Luncheon Address

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1 Introduction

I am very pleased to be here for this important conference on risk management and systemic risk. It is a great honor to have been asked to make this luncheon address. I do thank the Bank of Japan for organizing this event and also for inviting me.

Today, I have been asked firstly, to make some comments on the papers prepared for the conference and thereafter, share some thoughts on the major systemic risk issues we are facing in the global financial markets from a practitioner's point of view.

Before I move on, I should like to touch briefly on my personal background. I have been involved in derivatives since the early eighties. As a board member of ISDA as well as a working group member of G-30 Global Derivatives representing Japanese financial institutions, I have participated in the development of the framework on capital rules, risk management method, legal netting and market information survey for derivatives in collaboration with various supervisors, particularly the Bank of Japan and BIS.

Over the last four years, I was in charge of capital markets operations in London and recently in July, I moved to Singapore where I am now responsible for banking in this region. Like anybody else in the financial markets, I had experienced many financial crises in both the capital markets and commercial banking sector during the last eighteen months. I would like to talk on these later.

2 Comments on research papers

First of all, let me briefly touch on the research papers presented at our conference this time. An overall impression I have is that the topics covered by the papers are very well-diversified. They range from statistical analysis on market data, quantitative measurement of risks, model analysis of market behavior to policy discussion on supervisory framework. The role of central banks as lenders of last resort was also addressed.

Also, if we compare this year's research agenda with that of the previous conference in 1995, we can see a noticeable difference between the two. The 1995

research agenda focused more on the risk management side while the focus this year is on the systemic risk side; the key word for the 1995 conference being "value-at-risk" while the key word for this year is "contagion."

More specifically, in 1995, many papers discussed various techniques on how to quantify risks, both market and credit, and how to manage them using models. Evaluation of effectiveness of these models was also performed based on empirical analysis. In 1998, the priority of market analysis shifted towards that of a market movement under stressful conditions in one market and its contagious effect on the other markets. The concept of systemic risk has also been reviewed in the context of a contagion effect and detailed analysis on how contagion will emerge in various sectors of the financial system has been conducted.

What is the reason for such a difference? In 1995, liquidity was growing in the market through financial innovation and globalization. Those days, we saw a rapid and significant growth of new derivatives, securitization and emerging markets. Also, cross-market trading by hedge funds provided a lot of liquidity in the markets. Therefore, the needs for more accurate and effective pricing, risk management and risk/return analysis using advanced models were urgent at that time.

In 1998, however, the picture of financial markets changed completely. Several major market disruptions have taken place over the last eighteen months and global financial markets today are threatened by potential systemic crises. Also, excess liquidity has turned into a shortage which is beginning to cause either a market malfunction or dislocation of credit.

When I read the research papers against this background, I found them all very useful and informative. The following papers were particularly intriguing to me.

- De Bandt and Hartman's paper titled "What is Systemic Risk Today" that provides a comprehensive overview of systemic risk in banking markets, securities markets and payment systems.
- Kodres and Pritsker's paper titled "A Rational Expectations Model of Financial Contagion" which presents an extensive model analysis of a contagion process.
- Shimizu and Ui's paper titled "Contagious Expectations and Malfunctions of Markets" that explains the current liquidity crisis situation of Japanese financial markets through model analysis on the contagious effects of expectation.
- Yoshifuji and Demizu's paper titled "A Study of the Mechanism of Stress/Shock Movements in Financial Markets" that attempts an innovative approach derived from complexity theory to produce a market behavioral model.

3 Recent financial crises

Next, I would like to review three recent financial crises in the context of systemic risk; namely the Asian currency and debt crisis, the collapse of Long-Term Capital Management and the non-performing loan problems of Japanese banks.

3.1 Asian currency and debt crisis

The Asian currency and debt crisis which began with the devaluation of the Thai Baht in June 1997, spreading over to the other countries in the region, was unprecedented in terms of gravity and velocity.

The sharp drop in prices of currencies and equities and the ensuing soaring interest rates caused negative impact on the real economy. This was followed by the breakdown of the financial system and the occurrence of corporate failures in most countries hit by the crisis. We also witnessed a severe drain of liquidity which created a credit crunch. Contagion was another characteristic of the crisis. It spread out quickly not only to the other countries in the region but also to such other emerging markets as Russia and Latin America.

Excess liquidity is regarded as a primary cause of the crisis. It created a "bubble" in both the real economy and the financial markets, destined to burst. The crisis was also exacerbated by poor currency and debt management; i.e. overvaluation of currency and heavy dependence on short-term foreign capital. A weak banking system and political instability in some of the countries worsened the crisis further. The contagion was thought to have occurred due to a swift change of market expectation towards emerging markets. Investors moved quickly to liquidate their investment portfolios and arbitragers created short positions in currencies, equities and debts using mostly derivatives in those emerging market countries with similarly weak fundamentals. In a globalized capital market where capital and information flow very fast, contagion is unavoidable.

One of the by-products of the Asian currency and debt crisis was the threat to the payment system for off-shore Malaysian ringgit which arose from a sudden imposition of capital controls by the Malaysian government. On September 1, the Malaysian government announced a new rule which effectively banned the holding of Malaysian ringgit by non-residents. It also required the transfer of all ringgit accounts from off-shore to on-shore as well as early settlements of all existing foreign exchange contracts involving ringgit within a very short period of time. Depositors and exporters and importers in Singapore where a majority of off-shore ringgit had been traded went into a panic because all the off-shore ringgit accounts and contracts would become either worthless or invalid after the deadline. Potentially, that could have caused a systemic risk as the amount of offshore ringgit outstanding was equivalent to tens of billions of US dollars. However, due to very diligent work and close cooperation amongst banks and between banks and MAS, a swift decision was reached to settle all the ringgit contracts in US dollars at a suggested exchange rate as a guideline. Eventually, most of the deposits and foreign exchange contracts were either paid out or cash settled in US dollars in an orderly manner.

Except for Mr. Soros who praised the prompt solution in his testimony before the US Congress, this incident did not attract much attention from the world financial market. However, it did prove that close cooperation between banks and the central bank and quick action taken by them were the keys to preventing a potential systemic failure from occurring.

3.2 Collapse of long-term capital management

Long-Term Capital Management, a prominent hedge fund, collapsed due to losses arising from huge positions accumulated through the so-called leverage play. The collapse could have caused a serious market disruption, politically a systemic risk, since it was a dominant market player and a sole liquidity provider in some markets. Any large-scale liquidation of its positions or additional losses from fire sales would have resulted in significant losses to banks who had loans or counterparty exposures even though most of them were collateralized. Also, as many banks had copy-cat positions on their own books, such liquidation would have further aggravated the lack of liquidity in the markets. In other words, LTCM was too big to liquidate.

The Fed eventually intervened by organizing a consortium of banks which injected new capital into LTCM, thus preventing a major market disruption. The purpose of this intervention by the Fed was, I believe, not to rescue LTCM, but to lighten the problem by allowing for ordinary liquidation of its huge positions over time. Again, I regard the prompt action based on close cooperation between banks and the central bank as a key to preventing the occurrence of a systemic failure.

There are a number of implications for systemic risk which can be derived from this incident; inadequate disclosure by unregulated financial institutions, correlation risk in the market place by commonality of positions, lack of liquidity due to the disappearance of a dominant market player and difficulty in obtaining reliable price information in an extremely volatile and illiquid market.

3.3 Non-performing loan problem of Japanese banks

The non-performing loan problems of Japanese banks have posed an increasing threat to the stability of the Japanese financial system. We have already seen a few major failures over the last eighteen months. The current level of provisions for non-performing loans is regarded as insufficient and uncertainty remains with respect to true financial condition due to the lack of disclosure and arbitrary accounting. As such, major international credit rating agencies have successively downgraded Japanese banks, making Japanese banks' foreign currency funding operations in the international money markets more difficult and expensive. In the meantime, efforts by Japanese banks to increase capital adequacy ratios by scaling down on lending to corporations have caused a severe credit crunch. In order to remove this uncertainty surrounding them, Japanese banks must resolve their non-performing loan problem once and for all. They should not be hesitant to accept public funds to reinforce capital after taking sufficient provisions for non-performing loans. Otherwise, this credit crunch will continue, choking up corporate activities essential for the recovery of the real economy which, in turn, will deteriorate the banks' balance sheets further.

4 Systemic risk in today's financial market and proposed initiatives

I have just reviewed three major financial crises which we have seen over the last eighteen months. Among the causes for the crises, be it the severe economic slump, the hang-over from large unliquidated positions or credit deterioration due to non-performing loans, the common feature of systemic risk which we face in the global financial markets today is the contraction of liquidity.

A bank's role as a financial intermediary is to provide liquidity to corporations as a lender or to the market as a market-maker by taking credit and market risks. However, the risk-taking capabilities of banks, particularly those of Japanese banks, have been curtailed sharply and liquidity in the market place has also reduced significantly.

In order to cope with such a shortage of liquidity, Japanese banks must remove this uncertainty by taking adequate provisions for non-performing loans, restore capital using public funds and upgrade their credit rating by adopting more transparent disclosure and international accounting standards.

Needless to say, proactive risk-taking activities of banks must be supported by strong risk management infrastructure; both systems and practices. In this respect, taking lessons from the recent crises into account, a very robust stress testing for risk management purpose is important. Also, in collaboration with central banks and BIS, banks should work towards re-modeling the current capital rules so as to reflect credit risk, market risk and liquidity risk more accurately.

Concentration risk in terms of a liquidity provider has also been highlighted in the LTCM case. As we have seen an increasing concentration of market-making activities for derivatives and securities trading into a small number of financial institutions, notably a few commercial banks and investment banks in the U.S., further research work to study its impact on systemic risk will be necessary.