Information Disclosure Based on the Principles for Financial Market Infrastructures: The JGB Book-Entry Transfer System

Bank of Japan

September 2015

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1. Summary

1-1. The Purpose of This Document

The Bank of Japan (hereafter "the Bank") operates the JGB Book-Entry Transfer System as a book-entry transfer institution for the Japanese government bond (JGB)[1] based on the Act on Book-Entry Transfer of Corporate Bonds and Shares, etc. (hereafter "Book-Entry Transfer Law"). The JGB Book-Entry Transfer System provides for JGB deliveries and receipts stemming from transactions in these instruments between participants to be made in the form of book-entry transfers. The Bank has built the Bank of Japan Financial Network System -- BOJ-NET Funds Transfer System (FTS) and BOJ-NET JGB Services[2] -- with the aim to settle funds and JGBs between the Bank and financial institutions efficiently and safely online. With regard to JGB book-entry transfers under the JGB Book-Entry Transfer System, financial institutions participating in the JGB Book-Entry Transfer System (hereafter "participants") can make use of the BOJ-NET.

This document is designed to meet the disclosure requirement stipulated in "The Principles for Financial Market Infrastructures" (PFMIs), an international standard adopted in April 2012 by the Committee on Payments and Market Infrastructure (CPMI) of the Bank for International Settlements (BIS) and the Board of the International Organization of Securities Commissions (IOSCO), and it covers primarily the JGB Book-Entry Transfer System and the BOJ-NET JGB Services operated by the Bank. References will also be made to the BOJ-NET's business associated with JGB book-entry transfers (such as Delivery Versus Payment [DVP] settlement for JGB and in-transit collateral) as required.

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1 The JGB Book-Entry Transfer System covers exclusively dematerialized JGBs (book-entry JGBs) in accordance with the Book-Entry Transfer Law.

2 The BOJ-NET was established and is operated with the aim of efficiently and safely executing online funds and JGB settlements between the Bank and financial institutions through a computer network. The BOJ-NET connects the Bank's computer center with the Bank's head/branch offices and the financial institutions participating in the network with communication circuits that allow the data entered at the Bank's head/branch offices or financial institutions to be processed online at the Bank's computer center. In addition to connections with terminals, direct connection with financial institutions' computers is possible.

The functions of the BOJ-NET comprise (1) JGB Services for JGB settlements and (2) FTS for funds settlements. The former executes the JGB settlements arising from purchase and sale of JGBs, and transactions on auction, and issuance. The latter executes funds settlement on JGB transactions as well as other market transactions.

Principles 6, 10, 14, 15, and 24 of the PFMIs will not be applied to the JGB Book-Entry Transfer System due to the nature of their provisions.

1-2. Outline of the JGB Book-Entry Transfer System

The Bank offers real time gross settlement (RTGS) using the BOJ-NET JGB Services[3] for the delivery of JGBs among participants or between the Bank and participants. Under the RTGS, each transfer request or notice (hereafter "transfer instruction") given in the BOJ-NET JGB Services by the Bank or participants is settled immediately per transfer instruction once the BOJ-NET JGB Services confirms that it has secured a sufficient outstanding amount of the JGBs. Most of the participants are users of the BOJ-NET JGB Services.

In addition, by linking the BOJ-NET (FTS) and the BOJ-NET JGB Services, the Bank offers DVP settlement of JGB (under which the funds transfer in the BOJ-NET [FTS] and the corresponding JGB transfer in the BOJ-NET JGB Services are linked so that one is executed on the condition that the other is executed). In order to reduce the participants' burden of carrying intraday liquidity required by RTGS settlements and to ensure the smooth execution of JGB settlements, the Bank offers the intraday overdraft facility[4] and the in-transit collateral facility (which enables, for example, a participant to pledge to the Bank JGBs received through DVP settlement to simultaneously draw an intraday overdraft from the Bank to pay for the JGBs).

The legal basis of the JGB Book-Entry Transfer System is provided by the Book-Entry Transfer Law, the Bank of Japan Regulations Concerning the JGB Book-Entry Transfer System (hereafter "the Regulations") set by the Bank pursuant to the Book-Entry Transfer Law, and the Rules Concerning the JGB Book-Entry Transfer System (hereafter "the Rules") that provides specifics of the Regulations. The legal basis of the BOJ-NET JGB Services is provided by the rules for its usage. A high degree of legal certainty under the relevant laws on (1) the dematerialization of securities

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[3] A very small portion of JGB settlements, including the return of JGBs pledged as collateral to the Bank (that are designated to be processed at 15:00) are batch processed immediately after 15:00 on the designated delivery date. Note that DNS was abolished when the new BOJ-NET began full operation (on October 13, 2015), and all JGB settlements moved to RTGS.

[4] In order to facilitate JGB settlements and accompanying funds settlements, the Bank provides the participants it has authorized, when requested, with intraday liquidity to be repaid by the closing hour in the form of an overdraft (i.e., intraday overdraft facility) up to the assessed value of collateral pledged in advance.

(acquisition, transfer and extinguishment of rights resulting from the entry of records in the transfer account ledger), (2) the tiered structure, (3) the finality of the settlement, and (4) the DVP settlements between funds settlements and JGB settlements is ensured by these Regulations and Rules.

1-3. Participants in the JGB Book-Entry Transfer System

The types of participants in the JGB Book-Entry Transfer System comprise (1) Direct Participants (hereafter referred to as "DPs") that hold their accounts at the Bank, (2) Indirect Participants (hereafter referred to as "IPs") that hold their accounts at DPs, (3) Foreign Indirect Participants (hereafter referred to as "FIPs") that hold their accounts at DPs, IPs or FIPs; and (4) Customers that hold their accounts at the Bank, DPs, IPs, or FIPs. The JGB Book-Entry Transfer System takes a tiered structure, whereby the Bank opens accounts and manages JGBs for banks and financial instruments business operators, that are, DPs, who open accounts and manage JGBs for their customers (including IPs and FIPs). The eligibility criteria for the participation of the JGB Book-Entry Transfer System are stipulated in "Requirements for Establishing Direct Participants' Accounts and Customers' Accounts and Requirements for Approval as Indirect Participants and Foreign Indirect Participants in the JGB Book-Entry Transfer System," and are made public.

DPs include banks and financial instruments business operators located in Japan, while IPs include *shinkin* banks and financial instruments business operators located in Japan, and FIPs include foreign banks and financial instruments business operators located overseas. Of these participants, only DPs can use the BOJ-NET JGB Services.

1-4. Risk Management Pertaining to This System

The JGB Book-Entry Transfer System's operational stability and risk management are ensured by the governance structure of the Bank.[5]

The Bank does not bear credit or funds liquidity risk in individual JGB settlements made by the participants under the JGB Book-Entry Transfer System, as it is not a party

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5 The Bank operates the JGB Book-Entry Transfer System as the business pertaining to book-entry transfers of JGBs as a book-entry transfer institution designated under Article 47 of the Book-Entry Transfer Law and as business authorized under Article 39 of the Bank of Japan Act.

to these transactions. Although the Bank provides an intraday overdraft facility, as mentioned earlier, it appropriately manages risks associated with such credit provision by receiving in advance eligible collateral covering the amount of credit extended and by managing the amount of extended credit so that it remains within the value of the collateral pledged. The Regulations stipulate procedures to abolish an account in the event of a participant default and to port the outstanding amount of JGBs of defaulted participants' customers. It also stipulates that the Bank may additionally set or act on necessary matters so long as it aims at securing smooth operations of the JGB Book-Entry Transfer System.

As to operational risks, the Bank sets detailed operational procedures for participants and itself based on the detailed analysis of the JGB Book-Entry Transfer System's operations and on the operational flows established to control such risks. The BOJ-NET JGB Services are developed by identifying and curbing the operational risks in the design phase of system development. For business continuity planning, important IT systems are duplicated, data at the Bank's main center are reflected at its backup center near real time, and the switchover to the backup center can be executed to resume operations within two hours.

2. Important Changes Made since the Last Disclosure

Not applicable, as this is the first information disclosure of the JGB Book-Entry Transfer System based on the PFMIs.

3. Outline

3-1. Outline of the JGB Book-Entry Transfer System and the BOJ-NET JGB Services Operated by the Bank

The Bank operates the JGB Book-Entry Transfer System as a book-entry transfer institution for JGBs based on the Book-Entry Transfer Law. The JGB Book-Entry Transfer System provides for JGB deliveries and receipts stemming from transactions in these instruments between participants to be made in the form of book-entry transfers. The JGB Book-Entry Transfer System takes a tiered structure; the Bank opens accounts and manages JGBs for banks and financial instruments business operators, who also open accounts and manage JGBs for their customers (including Indirect Participants and Foreign Indirect Participants).

The types of participants in the JGB Book-Entry Transfer System comprise (1) DPs that hold their accounts at the Bank; (2) IPs that hold their accounts at DPs; (3) FIPs that hold their accounts at DPs, IPs or FIPs; and (4) Customers that hold their accounts at the Bank, DPs, IPs, or FIPs (see Chart 3-5). The eligibility criteria for the participation of the JGB Book-Entry Transfer System are stipulated in "Requirements for Establishing Direct Participants' Accounts and Customers' Accounts and Requirements for Approval as Indirect Participants and Foreign Indirect Participants in the JGB Book-Entry Transfer System," and are made public.

As of the end of March 2015, there were 280 DPs including banks and financial instruments business operators, 965 IPs including *shinkin* banks and financial instruments business operators located in Japan, and 133 FIPs including foreign banks and financial instruments business operators located overseas.

The Bank offers online RTGS[6] using the BOJ-NET JGB Services for delivery of JGBs among participants or between the Bank and participants. Of the 280 DPs, there were 270 BOJ-NET JGB Services users.

A large part of funds settlements arising from JGB settlements under the JGB

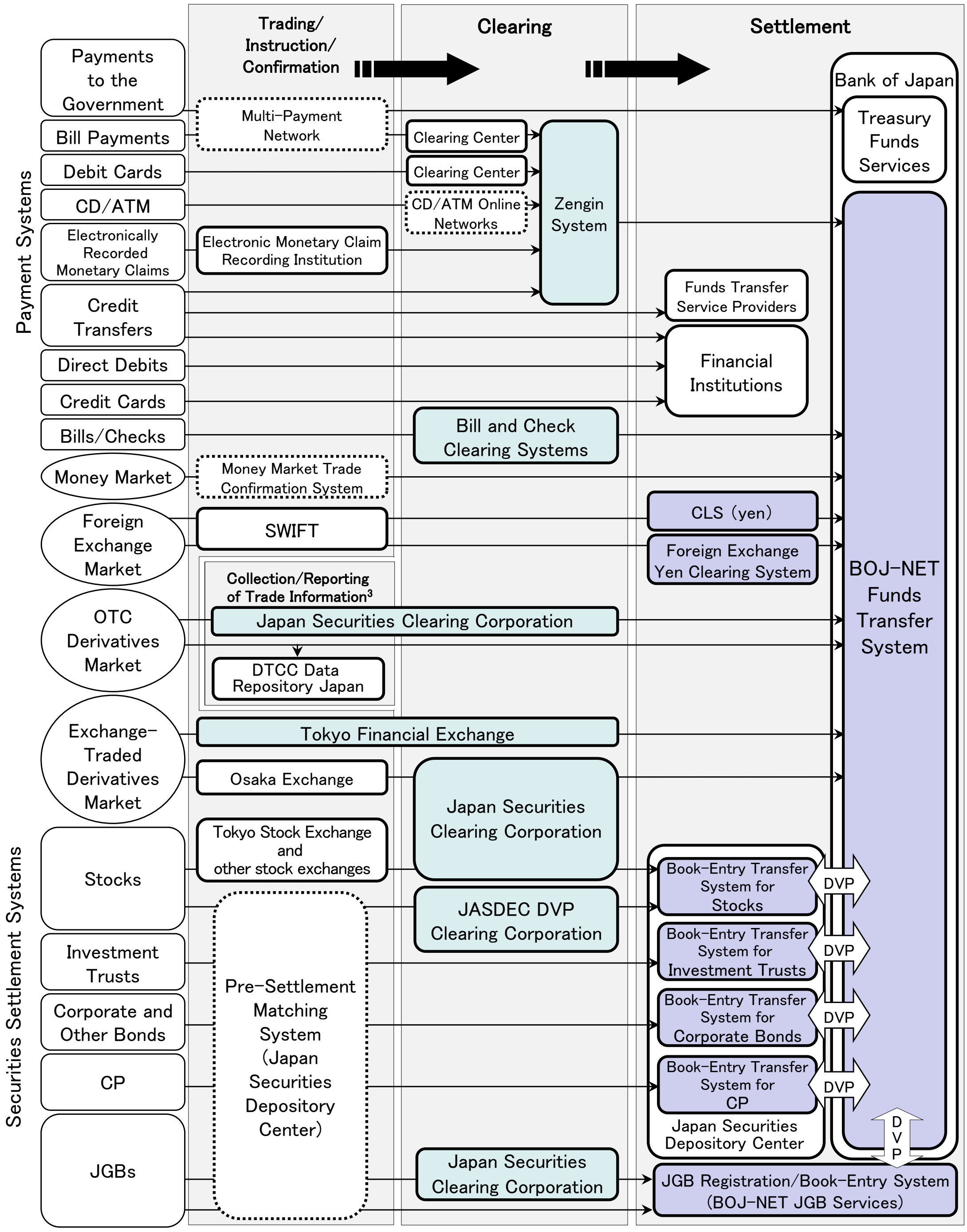
[6] Under RTGS, each transfer instruction given in the BOJ-NET JGB Services by the Bank or participants is settled immediately per transfer instruction once the BOJ-NET JGB Services confirms that it has secured the sufficient outstanding amount of JGBs.

Book-Entry Transfer System is executed online in the BOJ-NET (FTS) that effects transfers between participants' current account deposits held at the Bank.[7] By linking the BOJ-NET (FTS) and the BOJ-NET JGB Services, the Bank offers DVP settlement, under which each funds transfer in the BOJ-NET (FTS) and the corresponding JGB transfer in the BOJ-NET JGB Services are linked so that one is executed on condition that the other is executed. In order to reduce the participants' burden of carrying intraday liquidity for RTGS settlements and to ensure smooth execution of JGB settlements, the Bank offers intraday overdraft facility and a facility called in-transit collateral that enables, for example, a participant to pledge to the Bank JGBs received through DVP settlement and to simultaneously draw an intraday overdraft from the Bank to pay for the JGBs (see Section 3-4).

This document mainly covers the JGB book-entry transfer settlements under the JGB Book-Entry Transfer System and the BOJ-NET JGB Services operated by the Bank, and makes reference to the BOJ-NET's business associated with JGB book-entry transfers (such as DVP settlement for JGBs and in-transit collateral) and the Bank's operational arrangements as required.

[7] Those that do not participate in the BOJ-NET make settlement requests in paper form at the Bank's window; the Bank then enters the requests into the BOJ-NET to execute settlements.

(Chart 3-1) Major FMIs in Japan and Their Connection with the JGB Book-Entry Transfer System



Note: Systems surrounded by a dotted line are used in some instruction, confirmation, and clearing activities.

JGBs, as high-credit and highly liquid securities, occupy a central position in financial markets and are traded in very large amounts each day in the JGB market. In fiscal 2014, JGB settlement in the BOJ-NET JGB Services stood at approximately 103 trillion yen in terms of value and 19,000 transactions in terms of volume per business day, respectively (Chart 3-2).

(Chart 3-2) Value and Volume of Payments and Settlements by Major FMIs (Fiscal 2014[1])

Large-value payments	Value (trillion yen)	Year-on-Year growth (%)	Volume (thousands)	Year-on-Year growth (%)
BOJ-NET Funds Transfer System	128.2	+9.2	69.0	+3.2
Of which: Interbank transfers	39.8	–0.7	—	—
DVP for JGBs	55.8	+20.8	—	—
Large-value Zengin System payments	8.8	+1.1	—	—
CLS (yen payments)	51.1	+8.9	107.7	–4.2
Foreign Exchange Yen Clearing System (FXYCS)	13.3	+11.7	26.9	–1.0
Zengin System[2]	11.9	+1.5	6,197.0	+2.0
Bill and Check Clearing Systems	0.9	–15.0	88.3	–7.4

Securities settlements	Value (trillion yen)	Year-on-Year growth (%)	Volume (thousands)	Year-on-Year growth (%)
BOJ-NET JGB Services	102.9	+10.3	19.2	+6.3
Japan Securities Clearing Corporation (JSCC [Over-the-counter JGB transactions])[3]	54.7	+29.9	—	—
Japan Securities Clearing Corporation (JSCC [Exchange-traded transactions])[3]	3.2	–8.1	—	—
JASDEC DVP Clearing Corporation (JDCC)[3]	1.7	+12.7	114.6	+16.1
Japan Securities Depository Center (JASDEC)[4]				
Of which: Stock	—	—	430.5	+2.7
Dematerialized CP	6.6	+30.4	1.5	+24.2
Corporate and other bonds	0.9	+10.6	2.1	+5.2
Investment trusts	1.1	+2.1	24.2	+9.9

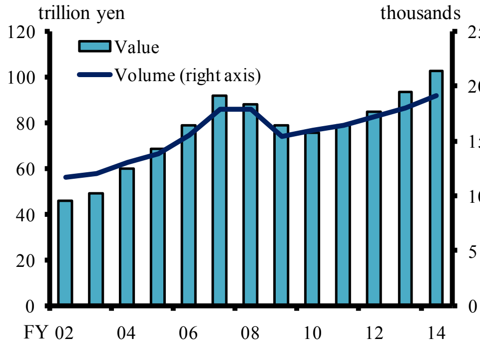
Notes:

1. The figures are the average per business day for fiscal 2014.
2. The value and volume of payments handled by the Zengin System.
3. The value and volume of payments (one-way) associated with clearing transactions (acceptance of obligations) by the central counterparty. For the Japan Securities Clearing Corporation (JSCC) (exchange trading, etc.) and JASDEC DVP Clearing Corporation (JDCC), only the value and volume of payments (one-way) for equity trading are included.
4. The sum of transfers, underwriting, and redemptions under each system (the sum of establishments, cancellations, and transfers for the Book-Entry Transfer System for Investment Trusts).

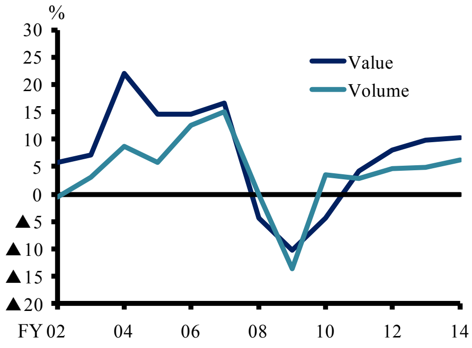
Sources: Japan Securities Depository Center (JASDEC), Japanese Bankers Association, Japanese Banks' Payment Clearing Network, Bank of Japan, JSCC, and JDCC.

(Chart 3-3) Value and Volume of Settlements via the BOJ-NET JGB Services

<Value and Volume of Transactions>



<Year-on-year Growth>



Source: Bank of Japan.

The fees for the use of the settlement services offered by the Bank under the JGB Book-Entry Transfer System are in principle set based on the following policy. First, the Bank considers that it should basically bear the costs for putting its infrastructure in place to offer its settlement services (including the costs of the development and maintenance of the systems). This is because the FMI the Bank offers to execute funds and JGB settlements among financial institutions is a public infrastructure that is fundamental to the functioning of the financial and capital markets. Moreover, it is considered that investing to further enhance the safety and efficiency of its FMI in response to changes in the surrounding environment such as technological innovation is an inherent function of central banks. On the other hand, financial institutions using these services online via the BOJ-NET can expect to benefit from the lighter operational burden and shorter processing time compared with those when using these services via paper-based requests to the Bank. Therefore, when an access is made via the BOJ-NET, the Bank collects the costs from participants for the connection with the BOJ-NET and the use of communication circuits in the form of fixed fees and transaction fees, which correspond to the benefits from online processing. The fixed fees are determined by the type of communication circuit, while the transaction fees are set according to the type of message format.

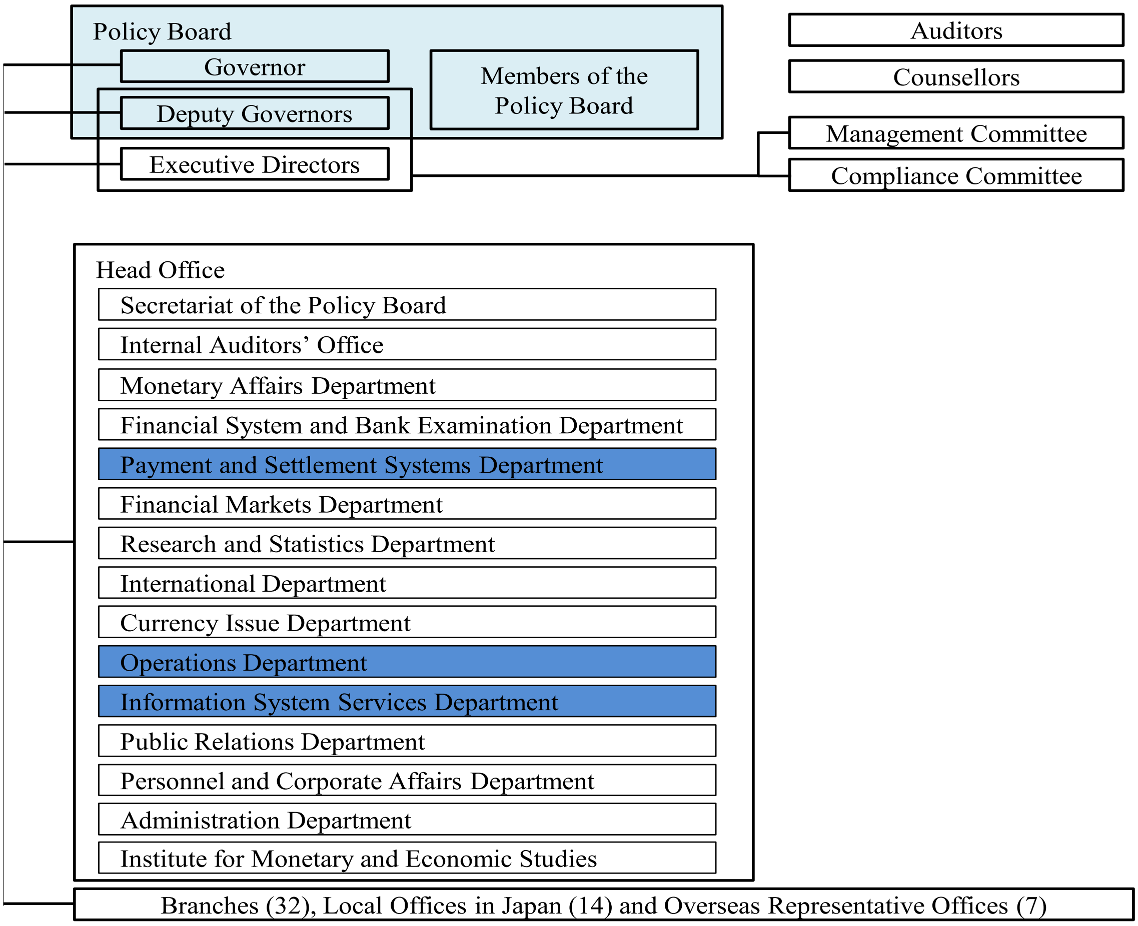
3-2. Organizational Structure

The Bank's governance structure is as shown below (Chart 3-4). The stability of the JGB Book-Entry Transfer System operated by the Bank is secured by this structure.

The Bank's organizational structure is set forth in the Bank of Japan Act (hereafter "the Act") as well as in the Bank's Articles of Incorporation and Rules on Organization of the Bank. Its officers consist of the Governor, Deputy Governors, Members of the Policy Board, Auditors, Executive Directors, and Counsellors (hereafter "Officers"). The Governor, Deputy Governors, and Members of the Policy Board make up the Policy Board, the Bank's highest decision-making body. In addition to matters concerning currency and monetary control, any matters that the Policy Board finds particularly necessary concerning other business including the operation of the FMI shall be decided by the Policy Board under the Act.

To execute its day-to-day business as a central bank, the Bank has head office departments, branches, and local and overseas representative offices. Of these, the Payment and Settlement Systems Department, Operations Department, and Information System Services Department are primarily responsible for the planning and operation of the JGB Book-Entry Transfer System and the BOJ-NET JGB Services (Chart 3-4).

(Chart 3-4) Organizational Chart of the Bank of Japan



The Bank operates the JGB Book-Entry Transfer System and the BOJ-NET JGB Services as (1) the business pertaining to book-entry transfers of JGBs that is conducted by a book-entry transfer institution designated under the Book-Entry Transfer Law, (2) the authorized business under Article 39 of the Act, and (3) part of the regular business of the Bank as stipulated in Article 33 of the Act. As such, their operations and risk management are not to violate these articles or the authorization, and they must also be consistent with the Bank's purpose as stipulated in Article 1, Paragraph 2 of the Act (which states, "the Bank of Japan's purpose is to ensure smooth settlement of funds among banks and other financial institutions, thereby contributing to the maintenance of stability of the financial system"). In addition, Article 5 of the Act stipulates, "In light of the public nature of its business and property, the Bank of Japan shall endeavor to conduct its business in a proper and efficient manner." The Policy Board has set down matters in accordance with each provision of the Act in the Bank's Articles of Incorporation, and all these in combination from the Bank's basic policy on the operations and risk management of the JGB Book-Entry Transfer System and the

BOJ-NET JGB Services.

Under this policy, the Policy Board decides the eligibility criteria for participation in the JGB Book-Entry Transfer System and other important issues regarding the operation of the JGB Book-Entry Transfer System. In the actual operation of the JGB Book-Entry Transfer System and the BOJ-NET JGB Services, in line with the policy and the decisions, all functions -- including the relevant functions responsible for business operations and IT system management -- identify risks that would arise from the execution of their business and verify how these risks are managed and countermeasures are implemented. The situation of risk management in each function is periodically reported to the Policy Board. Similarly, relevant Officers, including the Governor, and the functions responsible for business operations and IT system management of the JGB Book-Entry Transfer System are involved in the development and reviews of business procedures and IT system development.

In addition to the above, the Policy Board receives the results of internal audits from the Internal Auditors' Office on a regular basis, while the Auditors appointed by the Cabinet regularly audit the Bank's overall business. These measures ensure that the Bank's risk management is fully functioning.

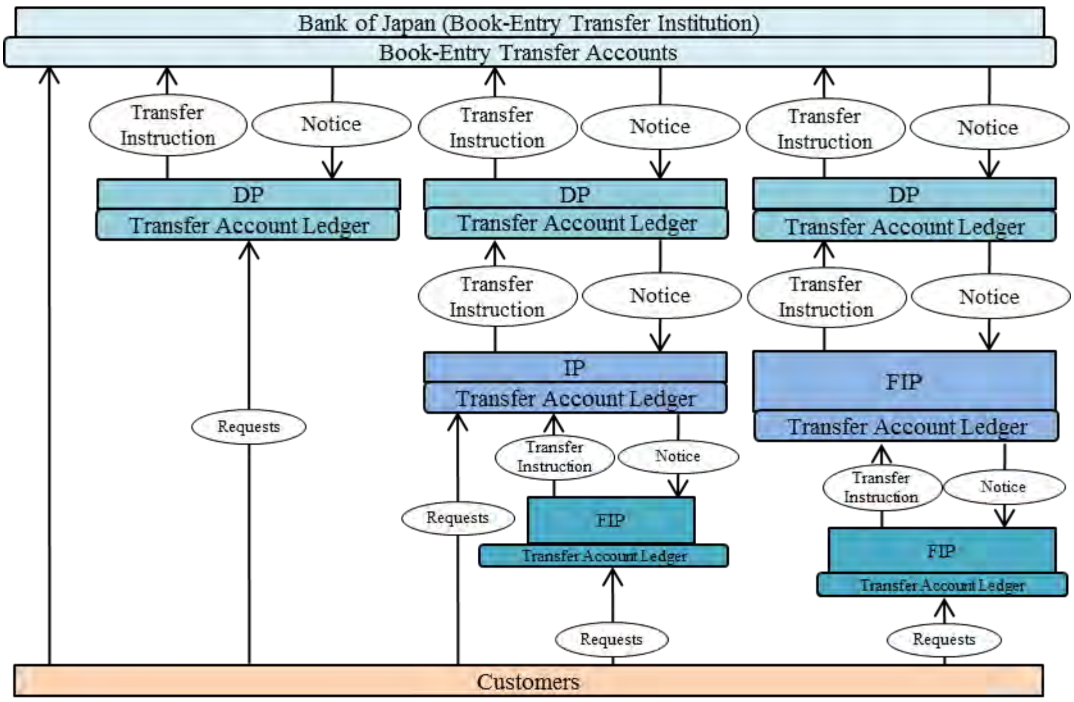
Before making significant changes to the business operations of the JGB Book-Entry Transfer System, the Bank solicits opinions and proposals from participants and relevant parties in the market, as necessary. In addition, to identify relevant issues such as the need for improvement of the JGB Book-Entry Transfer System, the Bank works continually to hold direct dialogues with and conduct surveys of participants, and exchanges information and views with the operators of major FMIs on practical issues surrounding FMIs in Japan.

3-3. Legal and Regulatory Frameworks

To operate the JGB Book-Entry Transfer System, the Bank is designated as a book-entry transfer institution by the competent ministers (the Prime Minister, Minister of Justice, and Minister of Finance) under Article 47 of the Book-Entry Transfer Law. The Bank is authorized by the Prime Minister (whose power is delegated to the Commissioner of the Financial Services Agency) and the Minister of Finance to operate (1) the JGB Book-Entry Transfer System under the Book-Entry Transfer Law and (2) the BOJ-NET JGB Services based on Article 39 of the Act. These services are provided to fulfill the Bank's purpose, which "is to ensure smooth settlement of funds among banks and other financial institutions, thereby contributing to the maintenance of stability of the financial system" (as stipulated in Article 1, Paragraph 2 of the Act).

The Book-Entry Transfer Law stipulates the attribution of rights and the validity of transfers pertaining to book-entry JGBs. It also states that the attribution of rights regarding book-entry JGBs is determined by the entry of records in the transfer account ledgers, and that transfer of JGBs becomes valid when it is recorded in the receiver's account. Under the JGB Book-Entry Transfer System, in addition to the Book-Entry Transfer Law, the Regulations set by the Bank pursuant to the Book-Entry Transfer Law, and the Rules that provide specifics of the Regulations, and other procedures and contracts set forth by the Bank form the legal basis. For online processing of JGB book-entry transfers via the BOJ-NET, in addition to the above-mentioned acts, regulations, and rules, the contract between the Bank and participants for the use of the BOJ-NET JGB Services provides the legal basis.

(Chart 3-5) JGB Book-Entry Transfer under the JGB Book-Entry Transfer System



With regard to the JGB Book-Entry Transfer System and the BOJ-NET JGB Services, the Bank conducts self-assessments against the PFMIs. The Bank's operation of the

JGB Book-Entry Transfer System is subject to the supervision of book-entry transfer institutions (primarily on the appropriateness and certainty of the operation as a book-entry transfer institution)[8] based on the Book-Entry Transfer Law. At the same time, the Act requires the Bank to report to the Diet and the competent ministers on its overall business.

3-4. The JGB Book-Entry Transfer System and Operational Process for the JGB Book-Entry Transfer under the JGB Book-Entry Transfer System

Under the JGB Book-Entry Transfer System, settlements are executed based on transfer instructions made by participants (see Chart 3-5). For example, when DP X's customer A wants to deliver JGBs to DP Y's customer B, deliverer A makes a transfer request of the JGBs to its account management institution X, after which the X debits A's account on its book and notifies the book-entry transfer institution (i.e., the Bank) which is an upper-tier institution. The book-entry transfer institution debits X's account in its book, then credits the account of Y, which is the account management institution of receiver B, and notifies Y. Account management institution Y credits receiver B's account, to conclude the series of transfers.

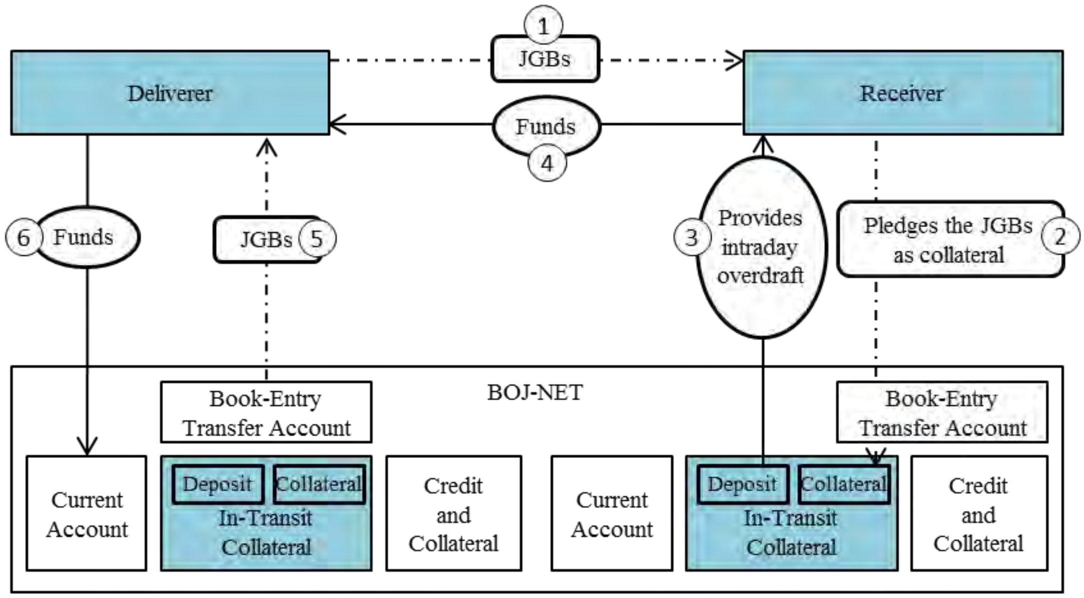
In the series of transfers, the BOJ-NET is used for the execution of the transfer request from account management institution X to account management institution Y, both of which are DPs. Most of the JGB transactions among financial institutions are settled using DVP settlement of JGBs, which was introduced in 1994.

After the introduction of RTGS in 2001, in order to reduce the financial institutions' burden of carrying intraday liquidity in the RTGS environment, and to ensure smooth settlement of JGBs, the Bank introduced the in-transit collateral facility, which combines the functionality of the Bank's intraday overdraft facility and the DVP settlement of JGBs. By using the in-transit collateral facility, a BOJ-NET user that is also eligible for the use of overdraft facility, (1) when receiving JGBs on a DVP basis, can (2) simultaneously pledge the received JGBs as collateral to the Bank for the Bank's overdraft facility, then (3) receive intraday overdraft from the Bank (against the

[8] Unlike other book-entry transfer institutions (which are joint share companies), the Bank, under a special provision in the Book-Entry Transfer Law (Article 48), is exempt from provisions concerning control and oversight, such as (1) the ban on engaging in other businesses, (2) reasons for disqualification of executive directors, (3) orders for the termination of executive directors, (4) on-site examinations, and (5) reporting and orders on assets (property) and income and expenditure.

collateral), and (4) pay for the purchased JGBs (see Chart 3-6, steps (1) through (4) are executed simultaneously). This facility is also available to the deliverer of JGBs as well as the receivers (see Chart 3-6, steps (1) and (4) through (6) are executed simultaneously).

(Chart 3-6) In-Transit Collateral Facility



Note: After the new BOJ-NET JGB Services started full operation on October 13, 2015, the dedicated current account used for this facility called the "current account (in-transit collateral settlement account)" and the dedicated collateral type called "in-transit collateral" were abolished and integrated with the existing "current account" and "pooled collateral," respectively.

4. Explanations of Each Principle

Principle 1: Legal basis

An FMI should have a well-founded, clear, transparent, and enforceable legal basis for each material aspect of its activities in all relevant jurisdictions.

Key Consideration 1: The legal basis should provide a high degree of certainty for each material aspect of an FMI's activities in all relevant jurisdictions.

The Bank operates the JGB Book-Entry Transfer System as a book-entry transfer institution for JGBs based on the Book-Entry Transfer Law. The important aspects in the operation of the JGB Book-Entry Transfer System that require a high degree of legal certainty are (1) the dematerialization of securities (acquisition, transfer, and extinguishment of rights resulting from the entry of records in the transfer account ledger), (2) the tiered structure, and (3) settlement finality.

In order to execute JGB transfers online, the Bank operates the BOJ-NET JGB Services upon the authorization based on the Act.

In addition to (1) through (3) mentioned above, an important aspect that requires a high degree of legal certainty in the operation of the BOJ-NET JGB Services is (4) the DVP settlements between the BOJ-NET (FTS) that enables the online funds settlements through transfers of current account deposits the Bank holds from financial institutions and others.

The important aspects mentioned above from (1) to (4), as well as the rights and obligations between the Bank and the participants regarding the JGB Book-Entry Transfer System, are set out by the Book-Entry Transfer Law, the Regulations, and the Rules. The Regulations stipulate that the rights and obligations regarding the JGB Book-Entry Transfer System are governed by Japanese law, and that any litigation due to a dispute involving these rights and obligations is to be settled exclusively by the Tokyo District Court. The rights and obligations regarding BOJ-NET JGB Services are to be treated in the same manner.

The legal basis of the Regulations and Rules is the Book-Entry Transfer Law and its related Cabinet Orders and Ordinance of the relevant Ministry, and the legal basis of the rules on the use of the BOJ-NET JGB Services is the Japanese Civil and Commercial Codes, and contracts between the Bank and the participants. The fact that these Regulations and Rules and the procedures based on them have a high degree of legal certainty under relevant laws and regulations is secured by assessments by the competent minister, or by both internal and external legal reviews (with the intensity of the review depending on the degree of significance) at the time of their introduction or revision, or at the time of the introduction of new relevant laws and regulations.

Key Consideration 2: An FMI should have rules, procedures, and contracts that are clear, understandable, and consistent with relevant laws and regulations.

Not only the laws related to JGB settlement (such as the Book-Entry Transfer Law and Civil and Commercial Codes) but also the Regulations, Rules, and eligibility criteria for the approval of participants are made public. The rules on the use of the BOJ-NET JGB Services are also publicly available.

As described under Key Consideration 1, consistency of the rules, procedures, and contracts pertaining to the JGB Book-Entry Transfer System and the BOJ-NET JGB Services with the relevant laws is secured by internal and external review procedures at the time of their introduction or revision. Specifically, the Book-Entry Transfer Law requires the competent minister's approval when amending the Regulations, or notification of the competent regulatory authorities when amending the Rules. Any important issues regarding the JGB Book-Entry Transfer System and the BOJ-NET JGB Services that the Policy Board finds particularly necessary shall be decided by the Policy Board in accordance with the Act (Article 15, Paragraph 2).

Key Consideration 3: An FMI should be able to articulate the legal basis for its activities to relevant authorities, participants, and, where relevant, participants' customers, in a clear and understandable way.

When a participant opens a DPs' Account or commences use of the BOJ-NET, the Bank notifies the participant in writing or through its website of the Regulations, the Rules, and rules on the use of the BOJ-NET JGB Services. The Regulations and the Rules are also published on the Bank's website. In addition, when amending the rules and procedures due to IT system improvements or changes in the surrounding environment, the Bank notifies participants of the amendment in writing or through its website, and thus participants are in a position to easily access the latest information.

Key Consideration 4: An FMI should have rules, procedures, and contracts that are enforceable in all relevant jurisdictions. There should be a high degree of certainty that actions taken by the FMI under such rules and procedures will not be voided, reversed, or subject to stays.

Transfer and pledging of JGBs settled in JGB Book-Entry Transfer System become legally effective and can be duly asserted against a third party when the pledgee has had the increase in the amount pertaining to the pledge described or recorded in the pledgee's DPs' Account through application for the book-entry transfer (Articles 98 and 99 of Book-Entry Transfer Law). If a deliverer of JGBs who does not have legal title to JGBs delivers them to a receiver, the receiver will acquire legal title to them, provided that the receiver acted in good faith without gross negligence (Article 102 of the above law). Since there is no rules in the Japanese bankruptcy laws that are equivalent to the so-called "zero-hour rule," transactions effected before the default will not be voided under the insolvency proceedings.

Key Consideration 5: An FMI conducting business in multiple jurisdictions should identify and mitigate the risks arising from any potential conflict of laws across jurisdictions.

FIPs (such as nonresident financial institutions) can manage accounts based on the JGB Book-Entry Transfer System through the branches or offices located outside Japan. If a suit is filed against an FIP located outside Japan, under rules on conflict of laws, foreign laws including the laws of jurisdiction where an FIP is located may be applied, and this may affect the legal framework of the JGB Book-Entry Transfer System. Taking into account such a situation, the Regulations stipulate that the rights and obligations regarding the JGB Book-Entry Transfer System are governed by Japanese laws, and in addition the Bank and the FIP mutually agree that the rights and obligations between the Bank and the FIP based on the Regulations and Rules are governed by

Japanese laws. Moreover, the Bank ascertains that the agreement regarding the governing laws is legally enforceable under the laws of jurisdiction where the FIP is located, by requiring the FIP to submit a legal opinion from a law firm located in and specializing in the laws of that jurisdiction.

Principle 2: Governance

An FMI should have governance arrangements that are clear and transparent, promote the safety and efficiency of the FMI, and support the stability of the broader financial system, other relevant public interest considerations, and the objectives of relevant stakeholders.

Key Consideration 1: An FMI should have objectives that place a high priority on the safety and efficiency of the FMI and explicitly support financial stability and other relevant public interest considerations.

The Bank operates the JGB Book-Entry Transfer System, placing high priority both on its safety and efficiency in accordance with the relevant laws and regulations. With respect to safety, the Bank's purpose to smoothly and stably operate the FMI derives from Article 1, Paragraph 2 of the Act, where it stipulates that the Bank's "purpose is to ensure smooth settlement of funds among banks and other financial institutions, thereby contributing to the maintenance of stability of the financial system." Taking into account that the funds transactions and settlements are closely related to the purchases and sales of JGBs among banks and other financial institutions, the purpose to operate the JGB Book-Entry Transfer System is to ensure smooth settlement of funds among banks and other financial institutions. As for efficiency, the Bank, in light of the public nature of its business and property, is required to conduct its business in a proper and efficient manner including giving due consideration to its financial soundness, as called for in Article 5, Paragraph 1 of the Act. In conducting the Bank's business, as provided by the Act, the Policy Board decides its basic policy, and the Governor, other Officers, and employees execute them under the basic policy. The Act also stipulates that the Auditors appointed by the Cabinet shall audit the Bank's business, including the evaluation of its performance.

The Bank publishes on a regular basis its *Payment and Settlement Systems Report*, describing the efforts made by the Bank and relevant institutions to improve the safety and efficiency of the FMIs. The report also assesses the extent to which the Bank has attained its objectives. The Bank also releases the *Annual Review*, which is a comprehensive description of the Bank's policy and business, including the operations of the JGB Book-Entry Transfer System, as required by the Act.

Key Consideration 2: An FMI should have documented governance arrangements that provide clear and direct lines of responsibility and accountability. These arrangements should be disclosed to owners, relevant authorities, participants, and, at a more general level, the public.

The operational stability of the JGB Book-Entry Transfer System is ensured through the governance arrangements of the Bank.

The Bank's organization is managed in accordance with the Act, Articles of Incorporation, and Rules on Organization of the Bank, all of which are made public. Specifically, at the Bank, the Policy Board, as the highest decision-making-body, decides the basic policies on policy, business, and organizational matters; based on these policies, the Governor and other relevant Officers, as well as head office departments, branches, and local and overseas representative offices, conduct business according to their jurisdiction. The operation of JGB Book-Entry Transfer System and the BOJ-NET JGB Services that are (1) JGB book-entry transfers as the designated book-entry transfer institution under the Book-Entry Transfer Law, (2) authorized business under Article 39 of the Act, and (3) the Bank's regular business under Article 33 of the Act, are also conducted under the above regime.

The Bank is the operator of the JGB Book-Entry Transfer System and the overseer of private FMIs. Mindful of this dual role that could cause a conflict of interest, the Bank strives to avoid the misunderstanding that it is conducting the oversight of private FMIs to take the advantage of the operation of the JGB Book-Entry Transfer System. For example, the oversight of private FMIs is conducted by a function that is separate from the one that operates the JGB Book-Entry Transfer System. With regard to the JGB Book-Entry Transfer System, the Bank conducts self-assessments against the PFMIs.

Key Consideration 3: The roles and responsibilities of an FMI's board of directors (or equivalent) should be clearly specified, and there should be documented procedures for its functioning, including procedures to identify, address, and manage member conflicts of interest. The board should review both its overall performance and the performance of its individual board

members regularly.

The Act and Articles of Incorporation set forth the matters that should be decided by the Policy Board, the Bank's highest decision-making body. On the management of the Policy Board, the Act and Articles of Incorporation call for a quorum of at least two-thirds of the total number of incumbent Policy Board members, including its chairperson, to hold a meeting and to take a vote. In addition, proceedings are determined by a majority vote of the attending members; when yes and no votes stand at parity, it is stipulated that the chair is to decide. The Act and Articles of Incorporation also stipulate that the Governor and Deputy Governors shall not have the authority of representation with regard to matters for which their interests and the interest of the Bank conflict. Regarding the management of proceedings at Policy Board meetings, the procedures are set forth by the Policy Board.

Key Consideration 4: The board should contain suitable members with the appropriate skills and incentives to fulfil its multiple roles. This typically requires the inclusion of non-executive board member(s).

The Policy Board consists of nine members. They are the Governor, two Deputy Governors, and the six Members of the Policy Board that are all appointed by the Cabinet, subject to the consent of the House of Representatives and the House of Councillors in accordance with the Act. Members of the Policy Board shall be appointed from among persons with relevant knowledge and experience including experts on the economy or finance.

Key Consideration 5: The roles and responsibilities of management should be clearly specified. An FMI's management should have the appropriate experience, a mix of skills, and the integrity necessary to discharge their responsibilities for the operation and risk management of the FMI.

The business of the Bank is executed by the Governor, Deputy Governors, and Executive Directors under the basic policy set by the Policy Board. The responsibilities and powers of these officers are set forth by the Act and Articles of Incorporation, as well as Rules on Organization of the Bank. Specifically, the

Governor represents the Bank and exercises general control over its business in accordance with decisions made by the Policy Board, while Deputy Governors, in accordance with the decisions made by the Governor, represent the Bank, and administer the business of the Bank assisting the Governor. The Executive Directors, in accordance with the decisions made by the Governor, administer the business of the Bank, assisting the Governor and Deputy Governors. The specific responsibilities of these Officers are decided by the Governor and are made public.

The Officers of the Bank are appointed in accordance with the provisions of the Act. Among the Officers administering the business of the Bank, the Governor and Deputy Governors are appointed by the Cabinet, subject to the consent of the House of Representatives and the House of Councillors, while Executive Directors are appointed by the Minister of Finance based on the Policy Board's recommendation.

Key Consideration 6: The board should establish a clear, documented risk-management framework that includes the FMI's risk-tolerance policy, assigns responsibilities and accountability for risk decisions, and addresses decision making in crises and emergencies. Governance arrangements should ensure that the risk-management and internal control functions have sufficient authority, independence, resources, and access to the board.

The JGB Book-Entry Transfer System and the BOJ-NET JGB Services are operated by the Bank as (1) JGB book-entry transfers as the designated book-entry transfer institution under the Book-Entry Transfer Law, (2) authorized business under Article 39 of the Act, and (3) the Bank's regular business under Article 33 of the Act. As such, their operation and risk management are not to violate these articles or the authorization, and they must also be consistent with the Bank's purpose stipulated in Article 1, Paragraph 2 of the Act (which states, "the Bank of Japan's purpose is to ensure smooth settlement of funds among banks and other financial institutions, thereby contributing to the maintenance of stability of the financial system"). In addition, Article 5 of the Act stipulates, "In light of the public nature of its business and property, the Bank of Japan shall endeavor to conduct its business in a proper and efficient manner." The Policy Board has set down matters in accordance with each provision of the Act in the Bank's Articles of Incorporation, and all of these in combination form the Bank's basic policy on the operation and risk management of the JGB Book-Entry Transfer System and the BOJ-NET JGB Services.

Under this policy, the Policy Board decides the eligibility criteria for participation in the JGB Book-Entry Transfer System and other important issues regarding the operation of the JGB Book-Entry Transfer System. In the actual operation of the JGB Book-Entry Transfer System and the BOJ-NET JGB Services, in line with the policy and the decisions, all functions -- including the relevant functions responsible for business operations and IT system management -- identify risks that would arise from the execution of their business and verify how these risks are managed and countermeasures are implemented. The situation of risk management in each function is periodically reported to the Policy Board. Similarly, relevant Officers, including the Governor and the functions responsible for business operations and IT system management of the JGB Book-Entry Transfer System, are involved in development and review of the business procedures and in IT system development.

In addition to the above, the Policy Board receives the result of internal audits by the Internal Auditors' Office on a regular basis, while the Auditors appointed by the Cabinet regularly audit the Bank's business. These measures ensure that the Bank's risk management is fully functioning.

As to decision making at the time of crisis or in emergencies, the Bank establishes procedures that allow flexibility in the management of the Policy Board, and set forth in advance internal procedures that are to be referred to by each function in case of extraordinary situations. Especially for measures against disasters, in accordance with the Basic Act on Disaster Control Measures and other relevant laws and regulations, the Bank has developed and made public its business continuity plans stating the selection of businesses to be covered in case of emergencies, securing of personnel and supplies, information gathering, and arrangements for communication with relevant institutions.

Key Consideration 7: The board should ensure that the FMI's design, rules, overall strategy, and major decisions reflect appropriately the legitimate interests of its direct and indirect participants and other relevant stakeholders. Major decisions should be clearly disclosed to relevant stakeholders and, where there is a broad market impact, the public.

Before making significant changes in the JGB Book-Entry Transfer System, the Bank publishes its basic policy in advance or discloses it to relevant stakeholders and solicits opinions and proposals from participants and relevant parties in the market, as necessary, thereby ensuring that there is sufficient time for preparation before the changes are implemented. In addition, to identify the needs for improvements in the business itself and the operation of the business, the Bank works continually to hold direct dialogues with and conduct surveys of participants, and to exchange information and views with the operators of major FMIs on practical issues surrounding FMIs in Japan.

Principle 3: Framework for the comprehensive management of risks

An FMI should have a sound risk-management framework for comprehensively managing legal, credit, liquidity, operational, and other risks.

Key Consideration 1: An FMI should have risk-management policies, procedures, and systems that enable it to identify, measure, monitor, and manage the range of risks that arise in or are borne by the FMI. Risk-management frameworks should be subject to periodic review.

The Bank's framework on the operation and risk management pertaining to the JGB Book-Entry Transfer System and the BOJ-NET JGB Services are as stated under Principle 2, Key Consideration 6. In the actual operation of the JGB Book-Entry Transfer System and the BOJ-NET JGB Services, in accordance with the basic policy and the Policy Board decisions on risk management, all functions -- including business operations and IT system management, either individually according to their jurisdiction or in collaboration with other functions -- analyze and consider risks (such as credit, liquidity, and operational risks) that could affect smooth operation of the JGB Book-Entry Transfer System to identify and manage them.

The management of individual risks is as described under the Principles corresponding to the individual risks (Principle 4 and after).

The Policy Board receives reports on the situation of risk management in each function on a regular basis, and also receives regular reports of internal audits by the Internal Auditors' Office. Separately, the Auditors audit the Bank's overall business, and the outline of the results is published in the *Annual Review*.

The risk management framework for the operation of the JGB Book-Entry Transfer System is subject to reviews in consideration of changes in the situation of risk management, economic and market trends, relevant laws and regulations, market practices, and so on.

Key Consideration 2: An FMI should provide incentives to participants and, where relevant, their customers to manage and contain the risks

they pose to the FMI.

To manage and contain risks (e.g., credit, liquidity and operational risks) pertaining to participants, the Bank publishes its eligibility criteria for participants. In addition, the Bank manages risks associated with participants and provides information on countermeasures against these risks through screening when approving participants, on-site examinations and monitoring of participants that have contracts regarding on-site examinations with the Bank, oversight of FMIs that are also participants, and publication of the *Payment and Settlement Systems Report*.

As stated in Principle 4, Key Consideration 1, from the viewpoint of ensuring smooth settlements of JGBs and the associated funds settlements under the JGB Book-Entry Transfer System, the Bank sets, in advance, lending terms for the provision of intraday overdraft (e.g., the due date of repayment, types of eligible collateral, and lending cap) and discloses them to participants.

After providing information in this manner, to manage and contain risks that a participant may impose on the JGB Book-Entry Transfer System, the Bank, based on the Regulations, the Rules, and the contracts for the use of the BOJ-NET JGB Services, holds the right to remove the participation qualification by abolishing the DP Account, to terminate the contract to use the BOJ-NET JGB Services, and to limit the use of the BOJ-NET JGB Services, if a participant violates the rules of the JGB Book-Entry Transfer System or if a situation might arise to impede the smooth operation of the BOJ-NET JGB Services.

As for the appropriate incentives per risk type, see the descriptions under each Principle corresponding to the risks.

Key Consideration 3: An FMI should regularly review the material risks it bears from and poses to other entities (such as other FMIs, settlement banks, liquidity providers, and service providers) as a result of interdependencies and develop appropriate risk-management tools to address these risks.

The operation of the JGB Book-Entry Transfer System is not predicated on the provision of certain services by other entities.[9] Therefore, even if other entities face problems, the probability is low that this would cause the JGB Book-Entry Transfer System to face difficulty in its operations due to knock-on effects.

On the other hand, as book-entry JGBs are critical for market participants for funds management and procurement and involve other FMIs (matching and clearing houses) in its settlement process, business processing or IT system disruptions of the JGB Book-Entry Transfer System could spread to other entities.

As to the risk of such disruptions arising in the JGB Book-Entry Transfer System and spreading to other entities, as stated in Principle 2, Key Consideration 6, in accordance with its basic policy and the Policy Board decisions on risk management, each function -- including the relevant function responsible for business operations and IT system management -- identifies risks that would arise from the execution of its business and verifies how these risks are managed and countermeasures are implemented. Each function's risk management status is reported periodically to the Policy Board. In addition, the Bank has spelled out procedures designed to ensure business continuity in the face of potential disruptions and notifies participants and other entities in advance. Moreover, through drills that deal with system disruption scenarios and through the oversight of FMIs, the Bank regularly verifies the spillover effects of such disruptions and the effectiveness of FMIs' responses to these effects.

Key Consideration 4: An FMI should identify scenarios that may potentially prevent it from being able to provide its critical operations and services as a going concern and assess the effectiveness of a full range of options for recovery or orderly wind-down. An FMI should prepare appropriate plans for its recovery or orderly wind-down based on the results of that assessment. Where applicable, an FMI should also provide relevant authorities with the information needed for purposes of resolution planning.

This Key Consideration does not apply to FMIs operated by central banks.

[9] DVP settlements for JGBs are realized by linking BOJ-NET JGB Services and the BOJ-NET (FTS) operated by the Bank.

Principle 4: Credit risk

An FMI should effectively measure, monitor, and manage its credit exposures to participants and those arising from its payment, clearing, and settlement processes. An FMI should maintain sufficient financial resources to cover its credit exposure to each participant fully with a high degree of confidence. In addition, a CCP that is involved in activities with a more-complex risk profile or that is systemically important in multiple jurisdictions should maintain additional financial resources sufficient to cover a wide range of potential stress scenarios that should include, but not be limited to, the default of the two participants and their affiliates that would potentially cause the largest aggregate credit exposure to the CCP in extreme but plausible market conditions. All other CCPs should maintain additional financial resources sufficient to cover a wide range of potential stress scenarios that should include, but not be limited to, the default of the participant and its affiliates that would potentially cause the largest aggregate credit exposure to the CCP in extreme but plausible market conditions.

Key Consideration 1: An FMI should establish a robust framework to manage its credit exposures to its participants and the credit risks arising from its payment, clearing, and settlement processes. Credit exposure may arise from current exposures, potential future exposures, or both.

Credit risk for the Bank

The Bank, as the book-entry transfer institution of JGBs, does not become a party to individual JGB settlements between participants.

Nevertheless, with the aim of ensuring smooth settlements of JGBs and the associated funds settlements, the Bank extends credit in the form of intraday overdrafts to the participants it has authorized to use such a facility when requested. Specifically, when a BOJ-NET user receives JGBs through DVP settlements (see Principle 12 for the detailed function of the DVP settlement mechanism), the user can simultaneously pledge the delivered JGBs to the Bank as a collateral for the Bank's overdraft facility, receive intraday overdrafts from the Bank (against the pledged collateral), and use the funds to pay for the purchased JGBs. The management of such credit risk arising from intraday overdrafts provided is described under Chapter 4, Principle 4 of "Information Disclosure Based on the Principles for Financial Market Infrastructures: The BOJ-NET Funds Transfer System" (hereafter "Information Disclosure (BOJ-NET [FTS])").

Credit risks for participants

Although credit risks for participants are not risks arising from the use of the JGB Book-Entry Transfer System, generally, between the trade date and final settlement, participants are exposed to the credit risk that results from an unrecoverable loss from the counterparty's default. Fully mindful of such credit risk, the Bank has introduced RTGS to the BOJ-NET JGB Services that executes JGB settlements under the JGB Book-Entry Transfer System. As transfer instructions sent by participants are settled immediately after the BOJ-NET JGB Services accept them, even if a participant defaults, the direct impact of a loss realized stemming from the credit risk would be limited to the counterparty of the defaulter, and the possibility that the turmoil would spread through the JGB Book-Entry Transfer System to other participants and the entire financial system would remain limited. Furthermore, the Bank strives to identify credit risks arising from funds and JGB settlements faced by participants through on-site examinations and monitoring of the participants that have BOJ current account deposits.

The BOJ-NET JGB Services provide the DVP settlement facility so that the participants are not exposed to the principal risk (the risk that a party that delivered JGBs is unable to receive payment against the delivery) arising from a counterparty's default (see Principle 12 for details).

Key Consideration 2: An FMI should identify sources of credit risk, routinely measure and monitor credit exposures, and use appropriate risk-management tools to control these risks.

See Key Consideration 1.

Key Consideration 3: A payment system or SSS should cover its current and, where they exist, potential future exposures to each participant fully with a high degree of confidence using collateral and other equivalent financial resources (see

Principle 5 on collateral). In the case of a DNS payment system or DNS SSS in which there is no settlement guarantee but where its participants face credit exposures arising from its payment, clearing, and settlement processes, such an FMI should maintain, at a minimum, sufficient resources to cover the exposures of the two participants and their affiliates that would create the largest aggregate credit exposure in the JGB Book-Entry Transfer System.

See Chapter 4, Principle 4, Key Consideration 1 of "Information Disclosure (BOJ-NET [FTS])." JGB settlements between the participants under the JGB Book-Entry Transfer System do not use deferred net settlement (DNS).

Key Consideration 4: A CCP should cover its current and potential future exposures to each participant fully with a high degree of confidence using margin and other prefunded financial resources (see Principle 5 on collateral and Principle 6 on margin). In addition, a CCP that is involved in activities with a more-complex risk profile or that is systemically important in multiple jurisdictions should maintain additional financial resources to cover a wide range of potential stress scenarios that should include, but not be limited to, the default of the two participants and their affiliates that would potentially cause the largest aggregate credit exposure for the CCP in extreme but plausible market conditions. All other CCPs should maintain additional financial resources sufficient to cover a wide range of potential stress scenarios that should include, but not be limited to, the default of the participant and its affiliates that would potentially cause the largest aggregate credit exposure for the CCP in extreme but plausible market conditions. In all cases, a CCP should document its supporting rationale for, and should have appropriate governance arrangements relating to, the amount of total financial resources it maintains.

This Key Consideration does not apply to CSD or SSS.

Key Consideration 5: A CCP should determine the amount and regularly test the sufficiency of its total financial resources available in the event of a default or multiple defaults in extreme but plausible market conditions through rigorous stress testing. A CCP should have clear procedures to report the results of its stress tests to appropriate decision makers at the CCP and to use these results to evaluate the adequacy of and adjust its total financial resources. Stress tests should be performed daily using standard and predetermined parameters and assumptions. On at least a monthly basis, a CCP should perform a comprehensive and thorough analysis of stress testing scenarios, models, and underlying parameters and assumptions used to ensure they are appropriate for determining the CCP's required level of default protection in light of current and evolving market conditions. A CCP should perform this analysis of stress testing more frequently when the products cleared or markets served display high volatility, become less liquid, or when the size or concentration of positions held by a CCP's participants increases significantly. A full validation of a CCP's risk-management model should be performed at least annually.

This Key Consideration does not apply to CSD or SSS.

Key Consideration 6: In conducting stress testing, a CCP should consider the effect of a wide range of relevant stress scenarios in terms of both defaulters' positions and possible price changes in liquidation periods. Scenarios should include relevant peak historic price volatilities, shifts in other market factors such as price determinants and yield curves, multiple defaults over various time horizons, simultaneous pressures in funding and asset markets, and a spectrum of forward-looking stress scenarios in a variety of extreme but

plausible market conditions.

This Key Consideration does not apply to CSD or SSS.

Key Consideration 7: An FMI should establish explicit rules and procedures that address fully any credit losses it may face as a result of any individual or combined default among its participants with respect to any of their obligations to the FMI. These rules and procedures should address how potentially uncovered credit losses would be allocated, including the repayment of any funds an FMI may borrow from liquidity providers. These rules and procedures should also indicate the FMI's process to replenish any financial resources that the FMI may employ during a stress event, so that the FMI can continue to operate in a safe and sound manner.

The Bank does not become a party to individual JGB settlements between participants. As such, it does not adopt rules for the allocation of uncovered credit losses stemming from a participant's default among the participants under the JGB Book-Entry Transfer System.

Principle 5: Collateral

An FMI that requires collateral to manage its or its participants' credit exposure should accept collateral with low credit, liquidity, and market risks. An FMI should also set and enforce appropriately conservative haircuts and concentration limits.

Key Consideration 1: An FMI should generally limit the assets it (routinely) accepts as collateral to those with low credit, liquidity, and market risks.

As described under Principle 4, Key Consideration 1, the Bank, with the aim of ensuring smooth settlements of JGBs and the associated fund settlements, provides intraday overdrafts secured by collateral to the participants it has authorized to use such facility when requested. As for the collateral the Bank accepts as eligible collateral for intraday overdrafts, see Chapter 4, Principle 5 of "Information Disclosure (BOJ-NET [FTS])."

Key Consideration 2: An FMI should establish prudent valuation practices and develop haircuts that are regularly tested and take into account stressed market conditions.

As described under Chapter 4, Principle 5, Key Consideration 2 of "Information Disclosure (BOJ-NET [FTS])."

Key Consideration 3: In order to reduce the need for procyclical adjustments, an FMI should establish stable and conservative haircuts that are calibrated to include periods of stressed market conditions, to the extent practicable and prudent.

As described under Chapter 4, Principle 5, Key Consideration 3 of "Information Disclosure (BOJ-NET [FTS])."

Key Consideration 4: An FMI should avoid concentrated holdings of certain assets where this would significantly impair the ability to liquidate such assets quickly without significant adverse price effects.

As described under Chapter 4, Principle 5, Key Consideration 4 of "Information Disclosure (BOJ-NET [FTS])."

Key Consideration 5: An FMI that accepts cross-border collateral should mitigate the risks associated with its use and ensure that the collateral can be used in a timely manner.

As described under Chapter 4, Principle 5, Key Consideration 5 of "Information Disclosure of the (BOJ-NET [FTS])." The Bank currently does not accept foreign government bonds as the eligible collateral for providing the in-transit collateral facility.

Key Consideration 6: An FMI should use a collateral management system that is well-designed and operationally flexible.

As described under Chapter 4, Principle 5, Key Consideration 6 of "Information Disclosure of the BOJ-NET (FTS)."

Principle 6: Margin

A CCP should cover its credit exposures to its participants for all products through an effective margin system that is risk-based and regularly reviewed.

Principle 6 does not apply to CSD or SSS.

Principle 7: Liquidity risk

An FMI should effectively measure, monitor, and manage its liquidity risk. An FMI should maintain sufficient liquid resources in all relevant currencies to effect same-day and, where appropriate, intraday and multiday settlement of payment obligations with a high degree of confidence under a wide range of potential stress scenarios that should include, but not be limited to, the default of the participant and its affiliates that would generate the largest aggregate liquidity obligation for the FMI in extreme but plausible market conditions.

Key Consideration 1: An FMI should have a robust framework to manage its liquidity risks from its participants, settlement banks, nostro agents, custodian banks, liquidity providers, and other entities.

Liquidity risk for the Bank

The Bank does not become a party to individual JGB settlements between participants.

As described under Principle 4, Key Consideration 1, to ensure the smooth settlements of JGBs and the associated funds settlements, the Bank extends credit in the form of intraday overdrafts to the participants it has authorized to use such a facility when requested. However, there is no liquidity constraint for the Bank in providing this facility. Hence, Key Considerations 3 to 10 do not apply to the Bank.

Liquidity risk for the participants

Although liquidity risk for the participants are not risks arising from the use of the JGB Book-Entry Transfer System, generally, between the trade date and final settlement, participants face a liquidity risk that the participants will not be able to acquire a sufficient amount of liquidity at the point of time necessary to settle. Fully mindful of such a liquidity risk, the Bank operated the JGB Book-Entry Transfer System from the viewpoint of ensuring smooth settlements of JGBs and the associated funds settlements under the JGB Book-Entry Transfer System. See Chapter 3, Outline, 3-4, in-transit collateral Facility, and Chapter 4, Principle 7, of "Information Disclosure (BOJ-NET [FTS])" for details (note that participants cannot use the Liquidity-Saving Features of

BOJ-NET [FTS] for funds settlements in the DVP settlements for JGBs.)

Key Consideration 2: An FMI should have effective operational and analytical tools to identify, measure, and monitor its settlement and funding flows on an ongoing and timely basis, including its use of intraday liquidity.

See Key Consideration 1.

Key Consideration 3: A payment system or SSS, including one employing a DNS mechanism, should maintain sufficient liquid resources in all relevant currencies to effect same-day settlement, and where appropriate intraday or multiday settlement, of payment obligations with a high degree of confidence under a wide range of potential stress scenarios that should include, but not be limited to, the default of the participant and its affiliates that would generate the largest aggregate payment obligation in extreme but plausible market conditions.

As described in Key Consideration 1, this Key Consideration does not apply to the Bank.

Key Consideration 4: A CCP should maintain sufficient liquid resources in all relevant currencies to settle securities-related payments, make required variation margin payments, and meet other payment obligations on time with a high degree of confidence under a wide range of potential stress scenarios that should include, but not be limited to, the default of the participant and its affiliates that would generate the largest aggregate payment obligation to the CCP in extreme but plausible market conditions. In addition, a CCP that is involved in activities with a more-complex risk profile or that is systemically important in multiple jurisdictions should consider maintaining additional liquidity resources sufficient to cover a wider range of potential stress scenarios that should include, but not be limited to, the default of the

two participants and their affiliates that would generate the largest aggregate payment obligation to the CCP in extreme but plausible market conditions.**

As described in Key Consideration 1, this Key Consideration does not apply to the Bank.

Key Consideration 5: For the purpose of meeting its minimum liquid resource requirement, an FMI's qualifying liquid resources in each currency include cash at the central bank of issue and at creditworthy commercial banks, committed lines of credit, committed foreign exchange swaps, and committed repos, as well as highly marketable collateral held in custody and investments that are readily available and convertible into cash with prearranged and highly reliable funding arrangements, even in extreme but plausible market conditions. If an FMI has access to routine credit at the central bank of issue, the FMI may count such access as part of the minimum requirement to the extent it has collateral that is eligible for pledging to (or for conducting other appropriate forms of transactions with) the relevant central bank. All such resources should be available when needed.

As described in Key Consideration 1, this Key Consideration does not apply to the Bank.

Key Consideration 6: An FMI may supplement its qualifying liquid resources with other forms of liquid resources. If the FMI does so, then these liquid resources should be in the form of assets that are likely to be saleable or acceptable as collateral for lines of credit, swaps, or repos on an ad hoc basis following a default, even if this cannot be reliably prearranged or guaranteed in extreme market conditions. Even if an FMI does not have access to routine central bank credit, it should still take account of what collateral is typically accepted by the relevant central bank, as such assets may be more likely to

be liquid in stressed circumstances. An FMI should not assume the availability of emergency central bank credit as a part of its liquidity plan.

As described in Key Consideration 1, this Key Consideration does not apply to the Bank.

Key Consideration 7: An FMI should obtain a high degree of confidence, through rigorous due diligence, that each provider of its minimum required qualifying liquid resources, whether a participant of the FMI or an external party, has sufficient information to understand and to manage its associated liquidity risks, and that it has the capacity to perform as required under its commitment. Where relevant to assessing a liquidity provider's performance reliability with respect to a particular currency, a liquidity provider's potential access to credit from the central bank of issue may be taken into account. An FMI should regularly test its procedures for accessing its liquid resources at a liquidity provider.

As described in Key Consideration 1, this Key Consideration does not apply to the Bank.

Key Consideration 8: An FMI with access to central bank accounts, payment services, or securities services should use these services, where practical, to enhance its management of liquidity risk.

As described in Key Consideration 1, this Key Consideration does not apply to the Bank.

Key Consideration 9: An FMI should determine the amount and regularly test the sufficiency of its liquid resources through rigorous stress testing. An FMI should have clear procedures to report the results of its stress tests to appropriate decision makers at the FMI and to use these results to evaluate the adequacy of and adjust its liquidity risk-management framework. In

conducting stress testing, an FMI should consider a wide range of relevant scenarios. Scenarios should include relevant peak historic price volatilities, shifts in other market factors such as price determinants and yield curves, multiple defaults over various time horizons, simultaneous pressures in funding and asset markets, and a spectrum of forward-looking stress scenarios in a variety of extreme but plausible market conditions. Scenarios should also take into account the design and operation of the FMI, include all entities that might pose material liquidity risks to the FMI (such as settlement banks, nostro agents, custodian banks, liquidity providers, and linked FMIs), and where appropriate, cover a multiday period. In all cases, an FMI should document its supporting rationale for, and should have appropriate governance arrangements relating to, the amount and form of total liquid resources it maintains.

As described in Key Consideration 1, this Key Consideration does not apply to the Bank.

Key Consideration 10: An FMI should establish explicit rules and procedures that enable the FMI to effect same-day and, where appropriate, intraday and multiday settlement of payment obligations on time following any individual or combined default among its participants. These rules and procedures should address unforeseen and potentially uncovered liquidity shortfalls and should aim to avoid unwinding, revoking, or delaying the same-day settlement of payment obligations. These rules and procedures should also indicate the FMI's process to replenish any liquidity resources it may employ during a stress event, so that it can continue to operate in a safe and sound manner.

As described in Key Consideration 1, this Key Consideration does not apply to the Bank.

Principle 8: Settlement finality

An FMI should provide clear and certain final settlement, at a minimum by the end of the value date. Where necessary or preferable, an FMI should provide final settlement intraday or in real time.

Key Consideration 1: An FMI's rules and procedures should clearly define the point at which settlement is final.

The point of time when the settlements of JGBs under the JGB Book-Entry Transfer System are final is stipulated in laws and regulations. Specifically, Article 88 of Book-Entry Transfer Law stipulates that the attribution of rights to the JGBs is final when it is recorded in the transfer account ledger. With respect to transfer and pledging of JGBs, the Book-Entry Transfer Law (Articles 98 and 99) stipulates that they become legally valid by the entry of records in the receiver's transfer account ledger. Moreover, if a deliverer of JGBs who does not have legal title to JGBs delivers them to a receiver, the receiver will acquire legal title to them, provided that the receiver acted in good faith without gross negligence (Article 102).

With respect to the transfer of JGBs that has already been recorded in the receiver's account, such transfer will not be voided or rescinded under Japanese laws, including the bankruptcy laws. Since there are no rules under the Japanese bankruptcy laws that are equivalent to the so-called "zero-hour rule," transactions recorded in the receiver's transfer account ledger before the default will not be voided under the insolvency proceedings.

Under the JGB Book-Entry Transfer System, FIPs (e.g., foreign financial institutions) can manage accounts through their branches or offices located outside Japan. Thus, if a suit is filed against an FIP located outside Japan, and foreign laws including laws of the jurisdiction where an FIP is located are applied under rules on conflict of laws, this may affect the legal framework of the JGB Book-Entry Transfer System. To address this issue, as described under Principle 1, the governing laws on the rights and obligations between the Bank and FIPs as set out by the Book-Entry Transfer Law, the Regulations and Rules are, by mutual agreement, Japanese laws. Moreover, the Bank ascertains that the agreement regarding the governing laws is legally enforceable under the laws of jurisdiction where the FIP is located, by requiring the FIP to submit to the

Bank a legal opinion from a lawyer located in and specializing in the laws of that jurisdiction.

Key Consideration 2: An FMI should complete final settlement no later than the end of the value date, and preferably intraday or in real time, to reduce settlement risk. An LVPS or SSS should consider adopting RTGS or multiple-batch processing during the settlement day.

Under the JGB Book-Entry Transfer System, the JGB settlement via the BOJ-NET JGB Services is designed to ensure final settlement intraday. This is stipulated in the contracts on the use of the BOJ-NET JGB Services.

Specifically, JGB transfer via the BOJ-NET JGB Services is continuously settled in RTGS intraday so that final settlements are promptly completed on the settlement date.[10] Participants are notified of the result of processing using the BOJ-NET JGB Services promptly after completion of the settlement.

Key Consideration 3: An FMI should clearly define the point after which unsettled payments, transfer instructions, or other obligations may not be revoked by a participant.

The contracts between the Bank and the participants stipulate when the JGB transfer instructions sent to the BOJ-NET JGB Services can be canceled and, where cancelable, the time limit. All JGB transfer instructions that do not designate DVP settlements are treated as instructions without conditions, and are processed immediately upon the Bank's acceptance of valid transfer instructions; these transfer instructions may not be canceled. JGB transfer requests designating DVP settlements may be canceled even after they have been accepted by the Bank, if the counterparty of the transaction gives its consent. However, even in such cases, they may not be canceled after the Bank has accepted the corresponding funds transfer requests.

These procedures are stipulated in the Regulations, Rules, and the contract on the use of

[10] A very small portion of JGB settlements that are settled in DNS are batch processed immediately after 15:00 on the designated delivery date. Note that above batch process was abolished when the new BOJ-NET started full operation (on October 13, 2015), and all JGB settlements moved to RTGS.

the BOJ-NET JGB Services.

Principle 9: Money settlements

An FMI should conduct its money settlements in central bank money where practical and available. If central bank money is not used, an FMI should minimise and strictly control the credit and liquidity risk arising from the use of commercial bank money.

Key Consideration 1: An FMI should conduct its money settlements in central bank money, where practical and available, to avoid credit and liquidity risks.

Under the JGB Book-Entry Transfer System, it is up to each market participant to choose a cash settlement agent for JGB settlement. In the case of JGB settlement on a DVP basis via the BOJ-NET, the funds settlement associated with the JGB settlement is settled via the BOJ current account deposits.

With regard to the funds settlements of JGB transactions that are not settled on a DVP basis, both the Bank and commercial banks act as a settlement agent. However, the guidelines formulated by the self-regulatory organization in the Japanese securities market (by the Japan Financial Instruments Business Operators Association in "The Japanese Government Securities Guidelines for Real-Time Gross Settlement") states that "market participants capable of DVP settlement are required to process settlements via DVP settlement as much as possible." Hence, most of the JGB settlements, except for those that are free of payment such as collateral trading, between the participants in the JGB Book-Entry Transfer System are settled on a DVP basis.

Key Consideration 2: If central bank money is not used, an FMI should conduct its money settlements using a settlement asset with little or no credit or liquidity risk.

As described under Key Consideration 1, under the JGB Book-Entry Transfer System, it is up to each market participant to choose a cash settlement agent for JGB settlement. A part of JGB settlement under the JGB Book-Entry Transfer System uses commercial bank money instead of central bank money to settle funds associated with the JGB settlement. Such commercial banks are subject to the prudential regulation of competent regulatory authorities based on relevant laws and regulations (e.g., the

Banking Law).

Key Consideration 3: If an FMI settles in commercial bank money, it should monitor, manage, and limit its credit and liquidity risks arising from the commercial settlement banks. In particular, an FMI should establish and monitor adherence to strict criteria for its settlement banks that take account of, among other things, their regulation and supervision, creditworthiness, capitalisation, access to liquidity, and operational reliability. An FMI should also monitor and manage the concentration of credit and liquidity exposures to its commercial settlement banks.

In the JGB settlement under the JGB Book-Entry Transfer System, the cash leg of the DVP settlement using the BOJ-NET is settled through BOJ current account deposits. Otherwise, each participant makes a choice on which cash settlement agent to use for the funds settlement in JGB settlement. However, non-DVP settlement remains marginal under the JGB Book-Entry Transfer System, and thus the credit and liquidity risks arising from the use of commercial banks as a cash settlement agent are limited.

Key Consideration 4: If an FMI conducts money settlements on its own books, it should minimise and strictly control its credit and liquidity risks.

Together with the JGB Book-Entry Transfer System, the Bank operates a funds transfer system using BOJ current account deposits. In the JGB settlement under the JGB Book-Entry Transfer System, the Bank settles funds in its own book for the DVP settlement using the BOJ-NET. See Principle 4 and 7 of "Information Disclosure (BOJ-NET [FTS])" for the management of credit and liquidity risks that arise from funds transfer using the BOJ current account deposits.

Key Consideration 5: An FMI's legal agreements with any settlement banks should state clearly when transfers on the books of individual settlement banks are expected to occur, that transfers are to be final when effected, and that funds received should be transferable as soon as possible, at a minimum by the end of

the day and ideally intraday, in order to enable the FMI and its participants to manage credit and liquidity risks.

In the JGB settlement under the JGB Book-Entry Transfer System, the cash leg of the DVP settlement using the BOJ-NET is settled through BOJ current account deposits. The funds transferred to the receiver are immediately available to the receiver.

For other JGB settlements, participants can choose to use commercial banks to settle funds associated with the JGB settlements.

Principle 10: Physical deliveries

An FMI should clearly state its obligations with respect to the delivery of physical instruments or commodities and should identify, monitor, and manage the risks associated with such physical deliveries.

This Principle does not apply to the Bank, since the JGB Book-Entry Transfer System only handles dematerialized JGBs (i.e., book-entry JGBs) based on the Book-Entry Transfer Law.

Principle 11: Central securities depositories

A CSD should have appropriate rules and procedures to help ensure the integrity of securities issues and minimise and manage the risks associated with the safekeeping and transfer of securities. A CSD should maintain securities in an immobilised or dematerialised form for their transfer by book entry.

Key Consideration 1: A CSD should have appropriate rules, procedures, and controls, including robust accounting practices, to safeguard the rights of securities issuers and holders, prevent the unauthorised creation or deletion of securities, and conduct periodic and at least daily reconciliation of securities issues it maintains.

Under the JGB Book-Entry Transfer System, in accordance with the Book-Entry Transfer Law and the Regulations, JGBs held by participants that are account management institutions and JGBs held by their customers are recorded separately in the transfer account ledger of book-entry transfer institutions or account management institutions. This ensures that the rights of the JGB holders are protected even from the attachment order or insolvency proceedings of the participant under the Civil Execution Law and the bankruptcy laws.

The Book-Entry Transfer Law stipulates that when a participant that is an account management institution makes erroneous entries such as recording an excess amount of JGBs in the transfer account books ("overbooking"), the participant has the obligation to retire the overbooking to protect its customers from losses. It also stipulates that account management institutions in the tiers below the account management institution responsible for the overbooking are jointly and severally liable to guarantee with their customers the obligation to retire the overbooking of the upper-tier institution. Further, an investor protection trust is set up as a safety net to cover the losses incurred by retail investors if the book-entry transfer institution or account management institutions (excluding FIPs) become insolvent before they fulfill the obligation to retire the overbooking. The investor protection trust will compensate the losses incurred by retail investors up to 10 million yen per investor.

In order to ensure the rights of the issuer of JGBs, with regard to new entry in the transfer account ledger based on the issuance of JGBs and deletion from the transfer account ledger account based on the redemption of JGBs, the Bank, as a book-entry transfer institution, makes it a rule to have at least two of its authorized staff members to execute such operations based on the instructions from the issuer of JGBs, the government. Moreover, when making transfers in the BOJ-NET JGB Services, the total balance of the entire transfer account ledger remains the same, and the amount debited from the sender's account and the amount credited to the receiver's account are always identical for each transfer, thus preventing the unauthorized creation or deletion of securities.

Furthermore, with regard to the appropriateness of operations of the JGB Book-Entry Transfer System and the BOJ-NET JGB Services (including accounting and verification of the total balance of the JGBs), the Bank's Auditors and the Internal Auditors' Office, which reports directly to the Governor, periodically verify and audit the operational status as a part of the Bank's overall business.

Key Consideration 2: A CSD should prohibit overdrafts and debit balances in securities accounts.

The Regulations of the JGB Book-Entry Transfer System prohibit participants from making transfer requests unless there are sufficient securities outstanding, thus preventing negative balances in the securities accounts. Moreover, the BOJ-NET JGB Services does not accept entries that cause negative balances.

Under the JGB Book-Entry Transfer System, the Bank does not provide overdrafts in the securities account to resolve negative balances in such an account.

Key Consideration 3: A CSD should maintain securities in an immobilised or dematerialised form for their transfer by book entry. Where appropriate, a CSD should provide incentives to immobilise or dematerialise securities.

JGBs processed under the JGB Book-Entry Transfer System are fully dematerialized, and no JGB certificates may be issued.

Key Consideration 4: A CSD should protect assets against custody risk through appropriate rules and procedures consistent with its legal framework.

As stated above, under the JGB Book-Entry Transfer System, the attribution of rights regarding JGBs is settled by the entries to the transfer account ledger, in accordance with the Book-Entry Transfer Law. Under such circumstances, entries to the transfer account ledger kept at the Bank are made by at least two of its authorized staff members based on the instructions from the government or participants. In addition, when there are credits or debits to the DPs' accounts, the Bank notifies the participants of the amount of credits or debits as well as the amount outstanding. The BOJ-NET JGB Services verify the validity of the sender of the message through authentication using a password distributed to each operator and integrated-circuit (IC) cards. The BOJ-NET JGB Services also send notifications whenever a transfer of JGBs is executed.

Based on the Regulations, the Bank takes the utmost care in maintaining the transfer account ledger in its custody so that it is not defaced, mutilated, lost, or destroyed.

The JGBs deposited with the Bank by participants under the JGB Book-Entry Transfer System are appropriately maintained in safekeeping through these operating arrangements and are fully protected from custody risk.

The segregation of customer assets is as described under Key Consideration 5.

Key Consideration 5: A CSD should employ a robust system that ensures segregation between the CSD's own assets and the securities of its participants and segregation among the securities of participants. Where supported by the legal framework, the CSD should also support operationally the segregation of securities belonging to a participant's customers on the participant's books and facilitate the transfer of customer holdings.

In accordance with the Book-Entry Transfer Law and the Regulations, the Bank segregates its own JGBs and JGBs owned by participants on the transfer account ledger it keeps. It also ensures segregation among its participants, by keeping separate accounts for individual participants on its transfer account ledger.

In addition, under the JGB Book-Entry Transfer System, in accordance with the Book-Entry Transfer Law and the Regulations, JGBs held by participants that are account management institutions and those held by their customers are separately recorded on the transfer account ledgers kept at the book-entry transfer institutions or the account management institutions in the tier above.

In order to implement the above, in the transfer account ledger of participants that are account management institutions, accounts for the entry of its own JGBs must be segregated from those for the entry of their customers' JGBs.

This ensures the protection of participant customers' assets against the attachment order or insolvency proceedings of the participants under the Civil Execution Law and the bankruptcy laws.

Key Consideration 6: A CSD should identify, measure, monitor, and manage its risks from other activities that it may perform; additional tools may be necessary in order to address these risks.

The Bank, as the central bank, is engaged in businesses other than the book-entry transfer institution for JGBs, as stipulated by the Act or authorized by the competent ministers. In being designated as the book-entry transfer institution for JGBs pursuant to the Book-Entry Transfer Law, the Bank was exempted from its provisions on the prohibition of engaging in other businesses.

The Bank identifies risks posed by each business it offers and verifies their impact on the business of the book-entry transfer institution under the JGB Book-Entry Transfer System.

Principle 12: Exchange-of-value settlement systems

If an FMI settles transactions that involve the settlement of two linked obligations (for example, securities or foreign exchange transactions), it should eliminate principal risk by conditioning the final settlement of one obligation upon the final settlement of the other.

Key Consideration 1: An FMI that is an exchange-of-value settlement system should eliminate principal risk by ensuring that the final settlement of one obligation occurs if and only if the final settlement of the linked obligation also occurs, regardless of whether the FMI settles on a gross or net basis and when finality occurs.

Under the JGB Book-Entry Transfer System, when participants transfer JGBs using the BOJ-NET, the Bank, as a book-entry transfer institution, provides them with a DVP settlement function that enables them to simultaneously execute the JGB transfer and the associated funds transfer via the BOJ current account deposits. This enables participants to eliminate the principal risk arising from the transfer of JGBs. The DVP settlements are processed as follows: (1) a participant delivering the JGBs sends a transfer instruction for JGBs; (2) information on funds transfer that corresponds to the JGBs transfer is notified to the payer of funds (i.e., the receiver of the JGBs or the cash settlement agent designated by the receiver of the JGBs); (3) the payer of funds confirms the information and makes an entry of the funds transfer instruction; and (4) settlement of JGBs and funds are executed.

The transfer of JGBs under the JGB Book-Entry Transfer System and the transfer of funds using the BOJ current account deposits are executed simultaneously on an RTGS basis under the "gross-gross model" (i.e., in each transaction, a specific funds transfer corresponds to a specific JGB transfer). Under this model, transfers of each JGBs and funds that are settled on DVP basis become final at the same time.

Principle 13: Participant-default rules and procedures

An FMI should have effective and clearly defined rules and procedures to manage a participant default. These rules and procedures should be designed to ensure that the FMI can take timely action to contain losses and liquidity pressures and continue to meet its obligations.

Key Consideration 1: An FMI should have default rules and procedures that enable the FMI to continue to meet its obligations in the event of a participant default and that address the replenishment of resources following a default.

The Bank does not become a party to individual JGB transfers between the participants.

On the other hand, as the operator of the JGB Book-Entry Transfer System, the Bank defines actions to be taken in the event of a participant default in the Regulations, etc. Specifically, the Regulations stipulate the criteria to abolish the account of DPs, the criteria to cancel the approval of IPs and FIPs, and the procedure to port the JGB balance of the participant's customers to other participants when the participant discontinues its book-entry transfer business due to its bankruptcy and so on. In addition, the Regulations stipulate that when a participant is prohibited from transferring JGBs by laws and regulations because of an attachment order, for example, the participant may not request the transfer of such JGBs. Furthermore, the Regulations provide, after noting explicitly that the purpose must be to ensure the "smooth operation of the JGB Book-Entry Transfer System," that the Bank may establish necessary provisions or take necessary measures.

With respect to the BOJ-NET JGB Services, the contracts with participants using this network stipulate that in the event that the Bank recognizes that there is a possibility that the smooth use of the BOJ-NET JGB Services could be jeopardized, it may cancel the contract or restrict the use of the BOJ-NET for a certain period of time. In addition, in the event of a participant default, the Bank may cancel the contract with the defaulting participant. Furthermore, the contracts between the Bank and the participants provide, after noting explicitly that the purpose must be "to ensure the appropriate use of the BOJ-NET for JGB related businesses," that the Bank may establish necessary provisions or take necessary measures other than those stated in the contracts.

Key Consideration 2: An FMI should be well prepared to implement its default rules and procedures, including any appropriate discretionary procedures provided for in its rules.

As described under Key Consideration 1, the Regulations, etc., stipulate the criteria to abolish the account of the participant, the criteria to cancel the approval of IPs and FIPs, and the procedure to port the JGB balance of the defaulting participant to other participants. In addition, to the extent of achieving the purpose to ensure the "smooth operation of the JGB Book-Entry Transfer System," the Bank may establish necessary provisions or take necessary measures. In addition to the above, the Bank has put in place a necessary business processing framework.

With respect to the BOJ-NET JGB Services, the contract on the use of the BOJ-NET stipulates that in the event the Bank recognizes that there is a possibility that the smooth use of the BOJ-NET JGB Services would be jeopardized, it may cancel the contract or restrict the use of the BOJ-NET JGB Services for a certain period of time. In addition, the contract stipulates that only to the extent of achieving the objective "to ensure the appropriate use of the BOJ-NET for JGB related businesses," the Bank may establish necessary provisions or take necessary measures. In addition to the above, the Bank has put in place a necessary business processing framework.

When the Bank terminates DPs' accounts or cancels the approval of IPs or FIPs, the Bank has an operational framework in place to appropriately notify all participants.

Key Consideration 3: An FMI should publicly disclose key aspects of its default rules and procedures.

The Bank stipulates in the Regulations, etc., the criteria to abolish the account of DPs, the criteria to cancel the approval of IPs and FIPs, and the procedure to port the JGB balance of the defaulting participant to other participants, and publishes them.

Key Consideration 4: An FMI should involve its participants and other stakeholders in the testing and review of the FMI's default procedures, including any close-out procedures.

Such testing and review should be conducted at least annually or following material changes to the rules and procedures to ensure that they are practical and effective.

The Bank verifies and reviews on an ongoing basis the effectiveness of the procedures to abolish DPs' accounts and to restrict the use of the BOJ-NET JGB services.

Principle 14: Segregation and portability

A CCP should have rules and procedures that enable the segregation and portability of positions of a participant's customers and the collateral provided to the CCP with respect to those positions.

This Principle does not apply to CSD or SSS.

Principle 15: General business risk

An FMI should identify, monitor, and manage its general business risk and hold sufficient liquid net assets funded by equity to cover potential general business losses so that it can continue operations and services as a going concern if those losses materialise. Further, liquid net assets should at all times be sufficient to ensure a recovery or orderly wind-down of critical operations and services.

As the Bank is not an entity that would be exposed to business continuity risks arising from deterioration of financial conditions (i.e., general business risk), this Principle does not apply.

Principle 16: Custody and investment risks

An FMI should safeguard its own and its participants' assets and minimise the risk of loss on and delay in access to these assets. An FMI's investments should be in instruments with minimal credit, market, and liquidity risks.

Key Consideration 1: An FMI should hold its own and its participants' assets at supervised and regulated entities that have robust accounting practices, safekeeping procedures, and internal controls that fully protect these assets.

As a book-entry transfer institution under the JGB Book-Entry Transfer System, the Bank manages its own JGBs and the JGBs deposited by participants on its own ledger. The management of securities by the Bank under the JGB Book-Entry Transfer System is as described under Principle 11.

Key Consideration 2: An FMI should have prompt access to its assets and the assets provided by participants, when required.

The Bank manages its own JGBs and the JGBs deposited by participants on its own ledger.

Key Consideration 3: An FMI should evaluate and understand its exposures to its custodian banks, taking into account the full scope of its relationships with each.

The Bank manages its own JGBs and the JGBs deposited by participants on its own ledger.

Key Consideration 4: An FMI's investment strategy should be consistent with its overall risk-management strategy and fully disclosed to its participants, and investments should be secured by, or be claims on, high-quality obligors. These investments should allow for quick liquidation with little, if any, adverse price effect.

The Bank does not invest its own assets or the JGBs deposited by participants.

Principle 17: Operational risk

An FMI should identify the plausible sources of operational risk, both internal and external, and mitigate their impact through the use of appropriate systems, policies, procedures, and controls. Systems should be designed to ensure a high degree of security and operational reliability and should have adequate, scalable capacity. Business continuity management should aim for timely recovery of operations and fulfilment of the FMI's obligations, including in the event of a wide-scale or major disruption.

Key Consideration 1: An FMI should establish a robust operational risk-management framework with appropriate systems, policies, procedures, and controls to identify, monitor, and manage operational risks.

The Bank's basic policy for the operation and risk management of the JGB Book-Entry Transfer System is as described as under Principle 2, Key Consideration 6. Operational risks in the JGB Book-Entry Transfer System are also managed under this policy.

Specifically, the JGB Book-Entry Transfer System and the BOJ-NET JGB Services are operated by the Bank as (1) JGB book-entry transfers as the designated book-entry transfer institution under the Book-Entry Transfer Law, (2) business authorized under Article 39 of the Act, and (3) the regular business of the Bank as stipulated in Article 33 of the Act. As such, their operation and risk management are not to violate these articles or the authorization, and they must also be consistent with the Bank's purpose stipulated in Article 1, Paragraph 2 of the Act (which states, "the Bank of Japan's purpose is to ensure smooth settlement of funds among banks and other financial institutions, thereby contributing to the maintenance of stability of the financial system"). In addition, Article 5 of the Act stipulates, "In light of the public nature of its business and property, the Bank of Japan shall endeavor to conduct its business in a proper and efficient manner." The Policy Board has set down matters in accordance with each provision of the Act in the Bank's Articles of Incorporation, and all of these in combination form the Bank's basic policy on the operation and risk management of the JGB Book-Entry Transfer System and the BOJ-NET JGB Services.

Under this policy, the Policy Board decides the eligibility criteria for participation in the JGB Book-Entry Transfer System and other important issues regarding the operation of the JGB Book-Entry Transfer System. In the actual operation of the JGB Book-Entry Transfer System and the BOJ-NET JGB Services, in line with the policy and the decisions, all functions -- including the relevant functions responsible for business operations and IT system management -- identify risks that would arise from the execution of their business and verify how these risks are managed and countermeasures are implemented. The situation of risk management in each function is periodically reported to the Policy Board.

Similarly, in the development phase of the JGB Book-Entry Transfer System, the Governor, other relevant Officers, and the relevant functions responsible for business operations and IT system management identify operational risks in accordance with the system development policy decided by the senior management, and build a system that contains such risks. In addition, in deliberating the content of new services, the function responsible for business operations ensures the implementation of appropriate business processing by carefully examining the content of the business, identifying and establishing business processes that control operational risks, and establishing detailed business processing rules and procedures for both participants and the Bank. Furthermore, with respect to system disruptions, basic measures stating how to react to the Bank's system disruptions have been developed among all relevant functions at the Bank, including the relevant functions responsible for business operations and IT system management. The Bank ensures the continuity of appropriate business processing through ongoing review of operational risks.

Key Consideration 2: An FMI's board of directors should clearly define the roles and responsibilities for addressing operational risk and should endorse the FMI's operational risk-management framework. Systems, operational policies, procedures, and controls should be reviewed, audited, and tested periodically and after significant changes.

As described under Key Consideration 1 and Principle 2, Key Consideration 6, in accordance with the basic policy and decisions of the Policy Board on risk management, and within the scope of organization and jurisdiction set forth by the Act, Articles of Incorporation and Rules on Organization of the Bank, all functions -- including relevant functions responsible for business operations and IT system management -- identify and control risks that may arise in the performance of their duties, and take necessary measures. The situation of risk management in each function is periodically reported to the Policy Board.

In addition, the Internal Auditors' Office conducts audits, and these results are verified by the Policy Board. Moreover, Auditors audit the Bank's business, and the outline of the results is published each year in the *Annual Review*.

Key Consideration 3: An FMI should have clearly defined operational reliability objectives and should have policies in place that are designed to achieve those objectives.

The Bank operates the JGB Book-Entry Transfer System and the BOJ-NET JGB Services with the purpose to contribute to the smooth settlement of funds among financial institutions by achieving safer and more efficient JGB settlements, as book-entry of JGBs is strongly linked with funds transactions and settlements among financial institutions. In according with this purpose, the BOJ-NET JGB Services has gained credibility in its business processing because (1) it has sufficiently high operational availability, (2) there have been very few breakdowns, and (3) the JGB Book-Entry Transfer System has operated stably for a considerable period of time. In accordance with the basic policy and the decisions of the Policy Board on risk management described under Principle 2, Key Consideration 6, the Bank aims to continue to maintain the sufficiently high operational availability of the JGB Book-Entry Transfer System and the stable operation of the System.

To ensure the information security of its computer systems, including the BOJ-NET JGB Services, and the information processed by these systems, the Bank has documented its security policy (its principles on organizational structure and security measures to ensure information security). Under this policy, the Bank works to ensure information security. Moreover, the Bank monitors the system operations at its computer center at all times for early detection and correction of disruptions. It also has in place business continuity plans for potential disasters or disruptions. Through these measures, the Bank will seek to maintain its high operational reliability in the future.

The operational status of the BOJ-NET JGB Services and other computer systems is periodically reported to the Policy Board. In addition, as part of their verification and audit of the overall business of the Bank, Auditors and the Internal Auditors' Office verify and audit the status of the development and operation of the BOJ-NET JGB Services.

Key Consideration 4: An FMI should ensure that it has scalable capacity adequate to handle increasing stress volumes and to achieve its service-level objectives.

The Bank ensures that it has adequate capacity in business processing by conducting surveys to project future transaction volume, as necessary, taking into account the offering of new services, developments in other FMIs, and trends in financial markets.

Key Consideration 5: An FMI should have comprehensive physical and information security policies that address all potential vulnerabilities and threats.

The Bank's security measures for the physical safety of its data centers, offices, as well as sites where its devices are located that are used for business processing, are stated in its information security policy (its basic principles on the organizational structure and safety measures) and rules on the security of its business offices. Specifically, there are rigorous controls on entering and leaving the Bank's data centers, the sites where devices are located. These locations are also guarded by locks and fire prevention measures.

As stated under Key Consideration 3, information security policy concerning the operation of the JGB Book-Entry Transfer System is set in the Bank's information security policy.

Key Consideration 6: An FMI should have a business continuity plan that addresses events posing a significant risk of disrupting operations, including events that could cause a wide-scale or major disruption. The plan should incorporate the use of a secondary site and should be designed to ensure that critical information technology (IT) systems can resume

operations within two hours following disruptive events. The plan should be designed to enable the FMI to complete settlement by the end of the day of the disruption, even in case of extreme circumstances. The FMI should regularly test these arrangements.

To ensure the operational reliability of the BOJ-NET JGB Services, the Bank has duplicated not only the host computers at its main center but also important devices, such as central devices including telecommunication control units, circuits linking the Bank's head office with branches, and circuit exchange offices of telecommunication companies used by the head office and major branches.

If disruptions should occur at its main center, the Bank has established a backup center at a location sufficiently distant from the main center (i.e., approximately 500 kilometers away in Osaka), so that even if a disruption hits the main center, the Bank should be able to continue the provision of services under the JGB Book-Entry Transfer System through processing at the backup center. Thus, the Bank has in place an operational framework to ensure smooth settlements.

At the Bank's computer center, the Bank monitors the situation of the system operations at all times for early detection and correction of disruptions. Under this regime, when an event that would suspend the business processing at the main center is detected, the processing can be switched over to the backup center. The backup center can provide the same service as the main center, and the data at the main center are mirrored nearly on a real-time basis to the backup center. The operational procedures following the switchover to the backup center are documented, and there is an arrangement under which the business at the backup center will be carried out primarily by the Bank's branch staff in Osaka, the city where the backup center is located. Plans call for resuming business at the backup center within two hours following a disruptive event.

If the Bank's branch cannot continue its business related to the BOJ-NET due to disasters or disruptions, the head office will take over the business of the branch. Moreover, if a participant is incapacitated and cannot execute business related to the BOJ-NET due to a disaster or disruptions, the Bank requires participants to prepare their business continuity capacity to switch to paper-based transactions or use the BOJ-NET terminals at its other offices dedicated for the use at such times. Through these measures, the Bank aims to ensure that time-critical transactions are executed even in case of extreme circumstances.

The Bank conducts annual drills with users of the BOJ-NET JGB Services, in which the scenario calls for switching over to the backup center. The effectiveness of the switchover to the backup center is verified through this drill. In addition to this drill, the Bank has established business continuity arrangements in emergencies arising from disasters and other events, and verifies their effectiveness periodically through drills.

Key Consideration 7: An FMI should identify, monitor, and manage the risks that key participants, other FMIs, and service and utility providers might pose to its operations. In addition, an FMI should identify, monitor, and manage the risks its operations might pose to other FMIs.

The Bank's basic policy for the operation and risk management of the JGB Book-Entry Transfer System and the BOJ-NET JGB Services is as described under Key Consideration 1 and Principle 2, Key Consideration 6. In the actual operation of the JGB Book-Entry Transfer System and the BOJ-NET JGB Services, in accordance with the basic policy and the Policy Board decisions on risk management, all functions -- including business operations and IT system management, either individually according to their jurisdiction or in collaboration with other functions -- analyze and consider risks (such as credit, liquidity, and operational risks) that could affect smooth operation of the JGB Book-Entry Transfer System and the BOJ-NET JGB Services to identify and manage them.

Specifically, through timely and appropriate monitoring of the status of participants' system operations, the Bank manages the risks posed by their disruptions that may affect the operation of the JGB Book-Entry Transfer System.

In addition, the BOJ-NET JGB Services encrypts messages sent via the telecommunication networks to protect secrets and prevent data tampering. Moreover, the Bank verifies the validity of the sender of the message through authentication using a password distributed to each operator and IC cards. The BOJ-NET JGB Services are controlled in such a way that a user of the BOJ-NET JGB Services can only execute the business that is designated to that user in advance.

On the other hand, the identification, monitoring, and management of the risks posed by disruptions in the business processing in the JGB Book-Entry Transfer System and the BOJ-NET JGB Services spreading to other entities are as described under Principle 3, Key Consideration 3.

The Bank maintains close contact with other FMIs using the JGB Book-Entry Transfer System for the JGB settlements through, among others, exchanges of communication trees in case of disruption and business processing procedures for business continuity. In establishing or amending such regime, the Bank and the FMI duly discuss and coordinate to ensure their effectiveness.

Principle 18: Access and participation requirements

An FMI should have objective, risk-based, and publicly disclosed criteria for participation, which permit fair and open access.

Key Consideration 1: An FMI should allow for fair and open access to its services, including by direct and, where relevant, indirect participants and other FMIs, based on reasonable risk-related participation requirements.

The eligibility criteria for the participation of the JGB Book-Entry Transfer System are stipulated in "Requirements for Establishing Direct Participants' Accounts and Customers' Accounts and Requirements for Approval as Indirect Participants and Foreign Indirect Participants in the JGB Book-Entry Transfer System," and published by the Bank. Such criteria enable open and fair access to the JGB Book-Entry Transfer System.

The requirements state that the Bank provides access to the JGB Book-Entry Transfer System to (1) institutions provided in Article 44, Paragraph 1, Items 1 through 13 of the Book-Entry Transfer Law (banks, foreign bank branches, financial instruments business operators, insurance companies); (2) other book-entry transfer institutions and clearing organizations under the Book-Entry Transfer Law; and (3) foreign book-entry transfer institutions and clearing organizations which the Bank considers to be equivalent to those under the Book-Entry Transfer Law. In order to ensure the safety of settlement under the JGB Book-Entry Transfer System, the Bank verifies the following to prevent the credibility of the JGB Book-Entry Transfer System being jeopardized or smooth operation of the JGB Book-Entry Transfer System being disrupted: the fact that the DPs' financial condition is sound and their operational capabilities are adequate; for book-entry transfer institutions and clearing organizations, in addition to the above, the fact that there are no concerns about the risk management of clearing and settlement as part of their business, procedures on loss disposition caused by the clearing and settlement, and credibility of the computer system offered to users. These requirements are appropriate from the viewpoint of ensuring the safety and efficiency of the JGB Book-Entry Transfer System.

Key Consideration 2: An FMI's participation requirements should be justified in

terms of the safety and efficiency of the FMI and the markets it serves, be tailored to and commensurate with the FMI's specific risks, and be publicly disclosed. Subject to maintaining acceptable risk control standards, an FMI should endeavour to set requirements that have the least-restrictive impact on access that circumstances permit.

As described under Key Consideration 1, the eligibility criteria for the participation of the JGB Book-Entry Transfer System are set appropriately from the viewpoint of ensuring the safety and efficiency of the JGB Book-Entry Transfer System. These criteria are reviewed whenever necessary, for example, based on risks surrounding the JGB Book-Entry Transfer System, changes in the financial market structure, and amendments in laws and regulations.

Key Consideration 3: An FMI should monitor compliance with its participation requirements on an ongoing basis and have clearly defined and publicly disclosed procedures for facilitating the suspension and orderly exit of a participant that breaches, or no longer meets, the participation requirements.

The participants' compliance with the Bank's eligibility criteria for the participation of JGB Book-Entry Transfer System is monitored through the submission of accident reports and reporting and submission of materials required by the Bank based on the Regulations and information disclosure contracts. Participants that have contracted with the Bank to be subject to on-site examination by the Bank are continuously monitored through on-site examination and off-site monitoring. FMIs that are participants in the JGB Book-Entry Transfer System are subject to the Bank's oversight.

Whenever a participant does not meet the Bank's eligibility criteria for participation in JGB Book-Entry Transfer System, or is acknowledged to have the risk of impairing smooth settlements under the JGB Book-Entry Transfer System, the Bank takes appropriate measures to induce changes and intensify monitoring of the participant. The Regulations stipulate that the Bank can immediately deny or suspend access of a participant to the JGB Book-Entry Transfer System (1) when a participant has been issued administrative dispositions based on laws and regulations, (2) when a participant has breached Rules, Regulations, or other matters determined by the Bank to ensure the smooth operation of the JGB Book-Entry Transfer System, or (3) when the Bank considers that it impairs, or threatens to impair, the credibility of the JGB Book-Entry Transfer System or prevent its smooth operation. The Regulations are publicly available on the Bank's website.

Principle 19: Tiered participation arrangements

An FMI should identify, monitor, and manage the material risks to the FMI arising from tiered participation arrangements.

Key Consideration 1: An FMI should ensure that its rules, procedures, and agreements allow it to gather basic information about indirect participation in order to identify, monitor, and manage any material risks to the FMI arising from such tiered participation arrangements.

The Bank collects information on indirect participation through settlement data under the JGB Book-Entry Transfer System and surveys of and discussions with the participants. Through these activities, the Bank grasps basic information on (1) IPs, FIPs, and Customers with a large scale of settlement (e.g., the number of IPs, FIPs, and Customers, their names, the transaction volume and value, and their industry categories); (2) the contents of the settlement-related services that DPs provide to the IPs; and (3) risks arising from these services and how these risks are managed.

Key Consideration 2: An FMI should identify material dependencies between direct and indirect participants that might affect the FMI.

As described under Key Consideration 1, the Bank conducts surveys of and discussions with DPs, and through them the Bank identifies material dependencies that may affect the smooth settlements of funds under the JGB Book-Entry Transfer System among the DPs and the IPs, FIPs, and Customers. Specifically, the Bank has identified dependencies where DPs provide settlement business, credit extension, and liquidity provision to IPs, FIPs, and Customers.

Key Consideration 3: An FMI should identify indirect participants responsible for a significant proportion of transactions processed by the FMI and indirect participants whose transaction volumes or values are large relative to the capacity of the direct participants through which they access the FMI in order to manage the risks arising from these transactions.

As described under Key Consideration 1, the Bank conducts settlement data collection under the JGB Book-Entry Transfer System and surveys and discussions with the DPs. Through these activities, the Bank identifies IPs, FIPs, and Customers with a large scale of settlement that have a considerable share of the transaction value under the JGB Book-Entry Transfer System and IPs, FIPs, and Customers that have a relatively higher transaction volume and value compared to DPs.

Key Consideration 4: An FMI should regularly review risks arising from tiered participation arrangements and should take mitigating action when appropriate.

As described under Key Consideration 1, through settlement data collection under the JGB Book-Entry Transfer System and surveys of and discussions with the DPs, the Bank grasps and verifies the risks arising from the tiered participation under the JGB Book-Entry Transfer System.

Through these activities, the Bank has confirmed that the number of IPs, FIPs, and Customers that have a considerable share of the transaction value under the JGB Book-Entry Transfer System, as well as the IPs, FIPs, and Customers that have a relatively higher transaction volume and value compared to DPs, is small. Hence, the Bank evaluates that risks arising from tiered participation arrangements under the JGB Book-Entry Transfer System are limited.

Principle 20: FMI links

An FMI that establishes a link with one or more FMIs should identify, monitor, and manage link-related risks.

Key Consideration 1: Before entering into a link arrangement and on an ongoing basis once the link is established, an FMI should identify, monitor, and manage all potential sources of risk arising from the link arrangement. Link arrangements should be designed such that each FMI is able to observe the other principles in this report.

The JGB Book-Entry Transfer System has not established a link with other FMIs (the Bank has not used nor has participated in other FMIs in order to operate the JGB Book-Entry Transfer System), hence it does not have the procedure to identify such risk that arises from the link arrangement.

On the other hand, when other FMIs apply for participation in the JGB Book-Entry Transfer System, the Bank verifies whether the applicant satisfies the requirements for securities clearing and settlement system set out in the "Requirements for Establishing Direct Participants' Accounts and Customers' Accounts and Requirements for Approval as Indirect Participants and Foreign Indirect Participants in the JGB Book-Entry System." In particular, the Bank verifies that there are no particular concerns about the safety of the clearing and settlement the FMI from the viewpoint of the risk management of clearing and settlement as part of business, the procedure of loss disposition caused by the clearing, and the settlement and credibility of the computer system offered to users. The Bank also verifies the fact that the participants' financial condition is sound and its operational capabilities are adequate. Furthermore, the Bank oversees major FMIs including FMIs that directly participate in the JGB Book-Entry Transfer System, in accordance with the "The Bank of Japan Policy on Oversight of Financial Market Infrastructures."

Key Consideration 2: A link should have a well-founded legal basis, in all relevant jurisdictions, that supports its design and provides adequate protection to the FMIs involved in the link.

As described above, the JGB Book-Entry Transfer System does not use or participate in other FMIs.

As described in Principle 1, Key Consideration 5, and Principle 8, Key Consideration 1, the legal risk arising from indirect participation in the JGB Book-Entry Transfer System by FMIs located outside Japan is addressed by mutually agreeing that the governing laws regarding the rights and obligations between the Bank and the FMI are Japanese laws, and verifying through the submission of a legal opinion from the lawyer from the jurisdiction where the FMI is located that the agreement concerning governing laws is legally enforceable under the law of jurisdiction in which the FMI is located.

Key Consideration 3: Linked CSDs should measure, monitor, and manage the credit and liquidity risks arising from each other. Any credit extensions between CSDs should be covered fully with high-quality collateral and be subject to limits.

This Key Consideration does not apply to the Bank, since JGB Book-Entry Transfer System does not use or participate in other CSDs.

Key Consideration 4: Provisional transfers of securities between linked CSDs should be prohibited or, at a minimum, the retransfer of provisionally transferred securities should be prohibited prior to the transfer becoming final.

The Bank does not use or participate in other CSDs.

There is no provisional transfer of securities with the CSD that participates in the JGB Book-Entry Transfer System.

Key Consideration 5: An investor CSD should only establish a link with an issuer CSD if the arrangement provides a high level of protection for the rights of the investor CSD's participants.

This Key Consideration does not apply to the Bank, since the Bank does not employ nor participate in other CSDs.

Key Consideration 6: An investor CSD that uses an intermediary to operate a link with an issuer CSD should measure, monitor, and manage the additional risks (including custody, credit, legal, and operational risks) arising from the use of the intermediary.

This Key Consideration does not apply to the Bank, since the Bank does not use or participate in other CSDs.

Key Consideration 7: Before entering into a link with another CCP, a CCP should identify and manage the potential spill-over effects from the default of the linked CCP. If a link has three or more CCPs, each CCP should identify, assess, and manage the risks of the collective link arrangement.

This Key Consideration does not apply to CSDs or SSSs.

Key Consideration 8: Each CCP in a CCP link arrangement should be able to cover, at least on a daily basis, its current and potential future exposures to the linked CCP and its participants, if any, fully with a high degree of confidence without reducing the CCP's ability to fulfil its obligations to its own participants at any time.

This Key Consideration does not apply to CSDs or SSSs.

Key Consideration 9: A TR should carefully assess the additional operational risks related to its links to ensure the scalability and reliability of IT and related resources.

This Key Consideration does not apply to CSDs or SSSs.

Principle 21: Efficiency and effectiveness

An FMI should be efficient and effective in meeting the requirements of its participants and the markets it serves.

Key Consideration 1: An FMI should be designed to meet the needs of its participants and the markets it serves, in particular, with regard to choice of a clearing and settlement arrangement; operating structure; scope of products cleared, settled, or recorded; and use of technology and procedures.

In making decisions or changes on services offered under the JGB Book-Entry Transfer System and the BOJ-NET JGB Services, the Bank conducts public consultations as necessary and, to grasp the views and requests of participants, regularly holds direct dialogues with and conducts surveys of participants. For example, in developing the new BOJ-NET (which began full operation on October 13, 2015), the Bank adopted a basic policy to (1) use the latest IT, (2) employ a more flexible architecture to take account of future changes, and (3) incorporate enhanced accessibility to meet the needs of participants. In addition, through public consultation and a forum of participants, the Bank grasps their views and requests. Based on these dialogues and survey results, the Bank makes its analyses on the improvements of the safety and efficiency as concrete as possible, and assesses the needs of its participants and the markets it serves.

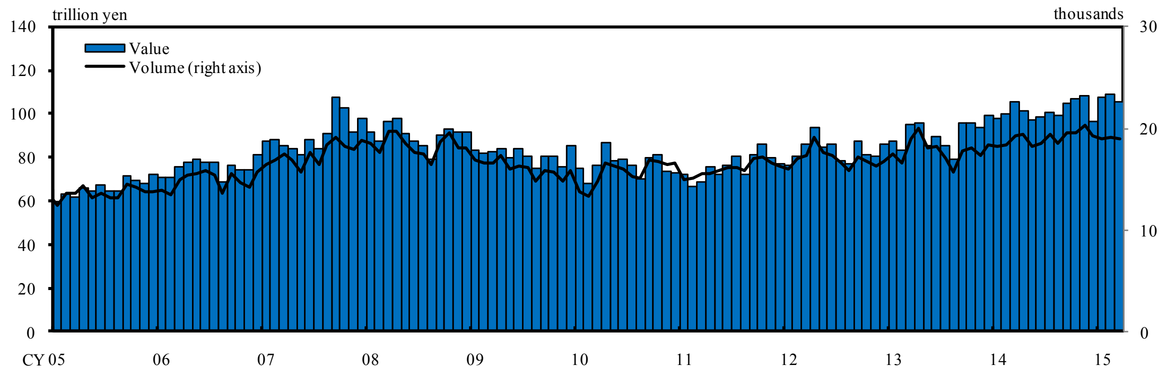
With regard to the IT system performance of the BOJ-NET JGB Services, the Bank verifies the system capacity and performance periodically or when development or modification of the system is underway. The Bank also monitors daily transaction volume at all times and has maintained sufficient IT system capacity to meet the transaction demands on normal days as well as the foreseeable peak transaction volume. At present, recent records on the use and settlement of the BOJ-NET JGB Services show no signs of gross excess or shortage in IT system performance.

Key Consideration 2: An FMI should have clearly defined goals and objectives that are measurable and achievable, such as in the areas of minimum service levels, risk-management expectations, and business priorities.

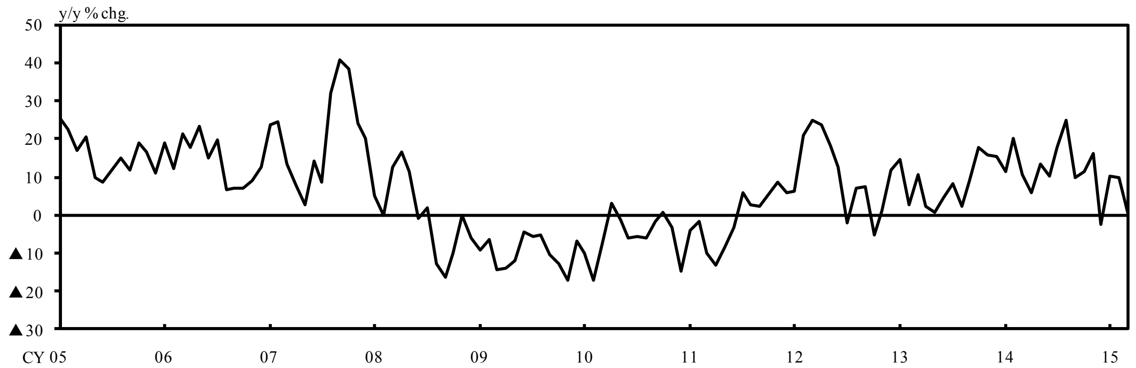
The Bank operates the JGB Book-Entry Transfer System with the purpose of contributing to the smooth settlement of funds among financial institutions by achieving safer and more efficient JGB settlements.

This purpose has been sufficiently achieved, as (1) the BOJ-NET JGB Services has maintained high operational availability for a long period of time, (2) there have been very few breakdowns (see Principle 17), and (3) the volume and value of settlements have followed a stable trend as shown in the charts below (Charts 4-1 and 4-2). The levels of JGB settlements under the JGB Book-Entry Transfer System and operational status of the BOJ-NET are periodically reported to the Policy Board, while trends in the value and volume of settlements under the JGB Book-Entry Transfer System are published as monthly statistics.

(Chart 4-1) Values and Volumes of JGB Settlements through the JGB Book-Entry Transfer System



(Chart 4-2) Year-on-Year Change of JGB Settlements Values through the JGB Book-Entry Transfer System



Key Consideration 3: An FMI should have established mechanisms for the regular

review of its efficiency and effectiveness.

The Bank ensures that it has adequate capacity in business processing by conducting surveys to project future transaction volume that takes into account the developments in other FMIs and trends in financial markets. In addition, the levels of settlements of JGBs under the JGB Book-Entry Transfer System and operational status of the BOJ-NET are periodically reported to the Policy Board.

Moreover, with regard to the Bank's business, including the operation of the JGB Book-Entry Transfer System and the BOJ-NET JGB Services, there are audits by the Internal Auditors' Office and periodic verification of the Bank's business operations by the Auditors, including an assessment of efficiency and effectiveness.

Principle 22: Communication procedures and standards

An FMI should use, or at a minimum accommodate, relevant internationally accepted communication procedures and standards in order to facilitate efficient payment, clearing, settlement, and recording.

Key Consideration 1: An FMI should use, or at a minimum accommodate, internationally accepted communication procedures and standards.

The BOJ-NET JGB Services uses Transmission Control Protocol/Internet Protocol (TCP/IP), which is an internationally accepted communication procedure.[11]

[11] The Bank renewed the IT system of the BOJ-NET on October 13, 2015. The new system has adopted the internationally prevalent Extensible Markup Language (XML) message format. ISO 20022 messages are employed when there is an expectation that the straight-through processing (STP) that enables the consecutive processing of a transaction from the point of execution to settlement can be enhanced. For other XML message formats, XML tags based on ISO 20022 messages are applied to the extent possible.

Principle 23: Disclosure of rules, key procedures, and market data

An FMI should have clear and comprehensive rules and procedures and should provide sufficient information to enable participants to have an accurate understanding of the risks, fees, and other material costs they incur by participating in the FMI. All relevant rules and key procedures should be publicly disclosed.

Key Consideration 1: An FMI should adopt clear and comprehensive rules and procedures that are fully disclosed to participants. Relevant rules and key procedures should also be publicly disclosed.

The basic rules and procedures for the JGB Book-Entry Transfer System are set forth in (1) the relevant laws and regulations including the Book-Entry Transfer Law; (2) Statement of Operation Procedures set by the Bank based on the Act; (3) the Regulations that is approved by the competent minister under the Book-Entry Transfer Law, and the Rules; and (4) the participation requirements for the JGB Book-Entry Transfer System.

The rules and procedures of the BOJ-NET JGB Services are stipulated as a contract between the DPs and the Bank, where the rights and obligations of the parties are clearly defined. The operation manuals for the BOJ-NET JGB Services stipulate the operational procedures to be followed by the users and the procedures on exceptional occasions such as participant defaults and system disruptions. These are easily accessible to participants.[12]

Also published are the rights and obligations between the Bank and participants, detailed arrangements on the use of the JGB Book-Entry Transfer System, and fees for the use of the BOJ-NET JGB services.

All the above rules and procedures including the Regulations make up comprehensive arrangements for the use of the JGB Book-Entry Transfer System, which allow a participant to easily recognize the risks and costs it may bear as the participant.

When the Bank makes changes to the rules and procedures in light of IT system

[12] The operation manuals are available only in Japanese.

improvements or changes in the surrounding environment, the Bank notifies participants of this fact in writing or via its website, and thus the participants can easily access the latest information.

Key Consideration 2: An FMI should disclose clear descriptions of the JGB Book-Entry Transfer System's design and operations, as well as the FMI's and participants' rights and obligations, so that participants can assess the risks they would incur by participating in the FMI.

As described above, the design and managements of the JGB Book-Entry Transfer System and the BOJ-NET JGB Services are stipulated in (1) the relevant laws and regulations including the Book-Entry Transfer Law; (2) Statement of Operation Procedures set by the Bank based on the Act; (3) the Regulations that are approved by the competent minister under the Book-Entry Transfer Law, and the Rules; (4) the participation requirements for the JGB Book-Entry Transfer System; and (5) the rules and operational manuals of the BOJ-NET JGB services. These relevant laws and regulations, rules and procedures are published on the Bank's website.

To facilitate the participants' understanding of the risks they would bear by becoming a participant in the JGB Book-Entry Transfer System or a user of the BOJ-NET JGB Services, the rules, procedures, and contracts provide information on the rights and obligations of a participant, the time when the book-entry transfer of JGB becomes final, the procedures for participant default, and the governing laws and jurisdiction.

The Regulations stipulate that the Bank may establish necessary provisions or take necessary measures, including the revisions of the rules and procedures. However, it is noted explicitly that it will be pursued only to the extent to achieve the objective of ensuring appropriate operation of the JGB Book-Entry Transfer System.

Key Consideration 3: An FMI should provide all necessary and appropriate documentation and training to facilitate participants' understanding of the FMI's rules and procedures and the risks they face from participating in the FMI.

The Bank promotes the participants' understanding through such steps as providing explanations when approved to become a participant to the JGB Book-Entry Transfer System, setting up help-desk support during business hours, providing explanatory documents and explanations upon revision in the JGB Book-Entry Transfer System, and offering running tests on the BOJ-NET JGB Services.

As a result of these measures, the Bank has maintained the stability of settlements under the JGB Book-Entry Transfer System and the BOJ-NET JGB Services.

Key Consideration 4: An FMI should publicly disclose its fees at the level of individual services it offers as well as its policies on any available discounts. The FMI should provide clear descriptions of priced services for comparability purposes.

With regard to the fees for the use of the BOJ-NET JGB Services, the Bank discloses its policy and the fees that are set at the level of individual services. Specifically, the fees are in principle set based on the following policy.

First, the Bank considers that it should basically bear the costs of putting its infrastructure in place to offer its settlement services (such as the costs of development and maintenance of the systems). This is because the JGB Book-Entry Transfer System, which offers JGB settlements among financial institutions, is a public infrastructure that is fundamental to the functioning of the financial and capital markets. Moreover, it is considered that investing to further enhance the safety and efficiency of its FMI in response to changes in the surrounding environment such as technological innovation is an inherent function of central banks.

On the other hand, financial institutions using the JGB Book-Entry Transfer System online via the BOJ-NET JGB Services can expect to benefit from the lighter operational burden and shorter processing time compared with those when using these services via paper-based requests to the Bank. Therefore, when the BOJ-NET JGB Services is accessed, the Bank collects the costs for connection with the BOJ-NET JGB Services and the use of communication circuits from participants, which corresponds to the benefits from online processing. The fees are collected in the form of fixed fees and transaction fees. The fixed fees are determined by the type of communication circuit, while the transaction fees are set according to the type of message format.

Key Consideration 5: An FMI should complete regularly and disclose publicly responses to the CPSS-IOSCO Disclosure framework for financial market infrastructures. An FMI also should, at a minimum, disclose basic data on transaction volumes and values.

The Bank intends to disclose publicly the response to "Disclosure framework for financial market infrastructures" of the Committee on Payment and Settlement Systems (CPSS)[13]-IOSCO whenever there is a material change in the JGB Book-Entry Transfer System and the BOJ-NET JGB Services or the surrounding environment, or at least every other year.

The Bank compiles and publishes on its website statistics on *Payment and Settlement Statistics* on a monthly basis. These statistics include the volume and value of settlements executed under the JGB Book-Entry Transfer System, and the cumulative share of DVP for JGB settlements settled during the day both on a volume and value basis. The Bank also publishes the number of participants in the JGB Book-Entry Transfer System.

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[13] The current Committee on Payments and Market Infrastructures (CPMI).

Principle 24: Disclosure of market data by trade repositories

A TR should provide timely and accurate data to relevant authorities and the public in line with their respective needs.

This Principle does not apply to CSDs or SSSs.