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Bank of Japan

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**Maintaining Stability and  
Enhancing Accessibility of Financial Markets**  
-- Japanese Financial Market Infrastructure in the Past and the Future --

*Speech at the Euromoney Japan Capital Markets  
and Global Borrowers Congress*

**Kiyohiko G. Nishimura**

*Deputy Governor of the Bank of Japan*

## **Introduction**

I am delighted and honored to have been invited to speak today at the Euromoney Japan Capital Markets and Global Borrowers Congress.

In order to strengthen the Japanese financial markets amid globalization, it is important, first, to maintain market stability, and second, to ensure a high degree of accessibility. Today, I would like to talk about these two points.

Maintaining market stability means securing market liquidity even during times of stress and is crucial to the support of the economic activities of financial institutions and firms. This relationship is often compared to the human circulatory system. The functioning of the circulatory system is often taken for granted. Likewise, financial institutions and firms may not pay much attention in normal times to funding liquidity and market liquidity that enhances the funding liquidity. They gain a painful appreciation of the vital importance of market liquidity, however, if -- like the circulatory system -- it stops functioning.

Therefore, I would first like to talk about the current conditions of the increasingly important market liquidity in the Japanese financial markets. Then I will touch on the measures for enhancing market stability in Japan, focusing particularly on the improvement of market infrastructure. Specifically, I will describe how, during the financial crisis in 2008, Japanese financial markets remained relatively stable compared to the United States and Europe. Next, I will outline the efforts to stabilize the Japanese financial markets after the financial crisis, through comparison with those in the United States and Europe.

Another important aspect of the financial markets today is enhancing accessibility of the markets. International funds transactions by financial institutions and investors have made financial markets increasingly borderless. Japanese financial markets have been facing fierce competition with financial markets in Asian emerging economies that have recently expanded their presence in the global economy, as well as those in the United States and Europe. Thus, the Japanese financial markets need to adapt to accelerating globalization by preparing market infrastructure with a high degree of accessibility. In this regard, I would like to explain the measures taken to improve the accessibility of infrastructure in

Japanese financial markets amid global competition.

Then, in closing my remarks, I will talk briefly about the importance of market participants' initiatives and the role of the Bank of Japan in ensuring stability and enhancing accessibility of the Japanese financial markets.

## **I. Financial Crisis in 2008: The United States, Europe, and Japan**

In the past quarter-century, international funds transactions have expanded considerably amid economic and financial globalization. Under these circumstances, the turmoil and dysfunction in the U.S. financial markets stemming from the failure of Lehman Brothers Holdings Inc. in the autumn of 2008 spread rapidly around the world, and global financial market conditions deteriorated significantly. Particularly in the United States and Europe, the concerns of market participants deepened over counterparty risk. Against this background, the money markets suffered markedly increased strain, with liquidity drying up particularly for term funding and LIBOR climbing sharply. For example, U.S. dollar and euro LIBOR-OIS spreads -- which represent the premium for liquidity and counterparty risks in interbank markets -- widened sharply after the financial crisis, showing a rapid heightening of tension in the money markets that deal with interbank transactions (see "U.S. dollar" and "euro" in Chart 1).

With regard to funding conditions for firms in the United States and Europe, downgradings of firms grew in number due to the significantly deteriorating environment for corporate profits after the failure of Lehman Brothers. This rapidly heightened uncertainty about the firms' ability to repay their debt. Subsequently, credit spreads on U.S. and European corporate bonds, including those with high ratings, widened rapidly, and liquidity in corporate bond markets decreased significantly (see "United States" and "Europe" in Chart 2).

Following the market turmoil, global financial markets generally regained stability from around the spring of 2009 due to bold policy measures taken by governments and central banks around the world. From January 2010, however, triggered by the fiscal problem in Greece, European financial markets became unstable, as seen in the growing concerns about

fiscal conditions in peripheral European countries and the financial soundness of European financial institutions.

Turning to Japan, financial markets became unstable immediately after the failure of Lehman Brothers, affected by the turmoil in the global financial markets. Recent developments in Japanese financial markets, however, have been relatively stable.

For example, in Japan's money markets, interest rates came under upward pressure after the failure of Lehman Brothers, but concerns over counterparty risk were limited to the transactions mainly with foreign financial institutions. Thus, although the yen LIBOR-OIS spread also widened, the rise was relatively marginal compared to the U.S. dollar and euro LIBOR-OIS spreads. Moreover, the effects of monetary easing by the Bank of Japan have recently been gradually spreading and the interest rates in the money market, including those of a longer term, have declined to extremely low levels (see "yen" in Chart 1).

With regard to funding conditions for firms in Japan, the issuing conditions for corporate bonds deteriorated, following those in the United States and Europe. Risk tolerance of major corporate bond investors, such as banks and life insurance companies, declined due to issuers' worsening financial conditions after the failure of Lehman Brothers and a steep fall in stock prices at that time. However, looking at corporate bonds rated AA or higher, which accounted for the majority of corporate bonds in terms of the total amount issued, the widening of credit spreads was limited even after the financial crisis, compared with that of BBB-rated corporate bonds. This differed from the United States and Europe, where credit spreads on corporate bonds even with high ratings widened significantly (see "Japan" in Chart 2).

Thus, it may be said that Japanese financial markets have shown -- in relative terms -- some stability against the shocks of the current financial crisis.

## **II. Measures to Stabilize Financial Markets after the Crisis**

Based on the experience of the recent crisis, market participants strongly reconfirmed that

ensuring financial market stability during times of stress was important. With this in mind, market participants at home and abroad have been taking measures to strengthen the infrastructure for financial market stability.

#### **A. Measures to Stabilize Financial Markets in the United States and Europe**

In the United States and Europe, market participants have recognized issues such as market transparency and risk assessment regarding over-the-counter (OTC) derivatives transactions including credit default swap (CDS) trading, and have discussed measures to strengthen market infrastructure related to the settlement and clearing system, such as the wide use of the central counterparty (CCP). Two of the most notable measures are review of the fails practice and reform of the repo market in the United States.

In the United States, after the failure of Lehman Brothers, an unprecedented number of fails occurred in Treasury transactions. In response to this, acting jointly, the Treasury Market Practices Group (TMPG) and the Securities Industry and Financial Markets Association (SIFMA) swiftly discussed and reviewed the fails practice. In May 2009, fails charges were introduced in order to prevent frequent occurrence of fails under low interest rate conditions.

As for tri-party repo transactions that are common in the U.S. general collateral (GC) repo market, in addition to Treasuries, mortgage-backed securities, agency debt, and corporate bonds had been accepted as collateral. As these three securities' prices declined, however, margin calls arose and haircuts were raised. As a result, liquidity in the repo market decreased significantly. Based on this experience, in September 2009 the Payments Risk Committee (PRC), a private-sector group of senior U.S. bank officials sponsored by the Federal Reserve Bank of New York that identifies and analyzes risk in payments and settlement systems, formed the Tri-Party Repo Infrastructure Reform Task Force. The task force has been reviewing collateral management and settlement practices.

#### **B. Measures to Stabilize Financial Markets in Japan**

As I mentioned earlier, at the time of the crisis, the Japanese government bond (JGB) and credit markets have remained relatively stable. This was because the Japanese financial

system, which had experienced a financial crisis in the 1990s, showed relative resilience compared with the systems in the United States and Europe.

In addition, the introduction of a delivery-versus-payment (DVP) mechanism for settlement of JGBs eliminated principal risk. Furthermore, a JGB clearing institution, the Japan Government Bond Clearing Corporation (JGBCC), accepted transactions between parties as a CCP, assumed the seller's obligation to every buyer and the buyer's obligation to every seller, and provided guarantee for settlement of those obligations. This reduced the settlement risk in the secondary market for JGBs as a whole and prevented a chain reaction of default in JGB settlement.

We should welcome the fact that a worst-case scenario was avoided in Japanese financial markets, as I have just described. This does not necessarily mean, however, that Japanese market infrastructure is sufficiently developed to ensure stability in times of crisis compared to the United States and Europe. Indeed, the current financial crisis revealed issues that were unique to Japan and different from those in the United States and Europe.

Specifically, the existing fails practice did not work as expected. As a result, the pace of JGB settlement was delayed significantly since fails occurred frequently in the secondary market for JGBs. In order to reduce the risk of fails, most market participants refrained from starting new repo transactions. Repo transactions are collateralized with government securities that command high creditworthiness. As a safer and more secure funding tool than uncollateralized transactions, they are expected to play an important role in ensuring liquidity in emergency situations. In reality, however, liquidity in the JGB repo market decreased, reflecting market turmoil mainly due to a steep increase in fails.

Based on these experiences, market participants have started to review the fails practice in order to further establish it, and have recognized, for example, that improving risk management by shortening the JGB settlement cycle is a priority issue for examination.

### **C. Reviewing the Fails Practice**

The working group of the Japan Securities Dealers Association (JSDA) has discussed and reviewed specific measures to further establish the fails practice. Measures such as the

introduction of fails charges will be effective from November 1, 2010. Some end-investors have been cautious up to now about accepting the fails practice, and it is vital for the review to help them come to understand the fails practice and establish it by developing business operations to handle fails. I hope that the fails practice will be further established and an environment will be developed in which market liquidity is not only maintained in normal times but also secured or quickly recovered during times of stress, thus strengthening the stability in the Japanese repo market.

#### **D. Shortening the JGB Settlement Cycle and Other Measures**

As I mentioned, materialization of principal risk was avoided in the settlement of JGBs. Market participants, however, became well aware of the liquidity risk that they could not receive bonds and funds as scheduled, during times of stress where default and settlement fails were likely to occur frequently.

Generally in the JGB markets, outright transactions are settled three days after the trade date (a T+3 settlement cycle), whereas in the United States and United Kingdom they are settled one day after the trade date (a T+1 settlement cycle) and in Germany two days after the trade date (a T+2 settlement cycle). The settlement cycle in Japan is thus longer than that in the United States and Europe, and the same applies to repo transactions. Market participants have accordingly been discussing measures to shorten the JGB settlement cycle in order to decrease the amount of unsettled outstanding positions of outright and repo transactions of JGBs.

It has been pointed out that the pace of intra-day settlement of JGBs by the JGBCC was delayed after the failure of Lehman Brothers. In response to this, policies have been laid out to strengthen the JGBCC's governance and enable it to take actions in order to enhance the funding arrangements in emergency situations such as defaults of the JGBCC participants and to improve transparency concerning how to allocate bonds subject to settlement fails. The Bank of Japan has been supporting such private-sector initiatives. I hope that in the process of further establishing the fails practice, the JGB settlement cycle will be shortened and the functions of the JGBCC will be further enhanced, so that the stability against market stress is further increased in the secondary market for JGBs.

### **III. Challenges to Improve Accessibility under Global Competition**

In the corporate bond and stock markets, market participants have engaged in efforts and discussions to improve the accessibility of market transactions, while ensuring market stability.

#### **A. Enhancing the Corporate Bond Markets**

As I stated earlier, it could be said that markets for corporate bonds rated AA or higher maintained a certain level of functionality during the current financial crisis. For corporate bonds rated A or lower, however, firms faced increased difficulty in issuing these bonds, or issuance conditions deteriorated, after the failure of Lehman Brothers. Accordingly, many large firms began to shift their funding to bank loans from corporate bond issuance during the crisis. Given these experiences, market participants became more aware of the fact that the Japanese corporate bond markets did not function sufficiently as a channel for funding by firms and that it was necessary to make efforts to enhance market liquidity.

Looking at the financial structure, the following are recognized as priority issues in the Japanese corporate bond markets. First, Japanese firms depend heavily on bank loans as a means of funding, and the size of the corporate bond markets is smaller than that in the United States. Second, the range of market participants in the corporate bond markets does not have sufficient diversity -- the "other side of the coin" of what I have just mentioned. In fact, issuers consist mainly of firms with high ratings and the major investors are domestic banks and life insurance companies. And third, as corporate bond issuance by firms is not active, the secondary market for corporate bonds has not been well developed.

Accordingly, a JSDA conference for enhancing the corporate bond markets discussed measures to foster a favorable environment for issuance of and investment in corporate bonds, including those with low ratings, and to bring in a wider range of investors. A report on the matter was released in June 2010.

The report listed the following issues for consideration. For issues related to the primary



markets, first, examination to accept corporate bonds will be reviewed to enhance the accessibility of issuers. Second, a provision and disclosure of covenants of corporate bonds and corporate bond management will be reviewed to promote the investors' holdings of corporate bonds with low ratings. Moreover, for issues related to the secondary markets, development of the infrastructure to provide information on market prices is currently under discussion to facilitate appropriate investment decisions by investors and determination of issuance environment by issuers. The Bank of Japan hopes that market participants will continue to take initiatives to strengthen market infrastructure, thereby improving stability and accessibility in the corporate bond markets.

## **B. Strengthening Infrastructure in the Stock Markets**

In Japanese stock markets, measures have been taken to improve the accessibility of transactions amid fierce competition with, for example, financial markets in Asian emerging economies.

Specifically, in January 2010, the Tokyo Stock Exchange (TSE) launched "arrowhead," the next-generation trading system for cash equity products. Due to developments in IT, the environment surrounding the stock exchanges has changed significantly, and a trading system called algorithmic trading, which automatically enters trading orders based on a certain data processing mode, has become popular among market participants. In other countries, as order placement and execution processing have accelerated, high-frequency trading (HFT) has become common. Therefore, the introduction of arrowhead meets the needs of investors at home and abroad to automate and accelerate the transactions. In addition, the TSE has been exchanging opinions with market users on the extension of trading hours, such as abolishing noon recess, which is uncommon in other major countries.

In Japan, the share of stock trading through a proprietary trading system (PTS), a trading system created by private firms, accounts for less than 1 percent of total listed stock trading, but in July 2010 one of the major companies from abroad started to offer a PTS. If the polarization of stock trading between stock exchange and off-exchange transactions leads to competition among these transactions, the utilization of the PTS, together with the measures taken by the TSE that I mentioned, is likely to help provide investors with more trading

opportunities and activating transactions.

In the United States, the sudden stock market plunge in May 2010 -- the so-called "flash crash" -- increased concern among market participants about financial market instability resulting from active algorithmic trading and the polarization of trading due to widespread off-exchange transactions. In this regard, price limits set for each stock issue may have contributed to market stability in Japan. Market participants, however, should pay careful attention to market stability given the trend of automation and acceleration of transactions in Japanese financial markets.

#### **IV. Toward More Stable and Accessible Market Infrastructure**

##### **A. Strengthening Market Infrastructure**

The experience of the recent crisis has reconfirmed that it is important to secure a stable source of liquidity in financial markets at all times. In strengthening market infrastructure, we should work toward reinforcing the financial market stability against stress, while at the same time considering measures to enhance accessibility with the aim of promoting active transactions.

In Japan, in order to address issues based on the experiences after the failure of Lehman Brothers, trading systems and market practices have been steadily established, in consideration of both market stability and accessibility. I hope that such initiatives and discussions will proceed further and Japanese financial markets will become stable markets that are credible to market participants and accessible markets that meet the needs of various investors and in funding.

##### **B. Role of the Central Bank**

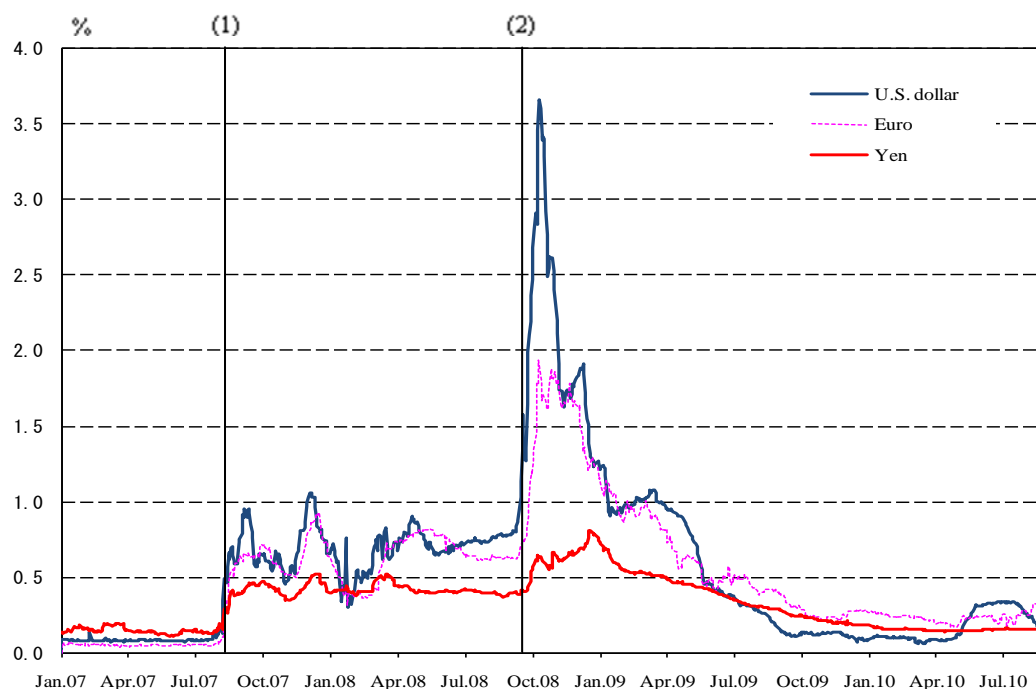
In closing my remarks, I would like to talk about the role of the Bank of Japan in strengthening market infrastructure. The effects of the central bank's monetary policy spread to the overall financial market and the real economy through various transactions by market participants and arbitrage trading between markets. The money market is where a central bank conducts daily money market operations that are essential to implement its monetary policy. The Bank plays a role in providing market infrastructure by operating

the Bank of Japan Financial Network System (BOJ-NET), which is a settlement system for funds and Japanese government securities (JGSs), and by providing payment and settlement services. Thus, the Bank recognizes that it is also crucial to strengthen market infrastructure equipped with a high degree of accessibility while maintaining market stability.

The Bank will continue to support market initiatives to strengthen infrastructure as much as possible through communication with the market, and will actively contribute to such initiatives by improving settlement infrastructure through, for example, the construction of the new BOJ-NET.

Thank you very much for your kind attention.

**Chart 1: Tension in the interbank market: LIBOR-OIS spreads (3-month)**

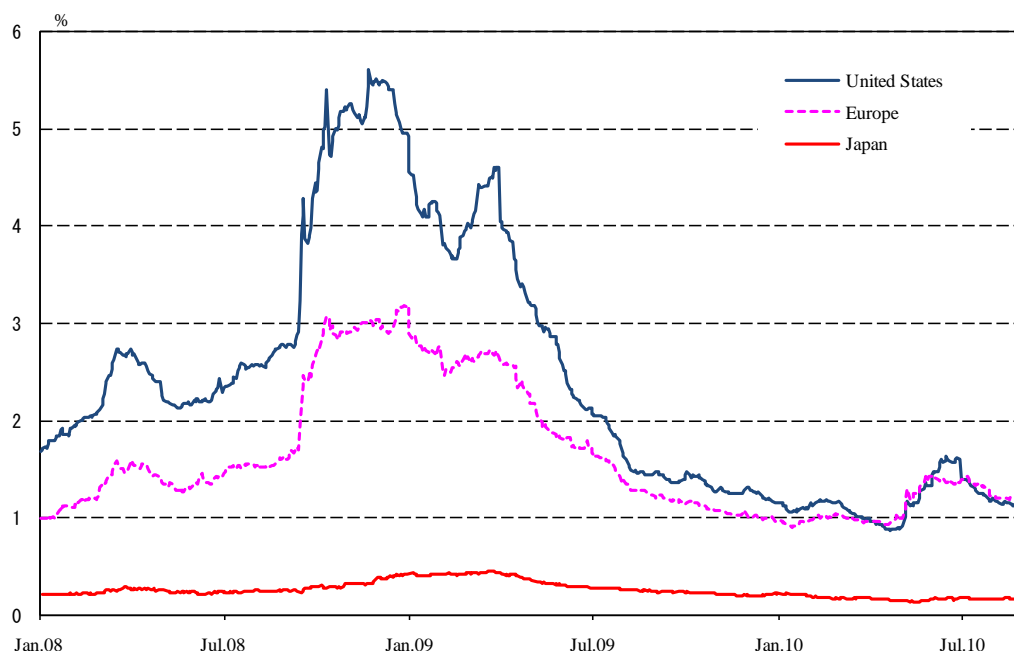


Notes: 1. (1) and (2) indicate the BNP Paribas shock (on August 9, 2007) and the failure of Lehman Brothers (on September 15, 2008), respectively.

2. Data up to September 10, 2010.

Source: Bloomberg.

**Chart 2: Tension in the corporate financing market: corporate bond spreads (AA-rated)**



Notes: 1. Corporate bond yields in Japan are obtained from "Reference Price (Yields) Table for OTC Bond Transactions," and those in the United States and Europe are calculated by the Bank of America Merrill Lynch.

2. The indicated rating of corporate bonds in Japan is of R&I, and those in the United States and Europe are of Moody's, S&P, and Fitch.

3. 3- to 7- year maturity for Japan; 3- to 5- year maturity for the United States and Europe.

4. Data up to September 10, 2010.

Sources: Bank of America Merrill Lynch; Japan Securities Dealers Association.