



March 18, 2016  
Bank of Japan

---

**Enhancement of Payment and Settlement Systems  
and the Bank of Japan**

*Remarks at the Forum on Payment and Settlement Systems*

**Shigehiro Kuwabara**

*Executive Director of the Bank of Japan*

(English translation based on the Japanese original)

## **Introduction**

Thank you very much for taking part in our Forum on Payment and Settlement Systems. To mark the opening, I would like to say a few words on the central bank's role in enhancing such systems, with a focus on large-value payment and settlement systems.

### **I. Central Bank and Large-Value Payment Systems**

Settlement is the primary function of central banks. The general public sees the central bank, first of all, as the issuer of money -- that is, banknotes -- which are the most widely used payment instruments. History shows us that many central banks were established with the aim of achieving efficiency in payments and settlements and ensuring stability in payment and settlement systems by providing risk-free payment instruments in a centralized manner. In comparison, the history of monetary policy is much more recent.

For economic activities to be strong, it is important that settlements of transactions are made ultimately final in an irrevocable way through the use of credit risk-free instruments -- that is, banknotes or central bank current account deposits. Many central banks operate large-value payment and settlement systems that are settled in central bank money, and their importance as infrastructure supporting the economy is rising further with the digitalization of payments.

### **II. Developments in the BOJ-NET and the Safety and Efficiency of Large-Value Payment and Settlement Systems**

Looking at developments in large-value payment and settlement systems in Japan, we see that enhancements in the safety and efficiency of payment and settlement systems have been achieved through initiatives by relevant parties such as financial institutions in the private sector, together with initiatives by the Bank of Japan.

In the 1980s, against the background of internationalization and the liberalization of finance, there was a growing need to make business operations for payments and settlements more efficient. Accordingly, in 1988 the Bank began operating the Bank of Japan Financial Network System, or BOJ-NET. The BOJ-NET has helped to enhance the safety and efficiency of payment and settlement systems through dematerialization of securities and online processing.

In line with growing awareness of settlement risks among financial institutions and financial markets, the Bank has actively enhanced the BOJ-NET. In 1994 it introduced delivery versus payment (DVP) for Japanese government bond (JGB) settlement, and in 2001 it introduced real-time gross settlement (RTGS). Drawing on the functionality of the BOJ-NET, financial institutions have worked to reduce settlement risks. In addition, central counterparties owned and operated by the private sector, such as the Japan Securities Clearing Corporation (JSCC), were established in the years after 2000.

### **III. The Financial Crisis and Trends in Large-Value Payment and Settlement Systems**

Such initiatives to enhance large-value payment and settlement systems have been pursued not only in Japan but also in other major economies. Reflecting these efforts, infrastructures including payment and settlement systems continued to function smoothly in each economy even during the global financial crisis of 2007 and 2008. The recognition that payment and settlement systems had functioned smoothly during the crisis was behind the agreement at the G20 Pittsburgh Summit in 2009 to use central counterparties to clear standardized over-the-counter (OTC) derivatives transactions.

There appear to be two issues underlying recent developments in large-value payment and settlement systems.

The first issue is the need to further enhance large-value payment and settlement systems in connection with ongoing progress in the globalization of economic activities and innovations in IT. The second issue is the need to further enhance the resilience of large-value payment and settlement systems, since their importance as a core infrastructure continues to grow. Let me elaborate on these issues.

#### **A. Further Enhancements of Large-Value Payment and Settlement Systems: The New BOJ-NET**

First, regarding the further enhancement of large-value payment and settlement systems, developments at major foreign central banks include the setup of new payment and settlement systems and operation for longer hours to achieve an overlap with overseas markets. For example, in the euro area, TARGET2, a large-value payment and

settlement system, went live in 2007, followed by T2S, a securities settlement platform, which went live in 2015. China also began operating a cross-border renminbi payment system, called the Cross-Border Interbank Payment System (CIPS), in 2015. This system has operated until 20:00 local time since its first day.

In these circumstances, the Bank has been accelerating its efforts to enhance the BOJ-NET, incorporating the IT innovations of recent years. The full launch of the new BOJ-NET in October 2015 is the prime example of our efforts.

The new BOJ-NET is built on the latest IT in programming language and system architecture. It is also designed with high flexibility to adapt to changes in future needs through the streamlining of BOJ-NET functionalities and commonalizing of application programs. Moreover, it has been structured for enhanced accessibility through the adoption of eXtensible Markup Language (XML) messages and internationally standardized codes to cope with developments such as financial globalization, and it has the technical capacity to operate for longer hours.

## **B. Enhancements in the Resiliency of Large-Value Payment Systems: Principles for Financial Market Infrastructures and Oversight**

The recent financial crisis focused considerable attention on enhancing the resilience of large-value payment and settlement systems. In this situation, in 2012 the Committee on Payment and Settlement Systems -- which is now known as the Committee on Payments and Market Infrastructures -- of the Bank for International Settlements and the International Organization of Securities Commissions published the Principles for Financial Market Infrastructures (PFMI). These are intended as the international standards for payment and settlement systems.

Central banks and financial authorities in major economies, including the Bank, have started to carry out oversight of major payment and settlement systems based on the PFMI. In addition, international implementation monitoring of the PFMI is being carried out by major economies, and in this monitoring there is continuous assessment as to whether each economy's payment and settlement systems satisfy the requirements of the PFMI, including the oversight framework. These activities should contribute to maintaining and enhancing the resilience of the payment and settlement system.

#### **IV. Outlook for Large-Value Payment and Settlement Systems and the Role of Central Banks**

Now I would like to talk about the outlook for large-value payment and settlement systems and the role of the central bank.

##### **A. Effective Use of the BOJ-NET**

As the globalization of economic activities progresses further, it is expected that an increasing number of transactions and payments will be made across borders and time zones. Many Japanese companies have already expanded their businesses in Asia and elsewhere, and there is a growing need for these companies to manage Japanese yen liquidity effectively across borders. It has also become more important for Japanese financial institutions operating abroad to secure sources of foreign currency liquidity funding overseas when necessary.

The new BOJ-NET has the potential to strongly support the activities of such companies and financial institutions. For example, by taking advantage of the overlap in operating hours of the new BOJ-NET with Asian markets all day and the European markets until around noon, the new BOJ-NET should support foreign currency liquidity funding using JGBs as collateral in Europe and the cash management of Japanese yen funds across Asia. In any event, I believe that the full launch of the new BOJ-NET is not the goal but the starting point of the initiative to further develop the financial market and vitalize economic activities by utilizing the new BOJ-NET.

At the same time, the Bank will continue to consider what it should do to further develop the market and vitalize the economy by utilizing the BOJ-NET. In this regard, of course, the operating hours of the future BOJ-NET are an important issue. The linkage of the BOJ-NET with payment and settlement systems abroad is also an issue for consideration. In this respect, in Asia there is an initiative under the ASEAN+3 framework to achieve cross-border DVP settlement of securities and funds. The Bank will continue to seek further effective use of the BOJ-NET. To discuss issues such as those I have just mentioned, the Forum Towards Making Effective Use of the BOJ-NET, for which the Bank serves as the secretariat, agreed today to establish three working groups and seek additional members. It is important for the relevant parties to become actively involved in discussing these issues and determine the best way to maximize the value of the new BOJ-NET.

## **B. Toward Further Enhancement of Payment and Settlement Systems**

The Bank also aims to actively support the initiatives of a wide range of relevant parties to enhance the payment and settlement systems.

Given payment and settlement system features such as economies of scale, economies of scope and network externality, to achieve the optimal situation for the economy, it is important that relevant parties communicate and cooperate and that, in some cases, the central bank set up initiatives. For example, in building an advanced system to dematerialize securities or reduce risks, it would be difficult to recover costs unless a number of participants decided to join such a system. Consequently, some participants might hesitate to make initial investment. The benefits of participating in payment and settlement networks and sharing market practices increase with the rising number of participants. In this situation, the Bank, from the standpoint of a central bank, will play an active role as a catalyst to support efforts by relevant parties to enhance the payment and settlement systems in Japan.

An example of such efforts is the shortening of the settlement cycle for JGBs and equities currently under consideration. Shortening the settlement cycle for securities helps to reduce risks and is effective in increasing other economies' confidence in Japan's financial market. To achieve this, however, all market participants need to adopt the new common trading practices.

In addition, to ensure confidence in the payment and settlement systems in Japan, each institution will be required to implement business continuity plan (BCP) measures which incorporate a range of scenarios including disasters and appropriate countermeasures against new threats such as cyber attacks, which have risen in recent years. To address such issues regarding BCPs and cyber attacks, cooperation among a wide range of relevant parties is essential.

The Bank, from the standpoint of a central bank, will extend the maximum support to the efforts by relevant parties to reinforce market practices, BCPs, and cyber resilience.

### **Concluding Remarks**

As I have just described, the Bank -- as the nation's central bank -- aims to actively

support a wide range of efforts among relevant parties to enhance the payment and settlement systems as a catalyst, and this Forum on Payment and Settlement Systems serves as an opportunity to achieve this aim. I would like to close my remarks now with the wholehearted wish that the discussions and exchange of views at today's forum will lead to further enhancement of the payment and settlement systems in Japan, and thereby contribute to the vitalization of economic activities.

Thank you for your attention.