

Business Continuity Planning at the Bank of Japan

Bank of Japan
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I. Introduction¹

The September 11 terrorist attacks in the United States have demonstrated the significance of business continuity planning addressing wide-scale disruptions and prompted many financial institutions at home and abroad to review and strengthen their own arrangements. To encourage and assist these moves by financial institutions, and thereby ensure effective functioning of payment and settlement systems and the stability of the financial markets in Japan even in times of disaster, the Bank of Japan has taken a number of measures. For example, it has discussed business continuity planning with financial institutions that hold current accounts at the Bank (hereafter the financial institutions). The Bank has provided relevant parties with opportunities to discuss how the overall resilience of the financial markets in Japan can be strengthened. Moreover, the Bank has released three papers on business continuity. They are (1) “Sound Practices on Business Continuity Management of Financial Institutions in Preparation for Disruption of Operational Sites,” released in March 2002; (2) “Results of a Questionnaire Study on Business Continuity Management,” released in February 2003; and (3) “Business Continuity Planning at Financial Institutions,” released in July 2003.² The third paper comprehensively delineates “sound practices” for developing and implementing business continuity plans.

In this paper, the Bank has outlined its current business continuity arrangements, in response to a number of inquiries from the financial institutions. Although some points require further consideration and some details have been omitted for security reasons, the Bank has nevertheless decided to release the paper to facilitate effective business continuity planning by the financial institutions.

It should be noted that the arrangements explained in this paper have not yet been coordinated with outside parties. The Bank will undertake the necessary coordination as it further reviews and strengthens the arrangements. It should also be noted that, although the Bank’s arrangements include preparations to address extremely severe conditions resulting from a disaster, the Bank does not expect all the financial institutions to be prepared for such conditions in the same manner.

¹ This is an English translation of the Japanese original released on July 25, 2003. Arrangements described in the paper are subject to change.

² The first and second papers are available only in Japanese. The third paper is available at <http://www.boj.or.jp/en/ronbun/03/ron0307b.htm>.

II. Framework of the Bank's Disaster Management

The Bank's disaster management consists of (1) minimizing the impact of a disaster on its business operations by implementing measures to prevent damage, and (2) ensuring, to the greatest extent possible, continuity of its critical business operations to fulfill the responsibilities it is expected to exercise even in times of disaster.³ What follows gives an outline of the Bank's plan and specific arrangements related to item (2) above.

III. Damage Scenarios and Basic Action Plans

The Bank faces various potential threats to business continuity such as (1) natural disasters including earthquakes and typhoons, (2) man-made disasters including terrorist attacks and cyber attacks, and (3) technical disasters including power outages and system failures. Depending on the extent of damage to the Bank's facilities and the impact on the Bank's operations that may result if these threats materialize, the Bank has identified three scenarios. The first scenario assumes a case where the Head Office in Tokyo (hereafter the Tokyo Head Office) remains functional, but the main computer center in the vicinity of Tokyo (hereafter the main computer center) is unable to continue its operations. The second scenario assumes that the main computer center remains functional, but the headquarters function at the Tokyo Head Office is affected by the disaster. In the third scenario, it is assumed that the Tokyo Head Office is affected and the main computer center is unable to operate.

Specific action plans differ for each scenario. In the first scenario, the Tokyo Head Office will continue to perform the headquarters function, but data processing at the main computer center will be switched over to the backup center in Osaka.⁴ The backup center will be able to receive and process online transfer instructions from the financial institutions, thereby avoiding disruptions in their payment and settlement activities. In the event the BOJ-NET terminals at the Tokyo Head Office cannot be used due to telecommunications failures and/or other consequences of the disaster, paper-based instructions received from the financial institutions and other documents

³ The Bank is a "designated public corporation" defined in the Disaster Countermeasures Basic Act (Law No. 223 of 1961). It is thus required to formulate a "disaster management operation plan" and put it into action in times of disaster.

⁴ Operations of the Bank of Japan Financial Network System (BOJ-NET) and other systems will be switched over to the backup center in Osaka. The BOJ-NET is a computer network system linking the Bank's computer center, the Tokyo Head Office/branches, and the financial institutions, and is used to transmit and process instructions online for the Bank's funds transfer service and service related to transfer of Japanese government bonds and bills (JGBs).

will be sent by facsimile from the Tokyo Head Office to Osaka for data input.⁵

To prepare for disruptions related to loss of the computer system, the Bank carries out industry-wide testing of switch-over to the backup center on an annual basis. The test aims to verify the plan's effectiveness, familiarize staff with relevant procedures, and determine areas requiring further improvement.

In the second scenario, although responses may vary depending on the extent of damage, the Bank will aim to continue its business operations to the greatest extent possible, focusing on business functions that need to be completed on the day a disaster takes place. High-priority functions would include delivery/receipt of cash and other activities necessary for maintaining the stability of the financial system. Arrangements are also in place to continue necessary operations outside the Tokyo Head Office in the event entry to the Tokyo Head Office is restricted temporarily due, for example, to a terrorist threat.

In the third scenario, there could also be variations in the responses depending on the extent of damage at the Tokyo Head Office. The Bank has, in particular, made arrangements to perform the most critical functions as the nation's central bank even in extremely severe conditions, when no contact can be made between Tokyo and Osaka for approximately two days. In such a case, the computer system will be switched over to the backup center in Osaka while part of the headquarters function will be transferred to Osaka (see the Appendix for details).

In both the first and third scenarios, the Bank will fully utilize its backup facilities and resources in Osaka. Osaka is geographically distant from the Tokyo Head Office, and the Osaka area has access to the largest number of the Bank's personnel after the Tokyo Head Office.

IV. Specific Arrangements and Infrastructure at the Bank

The Bank has taken some preparatory measures to effectively carry out critical operations in a disaster situation. They include establishing an emergency organizational structure, ensuring the availability of personnel, and reinforcing the necessary infrastructure. An outline of such preparations is given below.

⁵ Under this procedure, some transactions scheduled to be settled on the day a disaster occurs may not be settled by the end of the day due to system constraints.

A. Disaster Management Team

For smooth handling of the disaster situation, the Bank will, if necessary, establish a disaster management team. The team will have centralized responsibility for monitoring and assessing the impact of the disaster on the Bank's business operations, collecting and disseminating information, and communicating with parties both within and outside the Bank.

B. Staffing

To ensure a prompt response, the Bank has arrangements in place to secure necessary personnel in various emergency situations, including when a disaster strikes during nonbusiness hours such as at night or on holidays, and when the government issues a warning of an imminent, large-scale earthquake. Specifically, the Bank has assigned in advance personnel responsible for initiating disaster response procedures and personnel for carrying out critical business operations. The timing of convening these personnel and the type of activities they conduct are specified for various cases and stages of a disaster. In particular, key personnel are required to reside in or stay at accommodations near the Tokyo Head Office so that response procedures can be initiated quickly in the event the Tokyo Head Office is affected by a disaster. A similar type of housing arrangement is in place for personnel in Osaka who are responsible for various backup functions.

C. Communications

To minimize the probability that the Tokyo Head Office will be isolated from other areas in case of a disaster, the Bank is equipped with a diverse range of internal and external communications. These include fixed telephone services, facsimiles, mobile phones, e-mail,⁶ priority telephone services for use in emergencies, wireless devices (i.e., the Central Disaster Management Radio Communication Network and satellite telephones), and the messaging function of the BOJ-NET. Contact lists are exchanged among relevant departments and branches of the Bank and the financial institutions.

The Bank will also utilize its Web site and other means to promptly and accurately disseminate information on its operational status under the direction of the disaster management team.

Those visiting the Head Office will receive information from the Bank's staff, who will also be responsible for answering phones and replying to e-mails as long as telecommunications infrastructure in the Tokyo metropolitan area is operating.

⁶ The backup computer center in Osaka has a backup internal e-mail system for communication among the Tokyo Head Office and branches in the event of a disaster.

D. Backup Facilities

The Bank maintains a backup computer center in Osaka. The backup system of the BOJ-NET in Osaka is connected to the main computer center in Tokyo by a high-capacity proprietary line. Proprietary lines also link the financial institutions and the two computer centers. The main computer center has in-house generators and is earthquake-resistant. In the event the main computer center is unable to operate the BOJ-NET despite such measures, the main computer center will be disconnected from the network, and the backup system in Osaka will be activated and connected with the financial institutions and the Bank's Tokyo Head Office/branches. The backup system will use data mirrored from the main computer center. The switch-over process is expected to take approximately two hours, after which the BOJ-NET will resume its operations.⁷ Host computers, communications controllers, and databases of the BOJ-NET are all duplicated at both the main and backup computer centers.

The backup facility for performing the headquarters function is located in Osaka. Necessary personnel will be drawn from the Osaka Branch and other branches in the area. The Bank is also prepared to continue necessary operations in the event the Tokyo Head Office must be evacuated for a limited period of time. This is to address incidents such as a bomb threat, which some Japanese financial institutions experienced immediately after the terrorist attacks of September 11, 2001.

V. Issues for Further Consideration

As explained above, the Bank has been preparing for various kinds of disaster. It will continue to review its arrangements and improve the level of preparedness, in view of new types of threats, such as multiple terrorist attacks and cyber-terrorism, and other emerging computer crimes. Changes to the Bank's arrangements will be disclosed as necessary.

To strengthen the overall resilience of Japan's financial system, coordinated efforts among the financial institutions, payment and settlement system operators, and other relevant parties as well as the Bank are essential. The Bank, for its part, will exchange views with the financial institutions, and improve its business continuity plan by including arrangements to address cases where a significant number of the financial institutions are affected by a disaster.⁸ This paper is intended to provide the basis for

⁷ The Bank will continue to reduce the time required for the switch-over by making use of advances in information and communications technology.

⁸ The current arrangements address system and telecommunications failures at the financial institutions that could occur even when both the Tokyo Head Office and the main computer center of the Bank are functioning, such as a breakdown of BOJ-NET terminals. To prepare for such events,

such a process.

The Bank hopes that such efforts will assist business continuity planning at individual financial institutions. The Bank also hopes that this paper, together with the previously mentioned paper prepared by the Bank, “Business Continuity Planning at Financial Institutions,” will help the financial institutions develop and implement the necessary arrangements in a manner that suitably reflects the business and risk profiles of individual institutions.

the Bank allows the financial institutions to (1) access the computer network using their backup sites, (2) have backup BOJ-NET terminals, and (3) duplicate telecommunications lines. For certain types of operations, the financial institutions will also be allowed to input and output data using magnetic tapes and to input and output data at the Bank’s Tokyo Head Office.

Appendix: An Outline of Business Continuity Arrangements under Extremely Severe Conditions

The Bank aims to continue the most critical functions as the nation's central bank even in extremely severe conditions resulting from a disaster, when both the Tokyo Head Office and the main computer center in Tokyo are affected and no contact can be made between Tokyo and Osaka. In such a case, part of the headquarters function will be performed in Osaka and the back-up center in Osaka will operate the computer system. As described below, the Bank has identified a range of operations that would be conducted (1) by the Tokyo Head Office to support economic activity in the disaster-stricken Tokyo area that is isolated from other areas, and (2) in Osaka to ensure the stability of the payment and settlement system in areas unaffected by the disaster, taking into account the various constraints such as limited availability of personnel and computer systems under severe conditions.

The business operations listed below are those that the Bank has identified as the most critical. However, this does not mean that the Bank will discontinue all other operations when a disaster occurs. The Bank will continue other daily operations to the greatest extent possible, depending on the degree to which they are affected by the disaster.⁹

A. Business Operations to Be Continued at the Tokyo Head Office

The Bank's Tokyo Head Office will support economic activity in the Tokyo area that has been hit by a disaster and is isolated, by giving top priority to operations to ensure the smooth supply of currency. Specific business operations include the following.

1. Cash-related services

The Bank will take measures to ensure the smooth supply of cash to the extent permitted by available human and other resources. Damaged banknotes and coins brought to the Bank will be examined and exchanged for clean ones in accordance with the relevant criteria.

⁹ In times of disaster, the Bank may, when necessary, conduct operations during nonbusiness hours and on holidays.

2. Processing of credits/debits to current accounts and credit extension

The Bank will, to the extent permitted by available personnel, manually process (1) credits and debits to current accounts held by the financial institutions as they conduct cash withdrawals and other transactions, and (2) credit extension and related operations.¹⁰

3. Monitoring of payment and settlement systems

The Bank will monitor and assess the impact of the disaster on the operation of the BOJ-NET and private-sector payment and settlement systems. Necessary measures will be implemented through communication and coordination with relevant parties.

4. Emergency financial measures

The Bank will announce, in a joint statement with the Director of the Local Finance Office of the Ministry of Finance or the Director-General of the Local Finance Bureau, the implementation of emergency financial measures in the disaster-stricken area.

Emergency financial measures include the following that need to be taken by financial institutions: (1) “financial measures for a disaster-stricken area” specified in the Financial Services Agency Guidelines for Supervision, such as easing documentation requirements for cash withdrawals and credit extension, and providing services on bank holidays; (2) exchanging damaged banknotes for clean ones; and (3) handling cases of lost JGB certificates.

B. Business Operations to Be Transferred to Osaka

In the event that areas around the Tokyo Head Office become isolated from other areas, the Bank will transfer the most critical operations pertaining to the headquarters function to Osaka, to ensure the stability of the payment and settlement system in areas not affected by the disaster.

The Bank will establish a disaster management team in Osaka. The team will have the same level of responsibility as the one at the Tokyo Head Office, namely, it will decide on implementation of emergency measures described below, such as the timing of activating the backup computer system.

¹⁰ See Section C for details on the Bank’s credit extension policy.

1. Operation of the BOJ-NET

The Bank will activate the backup computer system in Osaka to operate the BOJ-NET. The Bank's branches and the financial institutions unaffected by the disaster will be able to submit instructions online for funds transfers and JGB transfers.

2. Settlement of transactions that have already entered the settlement process

The Bank will conduct operations related to settlement of the following types of transactions, provided that necessary data have been entered into the BOJ-NET system: (1) transactions to be settled using the "simultaneous processing" mode (e.g., outright purchases/sales of bills); (2) transactions requiring online confirmation by the financial institutions (i.e., start- and end-day transactions in purchase/sale of JGBs with repurchase agreements); and (3) net settlement positions arising from private clearing systems (i.e., the Tokyo International Financial Futures Exchange, bill and check clearing systems, the Foreign Exchange Yen Clearing System, and the Zengin System).

3. Credit extension

The Bank will extend credit to the financial institutions when necessary to ensure smooth processing of item 2 above (see Section C for details on the Bank's credit extension policy).

4. Communication and coordination with overseas parties

To avoid confusion in overseas financial markets, the Bank will promptly notify relevant parties including foreign central banks and international organizations of the impact of the disaster on the Bank's operations. Necessary communication and coordination will also take place.

The Bank has arrangements in place to disseminate information regarding its emergency measures such as information on the types of business operations that have been transferred to Osaka. If the Bank's Web site cannot be used due to failure of the web server or other necessary facilities and it is expected that a considerable amount of time is required for them to recover, an alternative server located at a remote site will be employed temporarily.¹¹ Using this server, the Osaka Branch will provide, through its Web site, as much information as possible to areas unaffected by the disaster.

¹¹ The server normally shared by the Bank's branches and offices (<http://www3.boj.or.jp/>) will be used in emergency situations.

C. The Bank's Policy on Credit Extension in Times of Disaster

To ensure smooth settlement through the BOJ-NET, the Bank will extend credit to the financial institutions in a timely manner when they, despite efforts to secure liquidity, are short of funds to cover their outgoing payments in times of disaster. The Bank's decision will be made taking into account factors such as the extent to which financial markets are functioning and the nature of payments handled by the financial institutions.