Mr Yamaguchi discusses the role of central banks in international finance

Speech by Mr Yutaka Yamaguchi, Deputy Governor of the Bank of Japan at the Japan Center for Economic Research in Tokyo on 13 July 1999.

Introduction

Today, I would like to discuss the role of central banks in international finance. The reasons why I chose this subject, and not the Japanese economy or its financial system, or the monetary policy of the Bank of Japan, are twofold. The first and foremost is that responding to the changes in the international financial markets has become a very important issue to the future of the Japanese economy, as evident from the financial crises involving the emerging economies since Thailand in the summer of 1997. The other reason is because we feel that the international activities of the Bank of Japan is not well understood, relative to the contributions the Bank has made so far. In the next hour or so, I would begin with some salient features of recent international financial crises and the roles of central banks therein. This would be followed by a discussion of the activities of the Bank for International Settlements (BIS) Committee on the Global Financial System (CGFS), which I have had the pleasure of chairing since last May. Finally, I would conclude my remarks today by briefly explaining the role of the Bank of Japan in international finance.

The changing nature of international financial crises

International financial crises in the 1990s

Let me begin by laying down some observations on the changes in the phenomena we call international financial crises. In the discussion of "international financial crises," we can, of course, begin by arguing what is a "crisis" and whether a crisis becomes "international." Let us, however, leave such question of exact definitions aside and look at those financial crises that had international repercussions.

Such international financial crises are not something new. The British suffered a severe attack on the Sterling in 1967. The US dollar's convertibility to gold was suspended in 1971, with serious international consequences. The mounting debt borne by the developing countries was a serious concern during the 1980s. We can conclude that the international financial markets had suffered a number of shocks or crises in the past, and thus, crises have been recurrent. However, if we look back on more recent crises, the Japanese bubble and its aftermath in the 1990s, the Nordic banking crises in the first half of this decade, the attack on the ERM in 1992, the Mexican crisis of 1994–95, and the turmoil in the emerging market economies beginning with east Asia in the summer of 1997 and followed by Russia and Brazil, it seems that the nature of crises has been changing, from what we had experienced in the 1960s to 1980s as we approach the next millennium. The most evident features are that we are experiencing more frequent crises, and when crises occur, their effects are severer and global. In this respect, I would like to draw your attention to the following four aspects.

Macroeconomic imbalances and the malfunctioning of credit allocation systems

The first point is that many international financial crises follow a period of unprecedented boom, and is the result of or is aggravated by interactions between macroeconomic imbalances and the malfunctioning of the banking or the credit allocation system. When an economy enters into an unsustainable economic boom, expectations of strong growth in the demand of goods and services becomes predominant. Investments are planned and conducted to fill these expected demands, and this, in turn, increases actual demand. Such a cycle will also result in an expansion in credit, which supports the investment boom. For example, in Japan during the bubble years, we have seen sizable expansion of credit in the form of increases in bank lending and issuances in the capital markets.

Meanwhile, in the case of the Asian economies, bank lending from developed countries increased at an annual rate of 19 per cent in the years between 1990 and 1996 (27 per cent per annum in the last three years). Unfortunately, such a virtuous cycle cannot be maintained forever, and when it stops, investments quickly turn into excess capacity and the recouping of capital becomes impossible. In the course of this process, a large part of financial assets turn into non-performing assets. If the volumes are large enough to impair the functioning of the financial system, the whole macroeconomy will stagnate. In this way, the interaction between macroeconomic imbalances and the malfunctioning of the financial system leads to financial crises. This relationship is often described by central banks as the interaction between monetary and financial stability; the macroeconomic stability, i.e. non-inflationary sustainable growth and the stability of financial system are interdependent. Our experiences of recent financial crises underscore the importance of such interaction

Volatility of short-term capital flows

The second point, which is closely related with the first, is the deepening of crises by sudden changes in short-term capital flows. As I have mentioned already, bank credit to the Asian countries expanded significantly in the years preceding the crisis. During the same period from 1990 to 1996, the share of credit maturing in less than one year has increased by more than 10 percentage points, from 52 per cent to 63 per cent. Short term extensions of credit do not cause problems if they are rolled over. However, when the borrower can no longer roll over its debt, and funds begin to flow outwards, the borrower quickly faces severe liquidity problems. The Asian crises showed us that the disruptions in the economies and financial markets in these circumstances could be very serious. In a number of cases, they could be far more serious than adjustments that would have been warranted to correct the macroeconomic imbalances that existed before the crisis. In this context, while the merits of capital inflows should also be fully recognized, the volatility of short term capital flows is an important issue in dealing with international financial crises.

International contagion of crises

My third observation is that there seems to be more international transmission of financial crises. For example, when the Latin American debt problem deepened in the 1980s, effects on other continents were muted and Asia did not suffer serious financial crises. The situation was similar during the Mexican crisis of 1994–95. However, in the most recent financial crisis beginning in 1997, the wave of disruptions reached many emerging market economies, sometimes quickly, and in other cases slowly. The transmission mechanism was not singular: rapid declines in credit extensions to the region by developed countries were significant in some cases, whereas in others it was the proxy hedge (i.e. hedging by selling other currencies with similar risk characteristics) or purely psychological transmissions of bearish sentiments. It might be said that the crisis that began in Asia swept around the world to end, seemingly, upon reaching Brazil. In the past, we have seen contagion of financial crisis within a region where there are significant interactions in terms of trade and investment flows and/or the economic structure is similar. Contagion to other regions of the globe is a new phenomenon not observed in the 1970s or 1980s.

More diverse manifestation of crises

Finally, I should point out that financial crises are now manifesting themselves in diverse ways. A classic financial crisis is when the financial system is strained by funding problems, for example when bank after bank is hit by depositor runs. Of course, in the most recent crisis involving the emerging market economies, many countries, such as Thailand, Korea, Russia and Brazil, suffered quintessential foreign currency funding problems. Meanwhile, we saw another type of crisis: if a classic financial crisis is precipitated by bank runs, the new type of crisis results from impairment of market functioning and such crisis could be termed a “market run.” When Long Term Capital Management (LTCM) almost collapsed last autumn, liquidity dried up in many markets of the developed countries as many market participants dumped their assets in "fire sales" and flight to quality became ever more pronounced. If we recognize that an important function of financial markets is to price financial assets and transfer risks at that price, i.e. "price discovery," the impairment of such a function is threatening to market participants.

Why are international crises becoming more pronounced?

Having said that the four features of recent international financial crises are the interactions between macroeconomic imbalances and the functioning of the financial system, the volatility of short-term capital flows, international contagion, and diversity in the manifestation of crises, I would like to spend some time to discuss why these changes might have occurred. I do not have a definite answer, but I agree with many experts who point out that financial innovation and globalization, enabled by advances in information technology, had a role. For example, cross-border flows of capital have increased more than threefold in the last ten years. What strikes us more is that the cross-border transfer of risks increased rapidly through derivatives transactions. As a hypothetical case, if we think of an investment in a bond denominated in Thai baht issued by a Thai firm, the investor faces various risks: foreign exchange risk, credit risk of the firm, interest rate risk, etc. Derivatives enable investors to unbundle these risks packaged in a bond into component risks – e.g. the risk that the credit standing of the issuing firm or the Thai baht exchange rate falls below a certain threshold – and transfer and/or assume them at will. Financial innovation has enabled market participants to engage in these operations at significantly lower costs, and this has resulted in an expansion of transaction volumes. The expansion in transaction volumes draws the attention of market participants to the need of more harmonized rules underlying financial transactions – payment and settlement systems and accounting standards – and encourages reforms therein. These reforms push the rules in the direction of standardization, which in turn, lower the costs of transactions and leads to a further increase in transaction volumes. Such globalizing financial marketplace facilitates a further division of labor: the development of risk appraisal services, investment funds, including hedge funds, tailored to suit diverse risk appetites should be understood in this context.

Accordingly, risk evaluation and risk taking become more specialized and tightly focused. This could result in a particular type of risk being singled out and transferred when crises or imbalances become apparent. In the example of a Thai firm issuing bonds denominated in Thai baht, investors in the bonds could guard against the depreciation of the baht by efficiently hedging the foreign exchange risk with derivatives, which is likely to result in higher pressures of selling baht hedges.

It is, however, not fair to emphasize only the deepening of crises as a result of financial innovation and globalization. In the case of East Asian countries, their incredible economic growth during the 1980s and up to the recent crisis was the result of their taking advantage of capital inflows from abroad. Capital inflows not only supplemented domestic investment funds, but also facilitated the transfer of industrial technology and know-how. In this context, derivatives enabled the unbundling of various risks embedded in economic transactions and the transfer of risks to other market participants. Such opportunities should have mitigated the perception of high risks associated with investments in emerging market economies and stimulated investments. Meanwhile, in a broader context, market discipline is also enforced through global market activities. Those that succeed in maintaining sound economic performance through determined efforts of restructuring, be they firms, financial institutions, or sovereign states, would be rewarded by the markets in the form of narrower credit spreads and thus lower funding costs. Market discipline stemming from the global capital market, therefore, is a driving force of robust economic growth in the long run.

Financial innovation and the globalization of financial markets, like any change, have both positive and negative effects: although positive effects may materialize in the long run, some disruptions may be expected in the short run. This means that our goal should be to devise plans to take the greatest advantage of financial innovation and globalization and implement them as well as possible. In other words, it is becoming important for each market participant, including firms, financial institutions and sovereign states, to recognize the role of market discipline, and, at the same time, lay down rules and practices that are compatible with the globalizing markets.

Central banks and international financial crises

In the international financial community, governments, central banks, financial institutions, and the academia are now engaged in a hot debate over the reform of international financial system, including exchange rate regimes and short term capital flows. The purpose of such discussions is to prevent a resurgence of international financial crises, and they are founded on the recognition that the nature of international financial crises may be changing, as I have just noted. In the next few minutes, I will carve out a niche in this very broad debate, and try to explain the roles that central banks could play with regard to international financial crises.

From this perspective, the most important responsibility for central banks is to maintain the stability of their own macroeconomy. More precisely, central banks are expected to maintain sustainable growth under stable prices. Putting one's house in order is the starting point. Unfortunately, however, implementing the correct policies to maintain the stability of the domestic economy and financial system alone does not guarantee a stable international financial system. The discussions on international financial architecture, which I have just referred to, seem to underscore the fact that efforts to maintain the functioning of international financial markets or the international financial system are just as important.

Monitoring the state of the international financial system

First and foremost, central banks should strengthen their ability to understand the risks and vulnerabilities in the international financial system. More simply, central banks should enhance their monitoring abilities. As mentioned a little earlier, a period of strong growth may sow the seeds of the next crisis by allowing excesses in consumption and investment. In fact, if we look back after the fact, we can often find signs warning of "bubbles" or excesses. For example, before 1997, i.e. before the Asian crisis, the BIS Banking Statistics indicated that banks in the developed countries were increasing their short-term foreign currency lending to the Asian countries. The increase in short-term foreign currency liabilities is likely to leave a country prone to a rapid outflow of capital and hence could lead to foreign currency liquidity problems. The reason why such warning signs were overlooked or ignored seems to be associated with national confidence. Past financial bubbles seem to be inevitably associated with such confidence shared by the general public. In Asia, there was the talk of the Asian miracle. A little earlier, during the Japanese bubble years, the oft-cited phrase "the largest creditor country" was an indication of such confidence. When the mood of a country is upbeat, the recognition of risks – even severe downside risks – are not easily acknowledged. Even if it were possible to identify such risks, it would have been extremely difficult to take the necessary corrective actions, either at the micro level (strengthening risk management) or at the macro level (tightening monetary policy). Even if such risks are initially contained through appropriate corrective measures, market participants' risk appetite may be so strong as to eventually render those corrective measures ineffective, and lead to a bubble. There is no panacea which quickly dissipates macroeconomic risks.

Nevertheless, it is extremely important for central banks to understand the risk factors and consciously analyze what could happen if there are significant changes in those risk factors. As a result of the most recent financial crisis, it became widely recognized that private financial institutions perform stress tests to identify vulnerabilities in their own portfolios. Stress tests may seem to be technical, but they are not. They are actually fundamentally judgmental processes for the management of financial institutions where various scenarios are employed to identify risks that endanger the existence of each institution. Likewise, it has become apparent that central banks should also adopt a similar approach – in effect stress testing at the macro level. By this, I am not arguing that central banks can always make the right judgment concerning risks to the macroeconomy. Nevertheless, I can stress that it is the *raison d'être* for central banks to identify risks that would endanger the policy objectives that are conferred upon them, namely the stability of the macroeconomy (sustainable growth under price stability) and the financial system. I should say, therefore, that in this globalizing world, it is becoming ever more important for central banks to make joint efforts to understand the risks in the global financial markets.

Policy recommendations for a more robust international financial system

Secondly, even if central banks could understand the conditions of the international financial system in extreme detail, they would probably not be able to prevent every financial crisis. This means that, central banks should contribute to the strengthening of the international financial system – building a system that could withstand crises and stress that are facts of life – through appropriate policy recommendations. I have used the word policy recommendations, because central banks do not usually have direct authority to make rules or supervise the international financial markets or their participants. For example, in the recent debate over how to deal with institutional investors including hedge funds, most central banks do not have any rule-making or supervisory authority over them. In such cases, the central banks look to other authorities to make and implement proper policy responses. There are also areas where no regulator or supervisor has formal authority, and the authorities are presently discussing how and whether to fill such gaps.

However, stemming from central banks' status as being players in markets, central banks have a strong interest in improving the functioning of markets. Accordingly, central banks could adopt a constructive approach: to analyze the global financial markets and make policy recommendations, which are to be implemented through dialogs with market participants and supervisory authorities. Along with such efforts, central banks must not neglect to improve their own operations, such as payment and settlement services, which can be modified through their own initiatives in response to the globalization of financial markets.

Responses to international financial crises

Third, but not the least, central banks must consider appropriate responses to international financial crises once they happen. In many cases international crises involve rapid depreciation of currencies or depletion of foreign exchange reserves, and manifest themselves as near or actual defaults of governments or private market participants. In such instances, extension of assistance from international financial institutions or governments could result in moral hazard, just like the domestic context, so it should not be too readily extended. The recent emphasis of debate on private sector involvement has sprung from this context. Nevertheless, if the effects on the international financial system would have been deemed to be severe in the absence of public sector involvement, public assistance had been granted. While such direct assistance has been the domain of IMF and national governments, central banks have been more concerned with maintaining the stability of the international financial system through maintaining the stability of domestic financial systems.

Central banks are "in the market," so to speak. As a result, they are able to collect up-to-date information on ever changing market conditions. In this context, central banks occasionally function as the lender of the last resort, in response to systemic risks posed by funding problems at private financial institutions. Of course, central banks must be careful so as not to create moral hazard. Meanwhile, when disruptions in international financial markets could affect the domestic financial markets or the domestic economy through global linkages between markets, central banks may consider lowering interest rates and supplying ample liquidity. For example, when the Federal Reserve lowered its federal fund rates three times last autumn, as the US financial markets became unsettled following the Russian crisis, the reason behind the move was to cushion the effects on prospective economic growth of increasing weakness in foreign economies and of less accommodative financial conditions domestically.

Committee on the Global Financial System

An international forum for central banks

The three elements of the role of central banks in international finance, which I have just mentioned, understanding markets, formulating policy recommendations for strengthening the financial system, and containing crises when they happen, have always been played by central banks in order to maintain the stability of the domestic financial system. As a result, central banks tend to share a common framework, which facilitates exchanges of information and views. This common framework is further strengthened through central banks' interactions with the markets – markets that are globalizing – in their day to day operations. There are many channels for such exchanges, and one of the most important is through the Bank for International Settlements (BIS). Many of you would probably know that the BIS is a unique international organization owned by central banks of more than forty countries.

Many committees of central banks meet at the BIS, led by the Governors of the Central Banks of the Group of Ten Countries (G10 Governors). The activities of the Committee on the Global Financial System (CGFS), the Basle Committee on Banking Supervision, and the Committee on Payment and Settlement Systems, in particular, are closely interconnected. Today, I would like to outline the activities of the CGFS, which I am involved in, and which is closely related to the theme of my discussion on the roles of central banks in international finance.

Monitoring of international financial markets

The activities of the CGFS can be grouped into three areas:

The first is to conduct comprehensive monitoring of the global financial market. This corresponds to the accurate appraisal of risks in the global market, which I stressed just a few minutes ago. At the quarterly meetings of the Committee, we focus on various risk factors and discuss what could be the risks that central banks should be most aware of. Diverse issues are taken up, but much attention has been paid to the origins and effects of the recent wave of financial crises beginning in Asia. For example, why were the "Asian Tiger Economies" suddenly faced with currency crises? What were the risks posed by the devaluation of the Thai baht to her Asian neighbors and to other emerging market economies? Why does the devaluation by Brazil not seem to have had great effects at least in the short run? We have also examined issues involving the developed countries such as the market trends in the run up to and after the introduction of the euro at the beginning of this year, and the inherent risks in the rising US equity markets. The Y2K risk premia observed in many markets for transactions over this year's end is also an issue that we have focused on. Furthermore, as a longer term issue, we have looked at the restructuring of the international banking industry, which is the reflection of changing nature of banking business.

There is no standard methodology for such monitoring exercises, but one aspect that the Committee is now particularly interested in is how to understand "positions" in the marketplace. For example, in the case of market turmoil involving LTCM, it is said that there were considerable arbitrage positions involving bonds of developed countries and emerging market economies: buying emerging market bonds and selling developed country bonds with the expectation that the spreads between the two classes of bonds should narrow. The speculation that this huge overhang of positions would be unwound was behind the disruptions we saw following the Russian default and huge losses at hedge funds. Of course, there are as many purchasers as sellers in the market, and all positions sum to zero. Nevertheless, the reaction of the market following a shock is dependent on who holds the positions, how concentrated the positions are, whether positions are correlated, etc. Paying attention to positions, therefore, is based on a view of the economy or the market that the positions are no less important factors in causing large market fluctuations than macroeconomic fundamentals. The CGFS also shares such views.

Improving the functioning of markets

The second element of the work program of the CGFS is longer term research with a view to improving market functioning. This begins with studies involving actual market practices: what sort of transactions are conducted day to day, how such transactions are executed and settled, what are the problems experienced by market participants, etc. Such information constitutes a part of understanding the markets and is also very important as input into crisis management.

The third area of the Committee's activities is closely related to, in fact based on, such research: examining alternate policy responses and the elaboration of corresponding policy recommendations to promote the development of well-functioning and robust financial markets and systems. Needless to say, these policy recommendations are shaped by past events and experiences in the international financial markets and driven by the keen interests of the Committee to prevent another disruption in market functions.

In this context, the most important activity of the Committee is its efforts to improve the transparency of markets through improvements in disclosure and statistics. Substantial improvements of market transparency would lead market participants to closely evaluate and select their counterparties and hopefully market equilibrium would be achieved to a certain extent. Central banks have long attached great importance to such mechanisms in the market that imposes self-discipline.

From this long line of work, I would like to draw your attention to the Committee's publication of a report titled "Review of the Disclosure Template Regarding the Authorities' Foreign Currency Liquidity Position" last autumn. This report is based on our recognition that one of the reasons for the deepening of the Asian crisis may have been the lack of transparency in the levels of official foreign exchange reserves: for example, Thai and Korean monetary authorities had conducted support operations of their currencies in the forward markets or assisted the foreign currency funding of domestic banks by depositing foreign currency at those banks. As a result of such operations, the actual amount of foreign reserves available to the authorities had substantially declined, but it was not reflected in official statistics on foreign exchange reserves. Accordingly, the Report recommends that public authorities disclose a more comprehensive, detailed and timely information on their foreign currency liquidity positions: e.g. the disclosure of potential drain on foreign exchange reserves through forward and options transactions, and the amount of foreign exchange reserves deposited at domestic banks, every month with one month timeliness. This initiative by the central banks was taken up by the IMF and incorporated in the Special Data Dissemination Standards, with which many countries, including Japan, are committed to comply.

Something that is as important as, if not more than, disclosure by public authorities is disclosure by private market participants themselves. In this regard, we should not forget what happened to LTCM last autumn. As we all know, LTCM was not able to fund itself when markets moved against its huge leveraged positions. If counterparties to LTCM had been able to find out that LTCM was holding some extreme positions through disclosures or macro statistics, market discipline might have been able to appraise the levels of position taking. In order for market participants to accurately measure various risks – market risk, credit risk, liquidity risk, etc. – improvements in disclosure and macro statistics are two sides of the same coin, and the CGFS has pursued both issues.

As to disclosure by private market participants, the Committee published the Fisher Report in fall 1994, advocating that disclosure needs to evolve from one based on financial statements to one providing information more accurately reflecting the risk profiles, including results of risk management model calculations. In the Report, it was noted that since individual market participants should wish to be correctly evaluated by the market, they should have the incentive to enhance disclosure, and a competitive mechanism to improve disclosure might be at work. However, as I have just pointed out, in the recent international financial crisis, one problem was that only insufficient information was provided to market participants. If so, it becomes necessary to examine why the competitive enhancement of disclosure did not materialize and what could we do to make it work. The Committee, with inputs from market participants, is spending considerable efforts, with an aim to devise a framework to enhance disclosure.

Along with these efforts to improve disclosure by the public sector and private market participants, the CGFS is expending considerable resources to improve statistics on international financial markets. For example, the BIS and national central banks, following a recommendation in a 1995 report by the Committee, launched a comprehensive market survey of global derivatives markets, the first in 1995 and the second in 1998. Another product is a more regular statistics based on a survey of major derivatives dealers covering more than 80% of global markets in derivatives ("Yoshikuni Statistics"), which was first published in December last year. In addition, there have been constant upgrades to existing BIS Banking Statistics: for example, the publication of the BIS Semiannual Consolidated International Banking Statistics, which is now watched closely as a leading indicator of country risk, is now approximately two months earlier than in the past. The CGFS is further looking into any gaps in statistics that may be filled.

As I have mentioned, in addition to improving market transparency, there is another distinct group of work in the activities of the CGFS. International financial crises are the consequences of market participants' taking and unwinding of positions. The Committee has studied such dynamics of markets and published recommendations based on its findings. One such example is the publication of a report titled "Market Liquidity: Research Findings and Selected Policy Responses" in May this year. Market liquidity is admittedly an elusive concept and is difficult to quantify. Nevertheless, market participants and authorities are making their day to day decision on the assumption that market is always liquid. One example is the risk management models, which is rapidly gaining acceptance. Such models assume that assets and liabilities can always be liquidated in the market immediately at prevailing market prices, i.e. the existence of market liquidity. If this assumption does not hold, the result could be unexpectedly large losses, or worse, bankruptcy of some market participants. This illustrates that maintaining the liquidity of markets would play an important role in upholding the stability of the financial system. The Report, from a conceptual viewpoint, identifies the determinants of market liquidity according to product design, market microstructure and the behavior of market participants, with a strong focus on the liquidity of the government securities market, which is one of the core financial markets. Of the policy implications that are pointed out in the Report, the effects on market liquidity of the issuing maturity and lot of government bonds and taxes offer valuable insights into how we can enhance liquidity in the market of Japanese government securities.

Concerning these recent activities of the CGFS, it should be recognized that the Committee is not working in a vacuum. In order to better play the role of central banks in international financial crises, be it the understanding of risks, developing robust systems, or containing crises, the CGFS should work in concert with other fora. For example, of the other Basel-based G10 committees, the Basle Committee on Banking Supervision pays attention to issues involving regulation and supervision of individual banks. The Committee on Payment and Settlement System (CPSS) focuses on the stability and efficiency of the payment and settlement systems, which are the infrastructure of financial systems. Compared with these two committees, the orientation of CGFS is on markets.

In any case, the activities of these and other fora should become more important as financial markets are further globalized. This April, the Financial Stability Forum, established to strengthen cooperation among the Group of Seven countries and various international organizations with a view to enhancing international financial stability, held its first meeting. The Chairman of the CGFS was asked to participate in this new forum along with the Chair of the Basle Committee, the CPSS, IOSCO

(International Organization of Securities Commissions) and IAIS (International Organization of Insurance Supervisors). This, I believe, means that the CGFS is expected to make contributions from its market-oriented perspective.

Role of the Bank of Japan in international finance

Finally, I would like to briefly describe the role of the Bank of Japan in international finance. In the new Bank of Japan Law, effective since April last year, provisions that allow the Bank to conduct activities related to international finance based on its judgments have been stipulated reflecting the globalization of finance. The Bank performs many functions: e.g. intervening in foreign exchange markets as an agent of the Finance Minister, providing services to foreign central banks and international organizations wishing to invest in yen. In addition, the Bank is actively engaged in activities related to international finance through channels other than the BIS, including the G7, G10, IMF, etc. In the remaining minutes I would like to take up, from this broad spectrum, a few issues that are related to the role of our Bank with respect to international financial crises.

Understanding developments in international financial markets

First, let me explain the monitoring activities of the Bank of Japan with respect to international financial markets. The Bank is closely following developments in international financial markets in addition to its monitoring of the domestic economy and financial markets, and the outputs of such monitoring is reflected in the Bank's policy decisions involving both monetary and prudential policy. For example, the international effects of the Russian crisis of August last year was profound, and concerns about the repercussions of such effects on the Japanese economy were factored into the decision to lower the target money market rates in September last year. Another example involves the effects of the Asian crisis on the funding operations of Japanese banks. Japanese banks had been burdened with non-performing assets, and the Bank of Japan was concerned with the additional impacts of the crisis on banks – the possibility of further deterioration of their assets or potentially severer credit evaluation towards Japanese banks which could cause difficulties in their foreign currency funding. The Bank of Japan carefully monitored the international financial markets by closely contacting domestic banks and overseas authorities, facilitating the funding operations of Japanese banks in the domestic markets – I will elaborate on this point later. Fortunately, the tensions in the international financial markets began to ease in the latter half of October last year, and in line with this, the external pressures on Japanese financial markets also declined rapidly.

As the domestic and the overseas financial markets move more and more towards convergence, the Bank of Japan intends to enhance its monitoring activities further, particularly on the Asian economies and financial markets.

Contributions to international rulemaking

My second point involves contributions to policy formulation at the international level. One implication of the globalization of financial markets is that we can no longer be self-sufficient in the rules related to financial transactions. The trend is the application of internationally developed rules in the domestic sphere. The Basle Accord of 1988 was probably a landmark in this context. Since globalization is inevitable, the Bank of Japan must contribute to enhancing the stability of the international financial system through making efforts towards designing and implementing rules that it sees most appropriate. Of course, such rules are not under the sole jurisdiction of central banks, but we are aiming to make contributions from the perspective of central banks. The active participation of the Bank in various fora which I have just mentioned – Basel-based committees, EMEAP (Executives' Meeting of East Asia-Pacific Central Banks), fora in which governments are also members, etc. – is based on this judgment. In addition, various technical assistance, including those in the area of payment and settlement systems, provided by our Bank to central banks of the emerging market economies should also contribute to enhancing the stability of the international financial system.

Containing crises relating to international finance

As my final point on the role of the Bank of Japan, I would like to discuss the Bank's role in containing crises relating to international finance.

Once a crisis develops and its possible threats to international finance becomes more than negligible, potential use of multilateral or bilateral liquidity support becomes an issue. A typical situation is when credit needs to be extended to countries facing crises. In such cases, support packages have usually been arranged by the IMF. Central banks' involvement is characterized by their nature as a provider of short-term liquidity, and the Bank of Japan has cooperated in international financial support by, for example, sharing responsibilities in BIS bridge loans.

Moreover, developments in international finance are affecting Japanese financial markets. For example, since the summer of 1998, the worries about the Japanese financial system were heightened, following events such as rumors over the financial health of the Long Term Credit Bank. This was compounded with concerns over credit crunch in the international financial market stemming from the Russian crisis and problems at some US hedge funds, with the result that many Japanese banks experienced difficulties in securing foreign currency funding. Under such circumstances, the so-called "Japan premium" – the extra risk premium charged to Japanese financial institutions reflecting market participants' heightened concerns over their creditworthiness – increased significantly. At the same time, Japanese banks entered into swap transactions to obtain much needed foreign currency funding – such transactions are, from the viewpoint of Japanese banks, exchange of yen funds for dollar funds for a certain period. These operations by banks put significant upward pressures on short-term domestic money market rates. In response, the Bank of Japan conducted money market operations to provide year-end funding earlier than usual to mitigate funding problems at Japanese banks.

Meanwhile, foreign banks, which had entered into currency swap transactions with Japanese banks, needed investment instruments for the yen they acquired. During the financial crises, credit risk-free instruments were sought, and the choice of foreign banks was Japanese government short-term financing bills (FBs) and the bills drawn by the Bank of Japan. Bank of Japan bills were originally intended to serve as instruments to absorb excess reserves in the interbank market, but foreign banks regarded them as favorable investment instruments. In retrospect, there might have even been periods when the Bank's bills played a large role in inducing foreign banks to enter into currency swap transactions. In effect, an overview of the monetary flows at the time suggests that the provision of year-end funding and the issuance of short-term bills by the Bank of Japan to stabilize the domestic financial markets worked to recycle liquidity between Japanese and foreign banks, and facilitated the foreign currency funding of Japanese banks.

I might add that, although often overlooked, it is important to note that these operations can only be effective when the assets of the Bank of Japan is sound and the bills issued are risk-free. The Bank's effectiveness, especially during crises, as experienced during the unprecedented period of concurrent crises in the domestic and overseas financial markets recently, relies on the soundness of the Bank's balance sheet. This is one reason why the Bank is, as it should be, sensitive about maintaining the quality of its assets.

Today, I have had the pleasure of speaking to you on the role of central banks in international finance. As a final note I would like to stress that globalization affects not only financial institutions and non-financial firms but also central banks as well. Due to limitation over time, I could not touch upon profound changes in the banking services provided by central banks, for example, in the area of payments and settlements. The changes that we are experiencing now – financial innovation and globalization of financial markets – may be a radical change equivalent to the Industrial Revolution of the eighteenth century. Just as the 18th-century Britons probably did not recognize that they were in the midst of such a revolution, we may be unknowingly in the midst of a watershed event. The introduction of the euro in Europe and serious discussions on the pros and cons of dollarization in some Latin American countries seem to be very symbolic, as the new millennium is dawning. If I draw upon the remarks that Nobel laureate Hicks made almost thirty years ago, central banks may no longer be at the center and become local banks as a result of globalization. In order for central banks to continue making their contributions to the stability of the economy and the financial system, they must review their policies and operations in accordance with the ongoing globalization. The Bank of Japan is also determined to tackle such challenges ahead.