives while providing sufficient time for the supervisory authorities to make an optimal disposition of the bank either through piecemeal liquidation or merger. Unfortunately, market discipline is likely to be less effective than it should be until creditors are persuaded that a credible resolution process is in place for every major, internationally active bank.

Concerns about the disruptive nature of quantity sanctions are a plausible reason to focus market discipline on holders of long-term claims and in this regard subordinated debt

and equity may both play a useful role. The concern that direct discipline through these channels is slight because new issues are relatively infrequent can be addressed in two ways. First, regular issues of subordinated debt can be required. Although this does impose additional transactions costs on the issuing bank, the issuing costs are less than those of issuing new equity and probably less than the compliance costs associated with the more intrusive forms of regulation and supervision that could be removed. Second, indirect market discipline can amplify direct market discipline.

Supervisors can enhance market discipline by linking supervisory actions to secondary market information. A wide range of responses is possible. If there is substantial skepticism about the quality of market information, it could be used to help allocate examination resources so that banks subject to adverse market signals receive more frequent and intense examinations. But if there is more confidence in the accuracy of market signals, prices could also be used to trigger standard debt covenants such as progressively greater restrictions on bank dividend policies, management fees, deposit insurance premiums or capital requirements. Indeed, the full set of prompt corrective action measures could be linked to levels of default premiums implicit in market prices.

This enhanced market discipline holds substantial promise of strengthening the financial system more effectively and at lower cost than the current Basel II proposal. The Basel II proposal holds little promise of accomplishing its laudable, stated objectives of eliminating regulatory capital arbitrage and aligning regulation with best practices in credit risk management. It will not eliminate incentives for regulatory arbitrage because the risk weights, despite their complexity, still do not reflect risk accurately. It fails to align regulation with best practices in credit risk management because it obliges banks to implement procedures that fail to take account of portfolio diversification, one of the most important tools for dealing with risk. Moreover, Basel II does not address the fundamental problem that measures of regulatory capital are based on accounting conventions that vary substantially from country to country and can be easily manipulated by banks that wish to boost their regulatory capital without increasing their capacity to bear loss. Finally, the extraordinary complexity of Basel II will impose heavy compliance costs and make it very difficult to monitor the enforcement of capital requirements.

In contrast, enhanced market discipline provides a simple, but effective way to enhance the effectiveness of capital regulation at much lower cost. Indeed, enhanced market discipline is much more likely to accomplish the stated objectives of Basel II. First, it will deter regulatory arbitrage. Regulatory risk weights that diverge from actual risks may give

banks an incentive to engage in transactions to reduce risk-weighted assets without reducing exposure to risk. But market participants will not be misled by regulatory risk weights. What matters to holders of subordinated debt and equity is the bank's overall exposure to risk of insolvency. If they perceive that a transaction increases a bank's exposure to risk, the bank will be penalized by the market and, to the extent that regulators rely on market signals to monitor risk, by the regulators as well.

Second, institutions that employ best practices in risk management, which will surely evolve over time, will be able to deploy capital more efficiently and have better control over their risk of insolvency. Rather than impede advances in risk management as Basel II threatens to do by prescribing a specific approach to risk management, holders of subordinated debt are likely to reward institutions than can quantify and control their overall exposures to risk more effectively. Unlike the Basel II approach that prescribes a particular approach to risk measurement and management, the market will reward the adoption of whatever improvements in risk management prove to be effective. In addition, market participants who perceive themselves to be at risk of loss are likely to be an effective force for enhancing disclosure that will augment the Pillar 3 requirements.

Finally, market discipline will help reduce the distortions introduced by the reliance of regulators on accounting measures of capital. Holders of risky claims are likely to increase pressures for the adoption of market value accounting because market values, not accounting values are relevant for assessing the risk of insolvency. Moreover, holders of subordinated debt are unlikely to be deceived by gains trading and under-provisioning that can boost regulatory capital without enhancing an institution's capacity to bear loss.

Enhanced market discipline is also likely to improve the performance of the supervisory authorities. The secondary market price of subordinated debt provides a highly visible signal of the riskiness of a bank and, because holders of subordinated debt stand in line for repayment after the deposit insurance authority, they have a strong motive to press for prompt corrective action to minimize losses at a failing institution.

Cast in the most favorable light, the Basel II proposal is an attempt to align regulation with market estimates of risk. But this raises a logically prior question: why invest in an enormously complicated way to mimic the market, when it is much easier to harness market discipline in support of safety and soundness objectives?

## References


Altman, Edward and Anthony Saunders, 2001, "An Analysis and Critique of the BIS Proposal on Capital Adequacy and Ratings," *Journal of Banking and Finance*, Vol. 25, No. 1.

Andrews, David, Jim Moss, and David Marshall, 2002, "Fitch Ratings' Bank Support Rating Definitions Revised," *Fitch Criteria Report*, July 29, pp. 1-5.

Bank for International Settlements, 2000, "A New Capital Adequacy Framework: Pillar 3 Market Discipline," Basel Committee on Banking Supervision Consultative Paper, January.

Bank for International Settlements, 2003, "Markets for Bank Subordinated Debt and Equity in Basel Committee Member Countries", Basel Committee on Banking Supervision Working Paper No. 12, August.

Bank for International Settlements, 2003, "Public Disclosures by Banks: Results of the 2001 Disclosure Survey," Basel Committee on Banking Supervision, May.

Bank for International Settlements, 2002, "Public Disclosures by Banks: Results of the 2000 Disclosure Survey", Basel Committee on Banking Supervision, May.

Bank for International Settlements, 2003, "The New Basel Capital Accord," Basel Committee on Banking Supervision Consultative Document, April.

Bank for International Settlements, 2001, "Working Paper on Pillar 3—Market Discipline", Basel Committee on Banking Supervision, September.

Basel Committee on Banking Supervision and the Technical Committee of IOSCO, 1999, *Trading and Derivatives Disclosures of Banks and Securities Firms*, BIS, December.

Berger, Allen N., 1991, "Market Discipline in Banking," *Proceedings of Conference on Bank Structure and Competition*, Federal Reserve Bank of Chicago.

Berkowitz, Jeremy and Paul O'Brien, 2002, "How accurate are Value-at-Risk Models at Commercial Banks?" *Journal of Finance* 57 (3).

Bliss, Robert R. and Mark J. Flannery, 2002, "Market Discipline in the Governance of U.S. Bank Holding Companies: Monitoring vs. Influencing," *European Finance Review*, Vol. 6.

Board of Governors of the Federal Reserve System, 2000, "The Feasibility and Desirability of Subordinated Debt," Report by the Board of Governors of the Federal Reserve System and the Secretary of the U.S. Department of the Treasury, submitted to the Congress, December.

Brash, Donald, 1997, "Dr. Brash looks at banking soundness and the role of the market with respect to New Zealand's banking industry," Address to IMF Conference on Banking Soundness and Monetary Policy in a World of Global Capital Markets, *BIS Review*, pp. 1-12.

Carey, Mark S., 1993, "Snacking and smoothing: Gains trading of investment account securities by commercial banks," Board of Governors of the Federal Reserve working paper, July.

Collin-Dufresne, Pierre, Robert S. Goldstein, and J. Spencer Martin, 2001, "The Determinants of Credit Spread Changes," *Journal of Finance*, December, Vol. 56, No. 6.

Crockett, Andrew, 2001, "Market Discipline and Financial Stability," speech at a conference on "Banks and Systemic Risk," at the Bank of England, London, 23-25.

Elton, Edwin J., Martin J. Gruber, Deepak Agrawal, and Christopher Mann, 2001, "Explaining the Rate Spread on Corporate Bonds," *Journal of Finance*, Vol. LVI, No. 1, February, pp. 247-277.

Evanoff, Douglas D., and Larry D. Wall, 2000, "Subordinated Debt as Bank Capital: A Proposal for Regulatory Reform," *Economic Perspectives*, Federal Reserve Bank of Chicago, Second Quarter, pp. 40-53.

Evanoff, Douglas D., and Larry D. Wall, 2001, "Sub-Debt Yield Spreads as Bank Risk Measures," *Journal of Financial Services Research*, Vol. 20, No. 2/3.

Financial Services Authority, 2000, *The FSA's Response to the Cruickshank Report's Recommendation of the Use of Disclosure*, London, Financial Services Authority, December.

Fitch, "Launch of Fitch's Bank Support Rating Methodology," *Criteria Report*, July 22, 2003.

Flannery, Mark J. and Kasturi P. Rangan, "Market Forces at Work in the Banking Industry: Evidence from the Capital Buildup of the 1990s," University of Florida Working Paper, September 2002.

Flannery, Mark J., 2001, "The Faces of 'Market Discipline'", *Journal of Financial Services Research*, vol. 20, nos. 2/3, October/December.

Flannery, Mark J., 1998, "Using Market Information in Prudential Bank Supervision: A Review of the U.S. Empirical Evidence", *Journal of Money, Credit, and Banking*, Vol. 30, No. 3, August.

Guttentag, Jack and Richard Herring, 1985, "Disclosure Policy and International Banking," *Journal of Banking and Finance*, 10, pp. 75-97.

Hamalainen, Paul, Maximilian JB Hall and Barry Howcroft, 2001, "A Framework for Implementing Market Discipline in Financial Regulatory Design," Loughborough University Banking Centre Research Paper, December 2001.

Hancock, Diana, and Myron Kwast, 2001, "Using Subordinated Debt to Monitor Bank Holding Companies: Is it Feasible?" *Journal of Financial Services Research*, Vol. 20, Nos. 2/3, October/December, pp. 147-188.

Herring, Richard J., 1989, "The Economics of Workout Lending," *Journal of Money, Credit and Banking*, 21, February, pp. 1-15.

Herring, Richard J., 2003, "The Subordinated Debt Alternative to Basel II," working paper, The Wharton School, University of Pennsylvania.

Hirtle, B., 2003, "What Market Risk Capital Reporting Tells Us About Bank Risk", *Federal Reserve Bank of New York Economic Policy Review* (forthcoming).

Hoenig, Thomas, 2003, "Should More Supervisory Information Be Publicly Disclosed?" *Economic Review*, Federal Reserve Bank of Kansas City, 3rd Quarter, pp. 5-14.

Hoggarth, Glenn, Patricia Jackson, and Erlend Nier, 2003, "Market Discipline and Financial Stability," in *The Future of Domestic Capital Markets in Developing Countries*, edited by R. Litan, M. Pomerleano, and V. Sundararajan, Washington, D.C., Brookings, pp.

Horvitz, P.M., 1986, "Subordinated Debt Is Key to New Bank Capital Requirement," *American Banker*, December 31.

Kohler, Horst, 2003, "Letter to Jaime Caruana to Comment on the third consultative paper on Basel II," posted on the BIS website, IMF, July 31.

Jorion, Philippe, 2002, "How Informative are Value-at-Risk Disclosures," *Accounting Review*, October.

Kane, Edward J., 2001, "Relevance and Need for International Regulatory Standards," in R.E. Litan and R.J. Herring (eds.), *Brookings-Wharton Papers on Financial Services*, Washington: Brookings Institution Press, pp. 87-116.

Kane, Edward J., 2002, "Using Deferred Compensation to Strengthen the Ethics of Financial Regulators," *Journal of Banking and Finance*, 26, September, pp. 1919-1933.

Kwast, Myron L., et al, 1999, "Using Subordinated Debt as an Instrument of Market Discipline," report of a Study Group on Subordinated Notes and Debentures, Board of Governors of the Federal Reserve System*, Staff Study 172*, December.

Lang, W. and D. Robertson, 2000, "Analysis of proposals for a minimum subordinated debt requirements," *Economic and Policy Analysis Working Paper 2000-4,* U.S. Comptroller of the Currency.

Merton, Robert, 1974, "On the Pricing of Risky Debt: The Risk Structure of Interest Rates," Journal *of Finance,* 29, pp. 449-470.

Morgan, D.P., 2000. "Rating Banks: Risk and Uncertainty in an Opaque Industry," Federal Reserve Bank of New York *Staff Reports* No. 105, forthcoming *American Economic Review*.

Nier, Erlend and Ursel Baumann, 2003, "Market Discipline and Financial Stability: Some Empirical Evidence," *Financial Stability Review*, June.

Schilder, Arnold, 2002, "Accounting Standards, Transparency and Supervision," *BIS Review*, 64, November.

Sironi, Andrea, 2003, "Testing for Market Discipline in the European Banking Industry: Evidence from Subordinated Debt Issues," *Journal of Money, Credit, and Banking*, Vol. 35, No. 3, June.

Swidler, Steven and James Wilcox, 2002, "Information about Bank Risk from Option Prices," *Journal of Banking and Finance*, May.

U.S. Shadow Financial Regulatory Committee, 2000, *Reforming Bank Capital Regulation: A Proposal by the U.S. Shadow Financial Regulatory Committee*, AEI Studies on Financial Deregulation, Washington, D.C., AEI Press, March.

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## Bank Regulation and Supervision

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A large and growing body of research suggests that banks matter for human welfare. Most noticeably, banks matter when they fail. Indeed, the fiscal costs of banking crises in developing countries in the 1980s and 1990s exceeded $1 trillion, with some estimates putting the cost of Japan's banking problems alone over this threshold too.[38] Recent research also finds that banks matter for economic growth.[39] Banks that mobilize and allocate savings efficiently, allocate capital to endeavors with the highest expected social returns, and exert sound governance over funded firms foster innovation and growth. Banks that instead funnel credit to connected parties and the politically powerful discourage entrepreneurship and impede economic development. Recent work further shows that banks matter for poverty and income distribution.[40] Well-functioning banks that extend credit to those with the best projects, rather than to the wealthy or to those with familial, political, or corrupt connections, exert an equalizing affect on the distribution of income and a disproportionately positive impact on the poor by de-linking good ideas and ability from past accumulation of wealth and associations.

The important relationship between banks and economic welfare has led researchers and international institutions to develop policy recommendations concerning bank regulation and supervision. The International Monetary Fund, the World Bank, and other standard setting groups (of bank supervisors, securities regulators, etc.) have developed extensive checklists of "best practice" recommendations that they urge all countries to adopt. Most influentially, the Basel Committee on Bank Supervision recently revised the 1988 Basel Capital Accord to create Basel II. The first pillar of these recommendations develops more extensive procedures for computing minimum bank capital requirements. The second pillar focuses on enhancing official supervisory practices and ensuring that supervisory agencies have the power to scrutinize and discipline banks. The third and less developed pillar envisions greater market discipline of banks

[38] J. Barth, G. Caprio, and R. Levine, Rethinking Bank Regulation: Till Angels Govern, Cambridge University Press, forthcoming.
[39] R. Levine, "Finance and Growth: Theory and Evidence," NBER Working Paper No. 10766, September 2004, and Handbook of Economic Growth, forthcoming.
[40] T. Beck, A. Demirguc-Kunt, and R. Levine, "Finance, Inequality, and Poverty: Cross-Country Evidence," NBER Working Paper No. 10979, December 2004; and T. Beck, A. Demirguc-Kunt, L. Laeven, and R. Levine, "Finance, Firm Size, and Growth," NBER Working Paper No. 10983, December 2004.

through policies that force banks to disclose accurate, transparent information. Although considerable debate surrounds the validity of these pillars, over 100 countries have already stated that they will eventually adopt Basel II.

**Data**

Until recently, the absence of data on bank regulation and supervision made it impossible to conduct broad cross-country studies of which regulations and supervisory practices promote sound banking. While analysts used models, country-studies, and the experiences of supervisors to make policy recommendations, there were simply insufficient data with which to conduct extensive international comparisons and to test the validity of Basel II or other proposals for reform. Clearly expert advice and evidence from individual countries should inform banking policies; but just as clearly, cross-country econometric evidence can provide a valuable contribution.

Consequently, we assembled an international database on banking policies. After moving up a painful learning curve in their design and implementation, we conducted two surveys. The first was conducted in 1998/1999 and involved over 100 countries and included information on almost 200 regulations and supervisory practices. The second covered 2003/2004 and included 50 more countries and 100 additional questions, many of which were recommended by users of the first survey.[41]

These data permit an assessment of which banking sector policies work best to promote sound banking around the world. In terms of defining "sound banking," many take for granted that stability is the primary objective of bank regulation. While we study stability, we also examine the impact of banking policies on bank development, efficiency, corruption in lending, and corporate governance of banks. Banks are not simply safe places to stash funds. Banks play pivotal roles in mobilizing and allocating resources, monitoring firms, and providing liquidity and risk management services. Thus, bank regulation and supervision should be judged by more

[41] J. Barth, G. Caprio, and R. Levine, "Banking Systems Around the Globe: Do Regulation and Ownership Affect Performance and Stability?" In: F. Mishkin (ed.), Financial Supervision and Regulation: What Works and What Doesn't, Chicago, IL: Chicago University Press, (2001), pp. 31-88.; J. Barth, G. Caprio, and R. Levine, (2001b). "The Regulation and Supervision of Banks Around the World: A new Database," in Robert E. Litan and Richard Herring, Editors, Integrating Emerging Market Countries into the Global Financial System, Brookings-Wharton Papers on Financial Services, Brookings Institution Press (Washington, DC), (2001), pp. 183-241.; J. Barth, G. Caprio, and R. Levine, "Bank Regulation and Supervision: What Works Best?," NBER Working Paper No. 9323, November 2002, and Journal of Financial Intermediation, 13, (2004), pp. 205-48; J. Barth, G. Caprio, and R. Levine, Rethinking Bank Regulation: Till Angels Govern, Cambridge University Press, forthcoming.

criteria than stability alone. Furthermore, while we examine many bank regulations and supervisory practices, we devote considerable effort to assessing Basel II's three pillars.

**A Political Economy Approach**

Consistent with research on the political economy of banking policies, the patterns we observe in the data suggest that countries do not choose individual regulations in isolation; rather, individual choices reflect broad approaches to the role of government in the economy.[42] Some governments choose an active, hands-on approach, where the government owns much of the banking industry, restricts banks from engaging in non-lending activities such securities underwriting, insurance, real estate, and non-financial service activities, limits the entry of new domestic and foreign banks, and creates a powerful supervisory agency that directly oversees and disciplines banks. Other countries rely substantially less on direct government control of banks. These countries place comparatively greater emphasis on forcing banks to disclose accurate information to the public as a mechanism for facilitating private sector governance of banks. Thus, some of our research can be viewed as using the laboratory of bank regulation and supervision to assess the historic debate about the proper role of government in the economy. These patterns also highlight (i) the potential pitfalls associated with attempting to design a uniform set of best practice recommendations for countries with different political and legal systems and (ii) the likelihood that the same regulations may work very differently in different institutional settings.

Given these observations, we framed the initial international investigations of what works best in bank regulation and supervision within two broad views of government. The public interest approach stresses that market failures – information and contract enforcement costs – interfere with the incentives and abilities of private agents to monitor and discipline banks effectively. From this perspective, a powerful supervisory agency that directly monitors and disciplines banks can improve bank operations. The public interest approach assumes that (i) there are market failures and (ii) official supervisors have the incentives and capabilities to ameliorate those market failures by directly overseeing, regulating, and disciplining banks.

The private interest view, however, questions whether official supervisory agencies have the incentives and ability to fix market failures and enhance the socially efficient operation of

[42] J. Barth, G. Caprio, and R. Levine, "Bank Regulation and Supervision: What Works Best?," NBER Working Paper No. 9323, November 2002, and Journal of Financial Intermediation, 13, (2004), pp. 205-48; J. Barth, G. Caprio, and R. Levine, Rethinking Bank Regulation: Till Angels Govern, Cambridge University Press, forthcoming.

banks. The private interest view holds that politicians and government supervisors do not maximize social welfare; they maximize their own welfare. Thus, if bank supervisory agencies have substantial influence over bank decisions, then politicians and supervisors may abuse this power to force banks to divert the flow of credit to ends that satisfy the private interests of politicians and supervisors, not the interests of the broader public. Under these conditions, strengthening official oversight of banks might reduce bank efficiency and intensify corruption in lending.

According to the private interest view, most countries do not have political and legal systems that induce politicians and government officials to act in the best interests of society. Thus heavy regulation of bank activities and direct, hands-on influence over banks is unlikely to promote sound banking. Rather, the private interest view holds that the most efficacious approach to bank supervision relies on using government regulations and institutions to empower private monitoring of banks. Specifically, the private interest approach advocates effective information disclosure rules and sound contract enforcement systems so that private investors can use this information to exert sound corporate governance over banks with positive ramifications on bank operations. This is not a laissez-faire approach. To the contrary, the private interest approach stresses that strong legal and regulatory institutions are necessary for reducing information and contract enforcement costs. Our research provides cross-country empirical evidence on these different approaches to bank regulation and supervision, including analyses of the role of legal and political institutions in determining the effectiveness of different banking sector policies.

**Initial Results on What Works and What Does Not**

Using different cross-country, bank-level, and firm-level datasets and employing different econometric techniques, the initial results are broadly consistent with the predictions from a private interest view of bank regulation. Bank regulations and supervisory practices that force banks to disclose accurate information to the public tend to: (1) boost the development of the banking system as measured by private credit relative to Gross Domestic Product, (2) increase the efficiency of intermediation as measured by lower interest margins and bank overhead costs, and (3) reduce corruption in lending as measured by survey information from

firms around the world.[43] For example, Beck, Demirguc-Kunt, and Levine estimate that the probability that a firm reports bank corruption as a major obstacle to firm growth would decrease by over half if a country moved from the 25th percentile of our measure of the degree to which regulations force information disclosure and foster private sector monitoring to the 75th percentile.[44] Furthermore, information disclosure rules have a particularly strong effect on reducing corruption in lending in countries with well-functioning legal institutions. Thus, private investors need both information and legal tools to exert sound governance over banks.

Results on banking system crises also advertise the importance of the incentives facing private investors. While we do not find a relationship between information disclosure rules and bank fragility, there is a strong link between deposit insurance design and crises. The results are consistent with the view that generous insurance schemes reduce the incentives of private investors to monitor banks and this increases the ability of bank owners to take on excessive risks, increasing the probability that the country suffer a systemic crisis.[45] For example, we estimate that if Mexico changed its very generous deposit insurance to the sample average, then its probability of suffering a systemic crisis would drop by 12 percentage points.[46]

In contrast, the results across a range of studies do not support the public interest view of regulation and raise a cautionary flag regarding reliance on direct official oversight of banks, government ownership of banks, regulations restricting bank activities, and impediments to the entry of new domestic and foreign banks. We never find that giving official supervisors greater powers (to force a bank to change its internal organizational structure, suspend dividends, stop bonuses, halt management fees, force banks to constitute provisions against actual or potential loses as determined by the supervisory agency, supersede the legal rights of shareholders, remove and replace managers and directors, obtain information from external auditors, and take

[43] J. Barth, G. Caprio, and R. Levine, "Bank Regulation and Supervision: What Works Best?," NBER Working Paper No. 9323, November 2002, and Journal of Financial Intermediation, 13, (2004), pp. 205-48; A. Demirguc-Kunt, L. Laeven, and R. Levine, "Regulations, Market Structure, Institutions, and the Cost of Financial Intermediation," NBER Working Paper No. 9890, August 2003, and Journal of Money, Credit, and Banking, 36 (2004), pp. 593-622; T. Beck, A. Demirguc-Kunt, and R. Levine, "Bank Supervision and Corporate Finance," NBER Working Paper No. 9620, April 2003; T. Beck, A. Demirguc-Kunt, and R. Levine, "Bank Supervision and Corruption in Lending," mimeo (June 2005).

[44] T. Beck, A. Demirguc-Kunt, and R. Levine, "Bank Supervision and Corruption in Lending," mimeo (June 2005).

[45] A. Demirgüç-Kunt and E. Enrica Detragiache, "Does Deposit Insurance Increase Banking System Stability? An Empirical Investigation." *Journal of Monetary Economics*, 49, (2002), pp. 1373-1406. T. Beck, A. Demirguc-Kunt, and R. Levine, "Bank Concentration and Crises," NBER Working Paper No. 9921, August 2003, and "Bank Concentration, Competition and Crises: First Results," Journal of Banking and Finance, forthcoming.

[46] J. Barth, G. Caprio, and R. Levine, "Bank Regulation and Supervision: What Works Best?," NBER Working Paper No. 9323, November 2002, and Journal of Financial Intermediation, 13, (2004), pp. 205-48.

legal action against auditors for negligence) enhances bank operations or reduces bank fragility. Similarly, greater government ownership of banks, regulatory restrictions on bank activities, or limitations on the entry of new banks never has positive effects. While some theories predict that strengthening direct official oversight and regulation of banks will promote social welfare in countries with well functioning political and legal institutions, we do not find support for this hypothesis either.[47]

As summarized in Barth, Caprio, and Levine (forthcoming, 2005), the bulk of "hands on" government policies lowers bank development, induces less efficient banks, exacerbates corruption in bank lending, and intensifies banking system fragility. Specifically, countries that grant their official supervisors greater disciplinary powers have lower levels of bank development and greater corruption in lending. Governments that heavily regulate bank activities and restrict entry into banking have banks with bloated interest rate margins and larger overhead costs.[48] Furthermore, countries with greater government ownership of the banking industry have less banking system development. We also find that restricting banks from diversifying into non-lending activities and prohibiting banks from lending abroad increases banking system fragility.

Thus, the evidence is broadly consistent with the private interest prediction that regulatory restrictions on activities, impediments to entry, limits on investing abroad, government ownership, and strengthening the discretionary power of official supervisors increase cronyism, corruption, and collusion with adverse ramifications on the efficiency and effectiveness bank intermediation. In analyses, however, we find that well-functioning political and legal institutions negate the negative effects of empowering direct official oversight of

[47] G. Caprio, L. Laeven, R. Levine, "Governance and Bank Valuation," NBER Working Paper No. 10158, December 2003. J. Barth, G. Caprio, and R. Levine, "Bank Regulation and Supervision: What Works Best?," NBER Working Paper No. 9323, November 2002, and Journal of Financial Intermediation, 13, (2004), pp. 205-48. A. Demirguc-Kunt, L. Laeven, and R. Levine, "Regulations, Market Structure, Institutions, and the Cost of Financial Intermediation," NBER Working Paper No. 9890, August 2003, and Journal of Money, Credit, and Banking, 36 (2004), pp. 593-622; T. Beck, A. Demirguc-Kunt, and R. Levine, "Bank Supervision and Corporate Finance," NBER Working Paper No. 9620, April 2003; T. Beck, A. Demirguc-Kunt, and R. Levine, "Bank Supervision and Corruption in Lending," mimeo (June 2005). T. Beck, A. Demirguc-Kunt, and R. Levine, "Bank Concentration and Crises," NBER Working Paper No. 9921, August 2003, and "Bank Concentration, Competition and Crises: First Results," Journal of Banking and Finance, forthcoming. J. Barth, G. Caprio, and R. Levine, Rethinking Bank Regulation: Till Angels Govern, Cambridge University Press, forthcoming.

[48] For example, Demirguc-Kunt, Laeven, and Levine (2004) compute that if Mexico had the same level of restrictions on bank activities as Korea, its interest rate margins would be a full percentage point lower.

banks. But even in these cases, the results do not indicate that empowering direct official oversight improves bank operations.

**Basel II and Beyond**

This research has implications for the three pillars of Basel II. Although one cannot directly test the new capital requirement recommendations because they are still being implemented, we examined current measures of the stringency of capital regulations and fail to find a significant impact of capital regulations on bank development, efficiency, stability, or corruption. Many factors may explain this result. The harmonization of national capital regulations makes it difficult to find a cross-country empirical relationship between capital regulations and bank performance. Or, the lack of clear evidence on the beneficial effects of current capital regulations may reflect the inadequacy of the Basel I capital regulations and the need for Basel II. Or, banks may evade capital regulations when they are sufficiently inconvenient.

The cross-country findings support Basel II's third pillar, but not its second. For most countries, the data indicate that strengthening official supervisory powers will make things worse, not better. Unless the country is a "top ten" country in terms of the development of its political institutions, the evidence suggests that strengthening official supervisory powers hurts bank development, impedes the flow of credit to worthy firms, and leads to greater corruption in bank lending without any compensating positive effects. Instead, the results advertise the efficacy of Basel II's third pillar: market discipline. Regulations that require informational transparency and that strengthen the ability and incentives of the private sector to monitor banks tend to promote sound banking.

In sum, this research argues for paying closer attention to the foundations of the financial sector. Without good information, and of course without adequate incentives, market participants will not be able and motivated to do a good job of effect if the monitoring banks. Although supervision was not found to be effective along a range of criteria, this does not mean that it does not have a role in strengthening the banking sector. Rather, what is suggested is a supporting role for supervision, that is one in which supervisors' job is to verify that the information being disclosed by banks is accurate, and to penalize banks that disclose false, misleading, or inadequate information. This is a critical role in support of market monitoring, and one that can be realistically achieved in most countries. In contrast, Basel II puts the burden

on supervisors to detect problems in banks, to stay on top of the latest advances in risk management, and to avoid abuses of the many powers that are given to supervisors. Our research suggests that all three burdens are too much for supervision to bear. While it is true that some members of the Basel committee have said that the committee is moving to greater reliance on market monitoring, we think that developing countries should not wait for this evolution, but should move to put greater reliance on market monitoring immediately, as this is an approach that the data suggest is effective.