Disclosure Report for
Principles for financial market infrastructures

JASDEC DVP Clearing Corporation (JDCC)

August 2023

About this document

The purpose of this document is to assess and publicly disclose the circumstances of JASDEC DVP Clearing Corporation (JDCC), based on the annex "Principles for financial market infrastructures: Disclosure Frameworks and Assessment Methodology" to *Principles for financial market infrastructures* formulated by the Committee on Payment and Settlement Systems of the Bank for International Settlements (BIS/CPSS*) and the International Organization of Securities Commissions (IOSCO).

* The Committee on Payment and Settlement Systems (CPSS) changed its name to the Committee on Payments and Market Infrastructures (CPMI) in September 2014.

Responding institution	JASDEC DVP Clearing Corporation
Jurisdiction(s) in which the FMI operates	Japan
Regulatory authorities	The Financial Services Agency
Oversight organization	The Bank of Japan
The date of this disclosure	10 August, 2023
This disclosure can also be found at	https://www.jasdec.com/en/about/jdcc/disclosure/index.html
For further information, please contact	JASDEC DVP Clearing Corporation 7-1, Nihombashi-Kabuto-Cho, Chuo-Ku, Tokyo, 103-0026, Japan TEL: +81-3-3661-0181

JDCC has taken every effort to ensure the accuracy of the information contained in this document. JDCC shall accept no responsibility or liability for any actions involving the use of this information. JDCC reserves the right to without notice revise or alter the contents of this document, or withdraw or halt its publication. Additionally, unless otherwise noted, information contained within this document is current as of August 2023.

This English translation has been prepared solely for reference purposes and shall not have any binding force. The original Japanese text will be definitive in case of any divergence in the meaning.

Abbreviation

The table below shows the abbreviation used in this document.

BCP	Business Continuity Plan
BIS	Bank for International Settlements
BETS	Book-entry Transfer System
BOJ	Bank of Japan
BOJ-NET	Bank of Japan Financial Network System
CCP	Central counterparty
CISO	Chief Information Security Officer
CP	Short-term corporate bond (Commercial paper)
CPMI	Committee on Payments and Market Infrastructures
CPSS	Committee on Payment and Settlement Systems
CRO	Chief Risk Officer
CSD	Central securities depository
DVP	Delivery versus payment
FISC	The Center for Financial Industry Information Systems
FIEA	Financial Instruments and Exchange Act
FMI	Financial market infrastructure
FSA	Financial Services Agency, The Japanese Government
GDPR	General Data Protection Regulation
IOSCO	International Organization of Securities Commissions
IT	Information technology
ITIL	Information Technology Infrastructure Library
JASDEC	Japan Securities Depository Center, Inc.
JDCC	JASDEC DVP Clearing Corporation
JGB	Japanese Government Bond
JSCC	Japan Securities Clearing Corporation
NETDs	Non-Exchange Transaction Deliveries
PFMI	Principles for financial market infrastructures
PS	Payment system
PSMS	Pre-Settlement Matching System
RTGS	Real-time gross settlement
SLO	Service Level Objective
SSS	Securities settlement system
STP	Straight Through Processing
TR	Trade repository
Transfer Act	Act on Book-Entry Transfer of Corporate Bonds and Shares

Contents

I. Executive summary

JASDEC DVP Clearing Corporation (JDCC) is a financial instruments clearing organization (CCP) established to reduce the principal risk related to securities settlement and to ensure proper fund settlement by linking the delivery of securities and fund settlement that occur in book-entry transfers of Non-Exchange Transaction Deliveries (NETDs) in Japan Securities Depository Center, Inc. (JASDEC). (Book-entry transfers of NETDs mean other than those of stock exchange trades.) The system that JDCC runs is called the DVP Settlement System for NETDs.

Following the formulation of the *Principles for financial market infrastructures* (PFMI), Japanese regulatory authorities required FMIs to act in accordance with the PFMI in December 2012. In response to these decisions, JDCC has been making the necessary improvements to ensure that JDCC complies with all applicable PFMI principles. This document is based on the "Disclosure Frameworks and Assessment Methodology" which is the annex to the PFMI, and publicizes the details of the application of the PFMI within JDCC.

JDCC also publicly discloses its quantitative data based on "Public quantitative disclosure standards for central counterparties" which was formulated and published by CPMI-IOSCO in February 2015[1].

(note) JASDEC is a central securities depository (CSD) that operates the book-entry transfer system (BETS) managing completely dematerialized (paperless) records of the ownership of stocks listed on Japanese stock exchanges, commercial paper (CP), corporate bonds and municipal bonds, investment trusts and other securities. JASDEC is also a securities settlement system (SSS) that enables the transfer of the ownership that are recorded in the book-entry transfer account registry in the BETS. For more details of JASDEC, please refer to "Disclosure Report for Principles for financial market infrastructures" (as of August 2023. Hereinafter referred to as "JASDEC disclosure report") disclosed in August 2023.

Participants

JDCC's participants are the users of the DVP Settlement System for NETDs (hereinafter referred to as "DVP participants") among those financial institutions, etc., who own accounts with JASDEC (JASDEC participant accounts opened for the purpose of book-entry transfer of stocks and other securities). Eligible securities to clear at JDCC

[1] JDCC's quantitative disclosure can be found at the following link:
http://www.jasdec.com/en/about/jdcc/disclosure/index.html

include stocks and corporate bonds with share options (CBs) handled by JASDEC. Eligible securities to be deposited as collateral with JDCC to secure their fulfillment of obligation owing to JDCC are stocks, CBs and other securities handled by JASDEC, as well as Japanese Government Bonds (JGBs).

In addition, DVP participants may designate a settlement bank to act as their representative for the settlement of their funds in the DVP Settlement System for NETDs. JDCC receives applications from the DVP participants and approves the settlement banks.

Regulatory framework

JDCC is licensed under the Financial Instruments and Exchange Act (FIEA) as the financial instruments clearing organization, with the designation by the competent minister, the Prime Minister. FIEA stipulates that the Prime Minister delegates the authority to regulate JDCC to the Commissioner of the Financial Services Agency (FSA). JDCC's rules and operations are regulated by the Commissioner of the FSA. Among the authorities delegated to the Commissioner of the FSA, the authority to implement inspections is in turn delegated by the Commissioner of the FSA to the Securities and Exchange Surveillance Commission.

In addition, the Bank of Japan (BOJ), which is the central bank, has released *The Bank of Japan Policy on Oversight of Financial Market Infrastructures* that states that PFMI is to be applied as the standard used to assess the safety and effectiveness of systemically important FMIs. The BOJ, as the central bank, implements *oversight* of Japanese FMIs.

Main risks and risk-management frameworks

Credit and liquidity risks are considered as the major risks for JDCC's financial instruments obligation assumption business (CCP business). Nevertheless, realistic risks are reduced by ensuring that all obligations are fully collateralized using a conservative appraisal rates (haircut), and by assuming obligations only on the settlement day.

As JDCC’s operation has an extremely close relationship with JASDEC's operations, JDCC’s risk management is undertaken by the JASDEC Group (JASDEC and JDCC) overall, with JDCC being an integral part of JASDEC. Specifically, under the JASDEC Group's Basic Policy on Risk Management, JDCC participates in the Integrated Risk Management Council that JASDEC has established and which is presided over by JASDEC's Chief Risk Officer (the "CRO," who oversees the risk management of the JASDEC Group and who, as the person responsible, carries out necessary leadership and supervision) and conducts periodic monitoring of the state of management of each type of risk and other activities to ensure a proper risk management structure.

JASDEC has set up a Risk Committee below the Board of Directors. The majority of the members of this Committee comprises persons who do not execute the operations of the JASDEC Group, and it is the role of this Committee to advise the Board of Directors in matters of overall risk concerning the JASDEC Group.

II. Summary of changes to disclosure

JDCC's first disclosure of information based on CPSS-IOSCO's "Principles for financial market infrastructures: Disclosure Frameworks and Assessment Methodology" was made on July 28, 2015, and has been updated every year since. A summary of the changes made since the previous disclosure (August 2022) is as follows.

- The description regarding the drill of the administrative procedures in the event of a participant default has been changed to reflect the current reality. (For details refer to Principle 7 (Liquidity risk), Key Consideration 7).
- The description regarding the confirmation of administrative procedures in the event of withdrawal from the Participants Fund has been changed to reflect the current reality. (For details refer to Principle 13 (Participant-default rules and procedures), Key Consideration 4).
- The description regarding regular meetings through which the progress of development and operation of the system are checked has been changed to reflect the current reality. (For details refer to Principal 17 (Operational risks), Key consideration 7).
- The description regarding the URL has been updated in accordance with the renewal of JASDEC Group's website (July 2023).

III. Overall summary of FMIs

1. Summary of JDCC

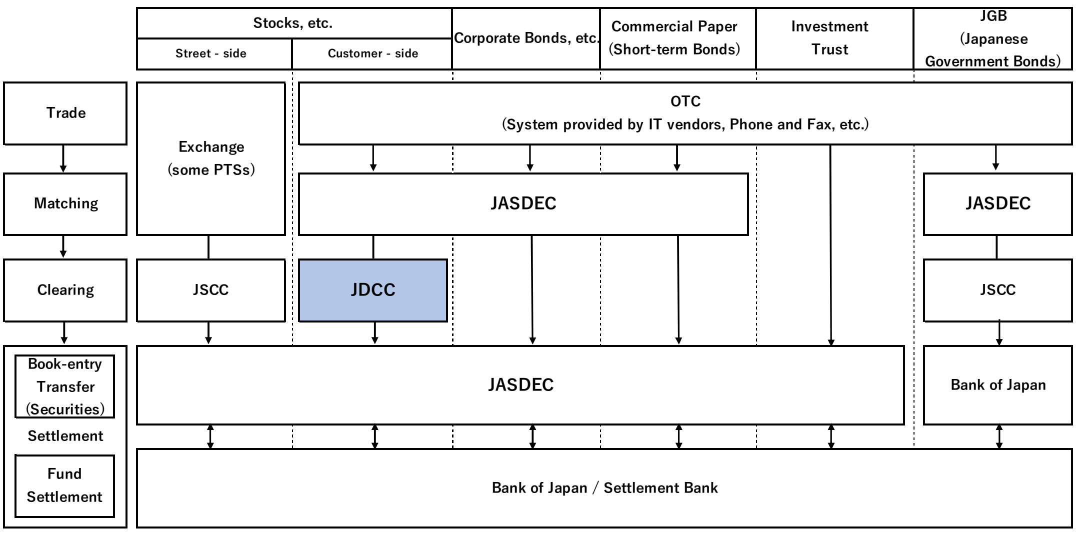
JDCC is a wholly owned subsidiary of JASDEC and is a CCP established to achieve a DVP settlement system for NETDs in JASDEC.

Financial Instruments and Exchange Act (FIEA) requires a CCP to be a stock company that has the board of directors and an auditor (or an audit committee). JDCC fulfills these requirements.

In the DVP Settlement System for NETDs, JDCC assumes obligations from DVP participants and executes DVP settlement as a customer-side clearing organization. DVP participants are able to eliminate principal risk related to securities settlement by using the DVP Settlement System for NETDs.

The DVP Settlement System for NETDs handles stocks (including convertible bonds, exchange traded funds (ETFs), real estate investment trusts (REITs), Japanese depositary receipts (JDRs), etc.) issued and listed in Japan, and foreign securities listed in Japan. Securities settlement is carried out on a gross basis by using JASDEC accounts for book-entry transfer of securities and fund settlement is carried out on a net basis by using BOJ-NET (Gross-Net DVP settlement). In addition, DVP participants may designate a settlement bank to act as their representative for the settlement of their funds at Bank of Japan.

【The role of JDCC in the Japanese Securities Market】



【Statistical Data】

The DVP Settlement System for NETDs	https://www.jasdec.com/en/statistics/index.html

2. An overview of the organization of JDCC

JDCC's Board of Directors is comprised of JASDEC executive officers. In consideration of JASDEC governance, the matters to be resolved by the JDCC's Board of Directors are reported to the JASDEC's Board of Directors, providing a means of checks and balances in the management of JDCC for DVP participants and other JDCC users.

JDCC has established a DVP Business Operations Committee that considers matters advised from the JDCC's Board of Directors about the operation of the DVP Settlement System for NETDs in order to undertake user-oriented operational management as well as emphasize corporate governance, from the point of view of its users under the JASDEC Group's Basic Management Policy.

3. An overview of laws and regulations

(1) Organizational form and holding structure

JDCC is a stock company based on the Companies Act, and was established in June 2003. JASDEC is its sole shareholder.

(2) Legal basis for major activities

JDCC is a CCP that is licensed by the competent minister, namely the Prime Minister, in accordance with the FIEA.

(3) Regulatory and supervisory framework

JDCC is a CCP, based on the FIEA. The FIEA is the main law that regulates JDCC.

In the FIEA, the competent minister is defined to have the authority, with respect to a financial instruments clearing organization (CCP), which includes the following: ordering the production of reports and inspection; issuing a business improvement order; and rescission of a license. Although the competent minister is the Prime Minister, under the FIEA the authorities of the Prime Minister are partially delegated to the Commissioner of the Financial Services Agency (FSA), with the exception of the authority over licensing and rescission of licenses, etc. Among the authorities delegated to the Commissioner of the FSA, the authority to issue an order for the submission of reports or materials and on-site inspections is in turn delegated by the Commissioner of the FSA to the Securities and Exchange Surveillance Commission.

The FSA has produced and published its *Comprehensive Guidelines for Supervision of Financial Market Infrastructures - Clearing Organizations, Fund Clearing Organizations, Book-entry Transfer Institutions, and Trade Repositories* - (Supervision Guidelines) covering the supervision of FMIs including CCPs.

In addition, the Bank of Japan (BOJ), which is the central bank, has released *The Bank of Japan Policy on Oversight of Financial Market Infrastructures* that states that PFMI is to be applied as the standard used to assess the safety and effectiveness of systemically important FMIs. The BOJ, as the central bank, carries out *oversight* of Japanese FMIs.

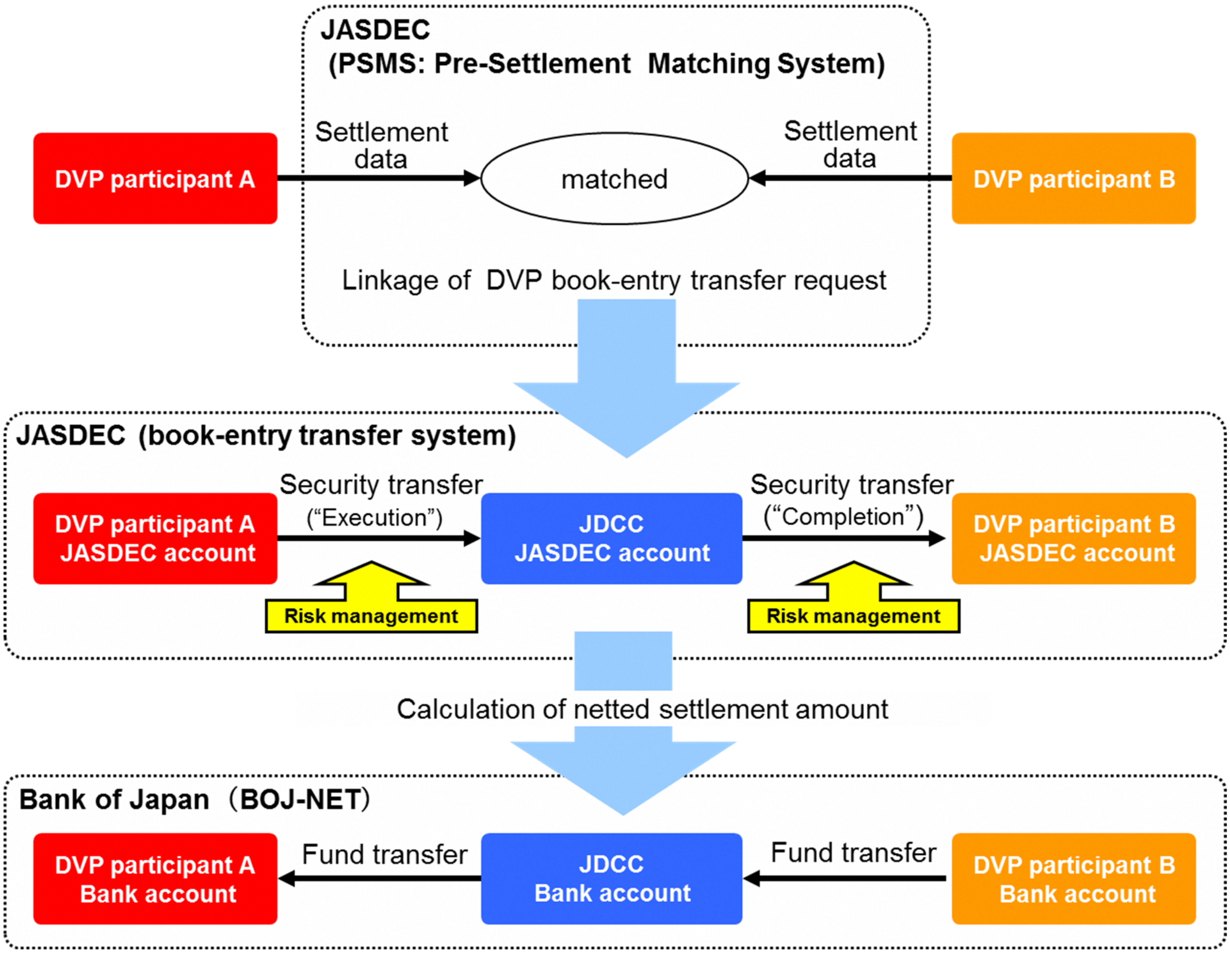
4. Overview of JDCCs institutional design and business operation

JDCC's DVP Settlement System for NETDs is a system that is designed to smoothly implement fund settlement and to reduce principal risk by linking the delivery of securities and fund settlement that occur in book-entry transfers of NETDs in JASDEC.

(Note) In the DVP Settlement System for NETDs, the delivery of securities is performed through book-entry transfer in JASDEC. There are no physical deliveries.

(DVP scheme)
In the DVP Settlement System for NETDs, the JASDEC's processing systems for pre-settlement matching and book-entry transfer are linked, and the series of processes related to settlement are carried out automatically. Data from both DVP participants are entered into the Pre-Settlement Marching System (PSMS). When those data are matched, the DVP book-entry transfer request is automatically linked to the book-entry transfer system. When JDCC receives a DVP book-entry transfer request, in accordance with a certain level of risk management, it receives the securities from the deliverer of the securities ("execution" of securities transfer). After the settlement of the funds of the receiver of the securities has been completed, the book-entry transfer of securities is made to the receiver's DVP participant account ("completion" of securities transfer).

【Settlement in the DVP Settlement System for NETDs（flow diagram）】



(Framework for the management of risks)

In the DVP Settlement System for NETDs there are various structures in place to strictly manage risk to ensure that the DVP settlement is performed properly. The main structures are as follows.

a. Assurance Assets

Assurance Assets consist of the following: (1) "Participants Fund" that require all DVP participants to deposit cash of a value that is calculated in advance using a consistent standard; (2) "Securities-to-be-Received" that are the securities to be delivered via DVP book-entry transfer placed in the JDCC account prior to them being transferred to the receiver; and (3) "Pledged Securities" that the DVP participant pledges to JDCC. Of these, JDCC assesses the value of Securities-to-be-Received and Pledged Securities by multiplying the closing price on the previous business day of the settlement day by certain appraisal rates, in consideration to the risk of price fluctuations and other risks.

JDCC only assumes obligations when the net debit, which is the total fund paying amount minus the total receiving amount, is within a range of the Assurance Assets. Even in case of default on fund settlement of the payer, JDCC would be able to recover the defaulted amount by selling the Securities-to-be-Received and the Pledged Securities and would avoid any losses being passed on to other DVP participants.

(Note) Among Pledged Securities, the depositing of stocks, CBs and other securities handled by JASDEC is performed through book-entry transfer in JASDEC. The depositing of JGBs is performed through book-entry transfer in the JGB Book-Entry System using the Bank of Japan Financial Network System (BOJ-NET). Both of them do not involve physical deliveries.

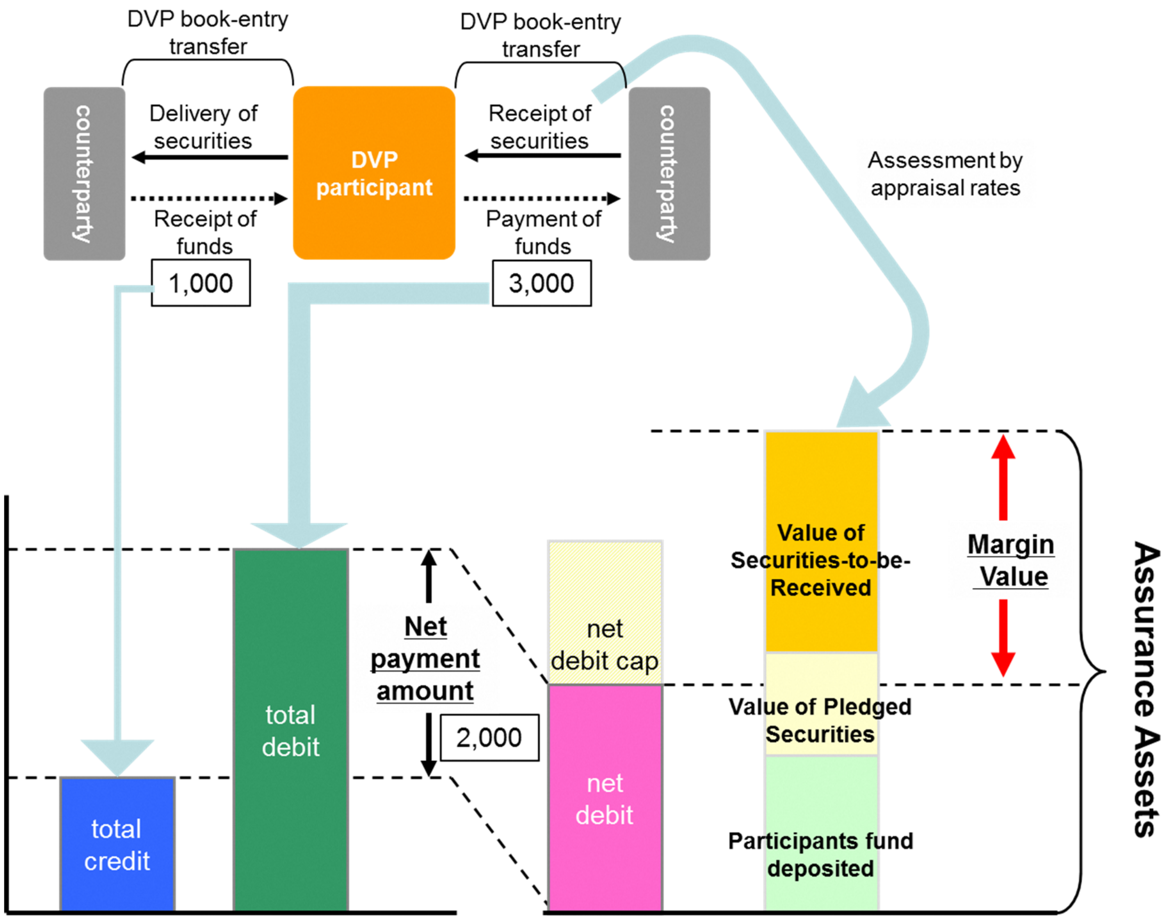
b. Net Debit Cap

JDCC not only sets individual net debit limits in each business day according to the trading performance of the DVP participants; it also sets an upper net debit cap (maximum 30 billion yen) to prevent the net debit increasing without limit. Furthermore, in order to cover the default of a DVP participant and its affiliates, JDCC sets an upper limit (60 billion yen) for the total amount of the net debit cap (hereinafter referred to as the "Total Net Debit Cap") of the DVP Participant Group (meaning the group of DVP Participants which belong to the same financial group; the same shall apply hereinafter).

c. Assurance of Liquidity

JDCC requires each DVP participant to deposit their Participants Fund and concludes a commitment line agreement with commercial banks to ensure the liquidity necessary to complete the payment to the DVP participant on the settlement date in case of the default of a DVP Participant Group as well as the default of two DVP participants that would create the largest aggregate liquidity exposure in JDCC, even if one of Commitment Line Banks defaults.

【diagram of risk management structure】



IV. Disclosure under 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.

（Applicable FMIs : PS、CSD、SSS、CCP、TR）

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.

Material aspects and relevant jurisdictions

- Material aspects of JDCC's business that require legal certainty are netting, DVP agreements, pledge agreements, and procedures to take when a DVP participant defaults.

- Japanese law applies to material aspects of JDCC's business.

Legal basis for each material aspect

The legal framework covering financial instruments clearing organization (CCP) is set out in the FIEA, and has a high degree of legal certainty. In addition, the JDCC Business Rules and other regulations make no provision for invalidating or altering the assumption of obligations.

(Netting)

- By assuming an obligation, JDCC positions itself between the deliverer and the receiver of the securities, taking a bilateral netting arrangement in which all relationships related to fund settlement are replaced to a two-party relationship between JDCC and the DVP participant. This netting arrangement is legally valid because it is conducted in accordance with the Business Rules and other rules based on it that are approved by the authorities.

(DVP agreements)

- The DVP Settlement System for NETDs is a system that institutionally links the book-entry transfer of securities and the settlement of funds, and provides DVP functions to the NETDs of stocks and other securities in JASDEC. The DVP Settlement System for NETDs is operated in accordance with the JDCC Business

Rules and other regulations. As for the book-entry transfer of securities, the use of JDCC accounts opened in JASDEC and in the BOJ ensures the legal basis for the transfer. As for the fund settlement, the use of central bank money from the BOJ-NET ensures the finality of the settlement.

(Pledge agreements)

- JDCC's rule stipulates that Participants Funds and Pledged Securities received from participants are to be Clearing Deposits. In accordance with laws and regulations (FIEA Article 156-11, Cabinet Office Ordinance on Financial Instruments Clearing Organization Article 18) JDCC manages these Clearing Deposits by segregating from other assets. (Refer to **"Principle 16. Custody and investment risks, Key considerations 1 and 2."**)

(Procedures to take in case of a DVP participant default)

- The efficacy of settlement of the netted amount, etc., carried out by JDCC in accordance with the Business Rules, has priority over bankruptcy proceedings (FIEA Article 156-11-2) and its legal basis is assured.

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

- Important rules, procedures and services at JDCC are developed clearly and easily understandable through the deliberations of the DVP Business Operations Committee that comprises its major DVP participants.

- The matters that must be set forth in the Business Rules are stipulated in law (FIEA Article 156-7). Changes to the Articles of Incorporation or the Business Rules require the approval of the competent minister (FIEA Article 156-12). In addition, amendments to any of the subordinate rules set up based on the Business Rules are required to be notified to the competent minister (Cabinet Office Ordinance on Financial Instruments Clearing Organization Article 47).

- During the deliberation of important rules, procedures and services, JDCC considers their compliance with related laws and regulations, and seeks legal analysis from legal experts (lawyers) when necessary.

- Through these processes, JDCC is ensuring consistency between the Business Rules and related laws.

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.

- JDCC discloses its rules and important operational procedures, etc. to the public general via its website.

- When JDCC amends any of these, it notifies its participants of the changes and their details, and publishes them on its website. Publishing information on its website, JDCC appends them with reference materials containing diagrams, etc., where necessary, to facilitate the understanding of viewers.

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.

Enforceability of rules, procedures and contracts

- JDCC's rules and main procedures are formulated through the process in accordance with the FIEA, such as the approval of the competent minister, to have a high degree of certainty.

- The FIEA clarifies the effective measures to be taken when a DVP participant defaults. The enforceability of the rules concerning business has been verified through analysis and, where necessary, the opinions of legal experts has been obtained. The rules are highly reliable.

- JDCC does not conduct its business over multiple jurisdictions.

Degree of certainty for rules and procedures

- JDCC's rules and main procedures are formulated by receiving approval for these matters from the competent minister or notifying these matters to the competent minister, in accordance with the FIEA.

- Measures based on JDCC's rules and procedures have never been invalidated, overturned or suspended.

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.

- JDCC's DVP Settlement System for NETDs is operated in accordance with the FIEA, which is Japanese law, and is not operated under multiple jurisdictions.

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.

(Applicable FMIs : PS、CSD、SSS、CCP、TR)

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.

- JDCC is a wholly owned subsidiary of JASDEC, and is managed according to the Corporate Philosophy and the Basic Management Policy of the JASDEC Group.

- The JASDEC Group has a Corporate Philosophy and a Basic Management Policy that is based on the Philosophy. These are shown on its website.

＜Corporate Philosophy＞

Recognizing our public role as a provider of important settlement service in the capital market, we aim to provide reliable, convenient and highly efficient services that help improve capital market functions and contribute to the development of society.

Accordingly, we will strive to stay closely attuned to business environment and structural changes in the domestic and international capital markets, and undertake constant reform to improve services from the point of view of investors, issuers, market intermediaries and other market participants.

＜Basic Management Policy＞

1. Undertake user-oriented operational management as well as emphasize corporate governance, from the point of view of investors, issuers, market intermediaries and other market participants.
2. Keep business environment and structural changes in the capital market firmly in mind and provide globally recognized best practice in settlement services at a moderate price, by acting rapidly and flexibly to improve and reform operations as well as reducing cost and enriching financial resources.
3. Ensure continuous and stable operational management, such as creating a corporate

culture that emphasizes risk management, from the standpoint of concentrating operations in settlement infrastructure while expanding the scope of services.
4. Recognize the public nature of our operations and ensure active disclosure and management transparency.

- Based on its above-mentioned Corporate Philosophy and Basic Management Policy, JDCC, as the member of the JASDEC Group, formulates the annual business plan by the resolution of JDCC's Board of Directors under JASDEC's medium-term management plans.

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.

Governance arrangements

- JDCC, as a wholly owned subsidiary of JASDEC, is a company that was established for the purpose of excluding principal risk from the NETDs in JASDEC book-entry transfer of stocks, etc. JDCC's operation has an extremely close working relationship with JASDEC's operations.

- As a result, as a member of the JASDEC Group, JDCC manages its business as an integral part of JASDEC, based on the Corporate Philosophy and Basic Management Policy of the JASDEC Group, including appointing executive officers of JASDEC to JDCC's Board of Directors.

- JDCC is subject to the supervision of the JASDEC's Board of Directors as one of the JASDEC business divisions, in accordance with JASDEC's Basic Policy on Corporate Governance, and reports on the execution of its business to the JASDEC's Board of Directors.

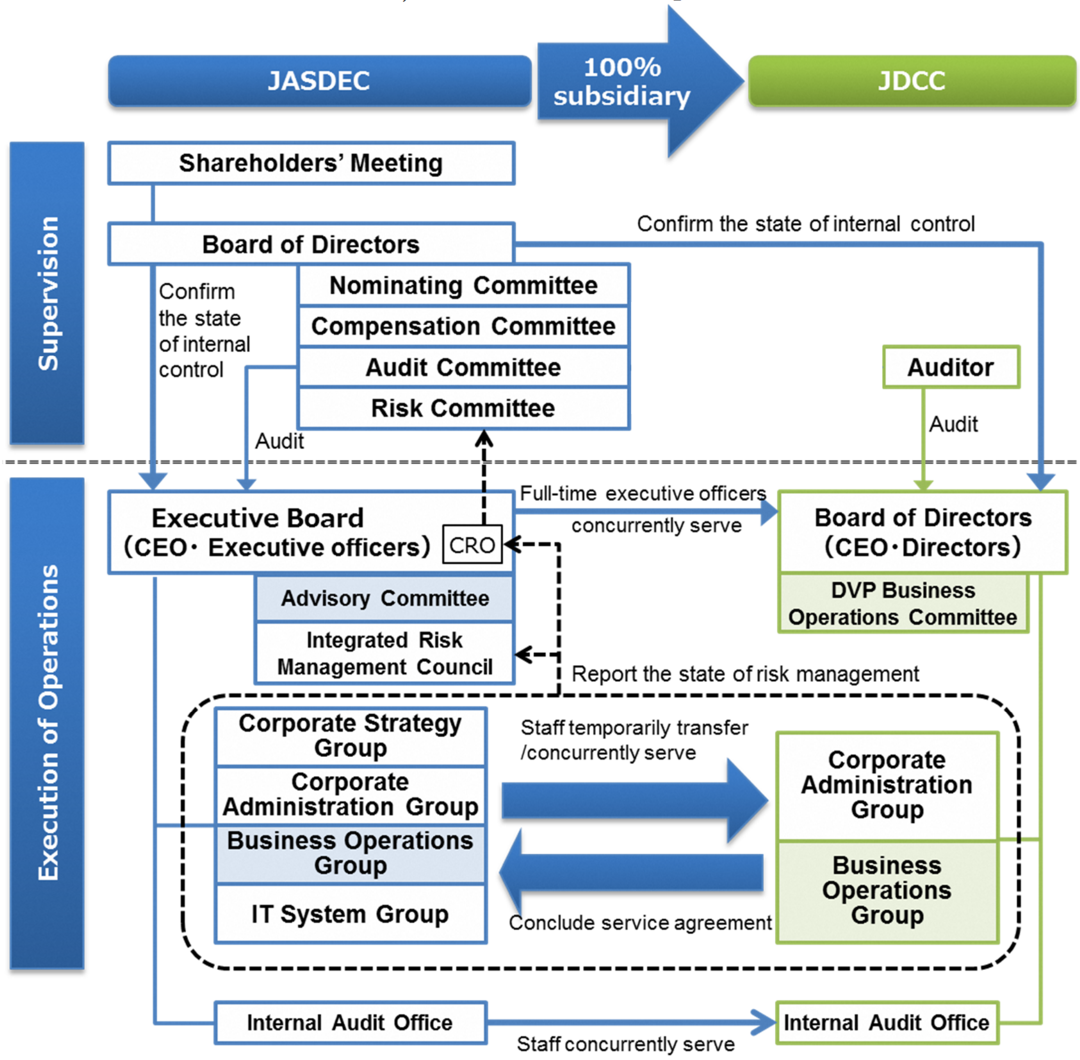
- JDCC conducts its business for the benefit of its users, in accordance with JASDEC's Basic Policy on Corporate Governance. JDCC has set up the DVP Business Operations Committee that comprises its major DVP participants, and carries out business and develops systems that adequately reflect the opinions of its stakeholders.

- For details about JASDEC governance, refer to "**Principle 2. Governance**" in JASDEC's disclosure report.

Disclosure of governance arrangements

- The JASDEC Group discloses its Basic Management Policy and JASDEC's Basic Policy on Corporate Governance on its website.

【Corporate governance framework of the JASDEC Group
(Blue color: JASDEC, Green Color: JDCC)】



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.

Roles and responsibilities of the board

- The JDCC Board of Directors conducts business in accordance with the JASDEC Group's Corporate Philosophy, Basic Management Policy, Basic Policy on Compliance as well as its Basic Policy on Internal Control. In addition, its Rules for the Board of Directors clarify the matters to be resolved and the authority of the Board of Directors.

- Each director in the Board of Directors is subject to the laws of the Companies Act regarding conflicts of interest between themselves and JDCC as a stock company, as illustrated by the following two points.

  - Directors with a special interest in the resolution of the Board of Directors may not participate in the vote.
  - Directors who are engaged in competitive transactions or who are carrying out any transactions with JDCC for himself/herself or for a third party shall report the material facts with respect to such transactions to the Board of Directors without delay after such transactions.

- JDCC has established a DVP Business Operations Committee that considers matters advised from the Board of Directors about the operation of the DVP Settlement System for NETDs, so that business can be run for the benefit of its users. The DVP Business Operations Committee's discussion paper and proceedings are disclosed to DVP participants.

Review of performance

- The matters resolved by the JDCC Board of Directors and other individual items related to business execution are reported to the JASDEC Board of Directors. The auditor also attends the Board of Directors meetings, and examines the director's execution of its duties. Through this process, the performance of the JDCC Board of Directors and of each director is evaluated.

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).

- JDCC was established for the purpose of excluding principal risk from the NETDs in JASDEC book-entry transfer, and has an extremely close working relationship with JASDEC's operations. For this purpose, JASDEC executive officers who are familiar with JASDEC operations are appointed to be JDCC directors.

- Licensing requirements for a financial instruments clearing organization include causes for disqualification of an officer (FIEA Article 156-4-2-4) and also include requirement that "in light of its personnel structure, the Applicant has sufficient knowledge and experience to perform Financial Instruments Debt Assumption Services properly and reliably, and has sufficient social credibility" (FIEA Article 156-4-1-3). Even after a license is obtained, the clearing organization is under the supervision of authorities from essentially the same perspective (Supervision Guidelines III-1-2).

- Since JDCC is a wholly owned JASDEC subsidiary and its directors are appointed from JASDEC executive officers, JDCC is able to attract and retain personnel who have sufficient knowledge and experience of securities markets and settlement business, without special incentives from JDCC. JASDEC provides incentives for each of its executive officers via remuneration.

- JDCC does not have any non-executive directors or independent directors. Nevertheless, a mechanism for the supervision of the execution of business of the JDCC Board of Directors is established by the reporting of JDCC's execution of its business to meetings of the JASDEC Board of Directors, which consists of a majority of outside directors and includes independent directors who have no relationship with JASDEC. JDCC auditor also attends meetings of the Board of Directors, and examines the director's execution of its duties.

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.

Roles and responsibilities of management

- Full-time directors at JDCC execute operations as management team. Their roles and responsibilities are stipulated in the Rules for Job Authorization as follows.
  - The president represents JDCC in accordance with the Articles of Incorporation and the Rules for the Board of Directors. The president determines the basic policies regarding JDCC business operations and has an overarching role in their management.
  - The full-time directors (excluding the president) assist and advise the president and, under the leadership of the president, decide the basic policies for the departments or offices (excluding offices belonging to departments) that they have jurisdiction over and have an overarching role in their management.

- The role of a full-time director is decided by the JASDEC Board of Directors, who decides which JDCC business group the full-time director is to be in charge of, in conjunction with the JASDEC business group. In addition, the duties of each business group they are in charge of are stipulated in the Rules for Division of Duties.

- The performances of the president and the full-time directors are evaluated at the shareholders' meeting, based on the Companies Act. Since JDCC directors are appointed from JASDEC executive officers, they are evaluated by the JASDEC Nominating Committee and Compensation Committee.

Experience, skills and integrity

- JDCC directors are appointed from JASDEC executive officers. Please refer to **"Principle 2. Governance, Key consideration 2.5"** of the JASCEC disclosure report for information about the appointment of JASDEC executive officers.

- Based on the Companies Act, JDCC directors may be dismissed at the shareholders' meeting.

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.

Risk management framework

- JDCC's risk management is handled comprehensively as the JASDEC Group according to JASDEC Group's Basic Policy on Risk Management. To ensure the soundness and reliability of its settlement infrastructure, JASDEC has taken basic matters relating to the risk management of the JASDEC Group, has defined them in its Basic Policy on Risk Management and has disclosed them on the website.

- JDCC's Basic Policy on Internal Control stipulates that the development of the JASDEC Group's risk management structure is to be promoted (a) through the Integrated Risk Council that JASDEC has established and which the manager of JDCC's business operations group attends, and (b) in accordance with JASDEC Group's Basic Policy on Risk Management.

- JASDEC Group's Basic Policy on Risk Management clarifies the categories of risk that is managed in the JASDEC Group (including JDCC's own risk), as well as the definitions of risk, the management departments and offices responsible, and the organization's risk management structure. JASDEC makes clear its overall policies for risk management and the responsibility of its executives and employees, to cultivate a corporate culture in which risk management is understood to be a key aspect of settlement infrastructure.

- Details about JASDEC's risk-tolerance policies, responsibilities and accountability for risk decisions, responses to decision-making in crises and emergencies, and other details of Basic Policy on Risk Management are given in **"Principle 3: Framework for the comprehensive management of risks, Key consideration 1."**

- Basic Policy on Risk Management is decided by the resolution of JASDEC's Board of Directors. In principle, the effectiveness, appropriateness and other aspects of the policy are considered by JASDEC at least once a year and revised if deemed necessary.

- When considering the effectiveness, appropriateness and other aspects of the Policy, the issues are discussed by the Integrated Risk Management Council chaired by JASDEC’s Chief Risk Officer (CRO) which the head of JDCC's business operations group attends, and also independently by JASDEC’s Risk Committee. The Committee gives advice to JASDEC’s Board of Directors.

Authority and independence of risk management and audit functions

(Risk Management)

- The roles, responsibilities, authority, reporting lines and resources of the risk management of the JASDEC Group are set forth in JASDEC’s Basic Policy on Risk Management.

(Auditing functions)

- The obligation to report to the auditor the state of business execution, etc. of directors and employees is stipulated in the JDCC Basic Policy on Internal Control.

- The roles, responsibilities, authorities, reporting lines and resources of the auditing functions of the auditor are as follows.

  Roles

  - The auditor audits the directors' execution of their duties, based on the Companies Act.

  Responsibilities

  - The auditor must prepare audit reports that summarize the results of their audits.
  - The auditor must report to the Board of Directors without delay if they find that a director has committed any wrongful acts or any violations of laws, regulations or the JDCC Articles of Incorporation.
  - The auditor must attend meetings of the Board of Directors and, if deemed necessary, give their opinions to the Board.
  - The auditor must inspect any proposal or other documents that any director wishes to submit to a shareholders meeting.

  Authorities and reporting lines

  - The auditor may at any time request business reports from directors or employees, or they may conduct investigations into JDCC business and the state of its finances.
  - The auditor, if they deem it necessary, may demand the directors to convene a meeting of the Board of Directors.
  - The auditor, if they discover acts by a director that are outside the scope of objectives of JDCC or are in violation of laws, regulations or the JDCC Articles of Incorporation and if there is a concern that such acts will cause significant damage to JDCC, may demand that the director refrains from such acts.

Resources

- Staff members have been appointed to assist the auditor in performing their duties, increasing the effectiveness of audits.

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.

Identification and consideration of stakeholder interests

- JDCC has established a DVP Business Operations Committee composed of personnel in charge of business at its major DVP participants. The Committee considers matters advised from the Board of Directors about the operation of the DVP Settlement System for NETDs, so that business can be run for the benefit of its users.

- The DVP Business Operations Committee can give its opinions to directors, concerning matters related to the operation of the DVP Settlement System for NETDs.

Disclosure

- When important decisions are made regarding the JASDEC Group systems, rules and procedures, etc., the JASDEC Group notifies participants and discloses on its website.

- JDCC discloses to DVP participants the DVP Business Operations Committee's discussion papers and proceedings.

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.

(Applicable FMIs : PS、CSD、SSS、CCP、TR)

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.

Risk management policies, procedures and systems for the risks that arise in or are borne by the FMIs

- JDCC Basic Policy on Internal Control stipulates that the development of the JASDEC Group's risk management structure is to be promoted (a) through the Integrated Risk Council that JASDEC Group has established and which the manager of JDCC's business operations group attends, and (b) in accordance with JASDEC Group's Basic Policy on Risk Management.

- Please refer to "**Principle 3. Framework for the comprehensive management of risks, Key consideration 1.**" of the JASDEC disclosure report regarding the details of the JASDEC Group Basic Policy on Risk Management and the main details of the risk management rules that stipulate the matters to be implemented for risk management conducted in the JASDEC Group to put the Policy into practice.

- In the JASDEC Group Basic Policy on Risk Management, JDCC's own risks are specified as being "credit risk" and "liquidity risk." The following measures are taken to address these risks.
  - Credit risk: setting of exposure upper limits, real-time controlling of intraday exposure, monitoring of the financial state of participants
  - Liquidity risk: The provision of cash liquidity to cover the default of a DVP Participant Group as well as the default of two DVP participants that would create the largest aggregate liquidity exposure in JDCC, even in a case where one of Commitment Line Banks defaults.

Review of risk management policies, procedures and systems

- The Basic Policy on Risk Management is decided by the resolution of JASDEC Board of Directors. In principle, the Board reviews the effectiveness, appropriateness and other aspects of the policy at least once a year and revises it if deemed necessary.

- When considering the effectiveness, appropriateness and other aspects of the Policy, the issues are discussed by the Integrated Risk Management Council chaired by JASDEC's Chief Risk Officer (CRO), which the head of JDCC's business operations group attends, and also independently by JASDEC's Risk Committee. The Committee gives advice to JASDEC's Board of Directors.

- JASDEC's Board of Directors, Risk Committee and the Integrated Risk Management Council periodically receive reports about the risks in the JASDEC Group overall so they can get a clear understanding of major changes and other risk-related matters.

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.

- JDCC supplies real-time data to its DVP participants (paying/receiving amounts, status of margin value(*) and net debit cap, etc.)
  * Margin value is the amount obtained by subtracting the net debit from the assessed value of the DVP participant's Assurance Assets. This amount is required to be a positive value when the participant requests for clearing.

- As its condition for assuming obligations, JDCC requires its DVP participants to: a) not allow net debit to exceed their Assurance Assets, and b) not allow net debit to exceed their net debit caps, to encourage their adequate risk management.

- JDCC systematically manages its exposure management arrangements.

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.

Material risks

- In accordance with the policies and procedures in **"Principle 3: Framework for the comprehensive management of risks, Key consideration 1,"** JDCC identifies and manages risks to or from parties with which JDCC has interdependencies.

- Parties with whom JDCC has an interdependencies are: JASDEC, the Bank of Japan (BOJ), the trust bank where JDCC trusts Participants Fund, and the Commitment Line Banks.

- Significant risks that JDCC might face could arise if there were a failure in the system, etc. of a party with interdependencies, which could harm JDCC's operations.

- Conversely, significant risks that JDCC might cause to a party with interdependencies could arise if there were a failure in JDCC's systems, etc., which could harm the other party's operations.

Risk management tools

- To cope with failure in the systems, etc. of JASDEC and the BOJ, which is a party that JDCC has interdependencies, JDCC has prepared alternative steps to take as well as a manual that describes the steps to be taken when facing system failure (System Operation Manual for Disaster and Long System Failure). In addition, JDCC structures operation flow (for both normal time and when facing system failure) that takes into consideration of its operational risk, and verifies it when deemed necessary.

- JDCC uses failure response practice drills and other activities to properly evaluate and assess the effectiveness of manuals and flows.

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.

Scenarios that may prevent an FMI from providing critical operations and services

- The JASDEC Group continuously identifies and manages the risks in its Group, based on its Basic Policy on Risk Management and other rules.

- Based on the risks that the JASDEC Group identifies, the Group has identified scenarios that may prevent JDCC from providing critical operations and services.

- Specifically, the following scenario has been identified, and the criteria for triggering the recovery plan regarding this scenario have been established.
  - Obligation of compensation for loss as a result of litigation

- This scenario could comprise multiple risks in combination that the JASDEC Group has identified.

Recovery or orderly wind-down plans

- To respond to the risk scenarios identified above and to enable recovery, JDCC assumes that it will allocate insurance proceeds, financial support by JASDEC (e.g. reduce debt), freeze investment, cut back on personnel costs and other expenses, raise its fees, and increase capital (through third party allocation, etc.).

- These responses are likely to enable JDCC to maintain a necessary capital level and continue its critical operations and services. Furthermore, in the unlikely event that JDCC is unable to cope with the scenario, or if it is foreseen that it will be unable to cope, JDCC assumes that it will consult with the relevant parties, including authorities, about making an orderly wind-down.

- In principle, risk scenarios and measures to respond to them are assessed for effectiveness and appropriateness at least once a year, in light of ongoing identification and management of risks, and, if necessary, can be reviewed by a resolution of the Board of Directors.

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.

(Applicable FMIs : PS、SSS、CCP)

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.

- As the scheme for risk management when JDCC assumes obligations, it has securities transfer “execution” conditions (conditions needed to be met when book-entry transfer of securities from delivering DVP participant account to JDCC account is executed). These conditions are: (1) the balance condition of the securities to be delivered by the delivering DVP participant; (2) the margin value condition for the delivering DVP participant; the margin value condition for the receiving DVP participant; and (3) the net debit cap condition. DVP participants are required to meet these conditions.

(1) Securities balance condition: JDCC requires that the balance of the securities held by the delivering DVP participant exceeds the balance to be transferred by the DVP book-entry transfer request. If a DVP book-entry transfer request meets all of the above securities transfer "execution" conditions, then the balance of the securities requested by the DVP book-entry transfer request can be transferred from the account of the delivering DVP participant to JDCC's account. This means that even if a DVP participant defaults, JDCC's security delivery obligations can be covered by transferring the securities that are already secured under this condition to the receiving DVP participant (excluding the defaulting participant).

(2) Margin value condition: This value (called the "margin value") obtained by subtracting the net debit from the assessed value of the DVP participant's Assurance Assets, is required to always be a positive value. These conditions are set for a single DVP book-entry transfer request for both the deliverer and the receiver. As a result, even if a DVP participant fails the fund settlement, the Assurance Assets of that DVP participant can be sold and converted to cash to cover the obligation that JDCC has assumed.

(3) Net debit cap condition: A certain upper limit (net debit cap) is set for each DVP participant's total net debit, depending on each DVP participant's use of the DVP Settlement System for NETDs during a certain period in the past. If there is a conflict with the net debit cap condition, reducing net debit is needed by remitting cash (called the "settlement progress payments") to JDCC or by other methods to enable the settlement; therefore, the net debit cap condition is effective in suppressing rapid increases in DVP participant exposure. JDCC also sets an upper net debit cap (maximum 30 billion yen) to prevent the net debit increasing without limit. Furthermore, in order to cover the default of a DVP Participant Group, JDCC sets an upper limit (60 billion yen) for the Total Net Debit Cap of the DVP Participant Group.

- JDCC also sets conservative appraisal rates (haircuts) for Securities-to-be-Received and Pledged Securities. For example, appraisal rate (haircut) for stocks is set as 70% of the market price on the day before the settlement date after applying[2].

- Each quarter, JDCC reviews the net debit cap level to determine whether it is at an appropriate level or not. JDCC also verifies the securities transfer "execution" conditions when deemed necessary and monitors the financial circumstances of DVP participants on a regular basis.

[2] Treatment of Business Rules: https://www.jasdec.com/en/rule/dvp/whole/index.html

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.

- The source of credit risk in the DVP Settlement System for NETDs is the default of a DVP participant. To cover its credit risk exposure to a default by a DVP participant, JDCC carries out stringent risk management when it assumes obligations.

- JDCC has its securities transfer "execution" conditions (securities balance condition for delivering participant, margin value condition for both delivering and receiving participants, and net debit cap condition) that it uses for risk management when it assumes obligations. JDCC uses its system to make constant measurements of these figures and monitors them. In its risk management, JDCC will not assume an obligation if these conditions are not met.

- JDCC assesses Securities-to-be-Received and Pledged Securities by multiplying the market price on the day before the settlement date by an appropriate appraisal rate (haircut), to prepare for the price fluctuation risk in the two-day period from the day before the default of the DVP participant to the day JDCC carries out its procedure in event of participant's default.

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 system.

- JDCC does not fall into a payment system or SSS.

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.

Coverage of current and potential future exposures to each participant

- As JDCC assumes and settles obligations on the same day, it does not have a marking to market structure in place. However, in terms of Pledge Securities and Securities-to-be-Received subjected to sale in case of DVP Participants' default, exposures exist for two days from the time of the market price valuation (one day before the settlement date) to the time for sale (one day after the settlement date).JDCC uses the Assurance Assets (Participants Funds, Pledged Securities, Securities-to-be-Received) to cover these exposures. Of these, Pledged Securities and Securities-to-be-Received are valued by multiplying an appropriate appraisal rate (haircut) to their market price. In all instances, JDCC is able to easily utilize these assets because they are held in accounts in its name.

- Since the condition of the net debit being less than the Assurance Assets is always satisfied, JDCC is able to adequately cover its exposure, provided that the actual value of the collateral is not less than the assessed value derived by multiplying the asset's market price by the appraisal rate (haircut). The sufficiency of the appraisal rate (haircut) is verified through back testing and the sufficiency of the Assurance Assets is verified through stress testing on a daily basis.

Risk profile and systemic importance in multiple jurisdictions

- There are no business in JDCC that have complex risk profile. In addition, JDCC's business is not operated under multiple jurisdictions.

Additional financial resources

- When JDCC sells an Assurance Asset but an uncovered payment obligation remains, default compensation charge and extra default compensation charge (refer to **Key consideration 7**) are used to recover the uncovered payment, so JDCC does not maintain additional financial resources. However, JDCC sets a conservative appraisal rate (haircut) for Securities-to-be-Received and Pledged Securities, which can be considered as additional financial resources.

- There are no business in JDCC that have complex risk profile.

Supporting rationale and governance arrangements

- JDCC's retain of the total financial resources (Assurance Assets) is specified in its Business Rules. Changes to its rules regarding Assurance Assets are resolved by the Board of Directors.

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.

Stress testing

- Since JDCC only assumes obligations that are within the range of the Assurance Assets, financial resources always remain sufficient, provided that the assessed value of the Assurance Assets (their value multiplied by the appraisal rate (haircut)) does not fall below the selling price.

- JDCC conducts daily stress tests and so far there are no issues found in risk management of the assessed values of the Assurance Assets (Securities-to-be-Received and Pledged Securities) of each DVP participant as well as those of each DVP Participant Group over the liquidation period (2 business days). The test subjects the Assurance Assets to the highest stress level actually experienced (either price fluctuations for a two-day period since the DVP settlement system for NETDs was established in 2004, or price fluctuations for a two-day period around Black Monday in 1987, whichever is higher) to verify whether the Assurance Assets can sufficiently cover JDCC's exposures even in such stressed situations.

Review and validation

- JDCC examines the sufficiency of the Assurance Assets in large price fluctuations and confirms it by stress testing to verify the risk management model on a daily basis.

- The results of the daily stress tests of each DVP participant's Assurance Assets (Participants Fund, Securities-to-be-Received and Pledged Securities) are analyzed on monthly base and reported to the Board of Directors every quarter. The adequacy of the stress scenario is also verified on yearly base. For this annual validation procedure, JDCC established a framework which discloses the stress tests results to DVP participants and seek their comments to contribute to the Board of Directors' decision making.

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.

- JDCC has conducted daily stress tests to verify the assessed values of the Assurance Assets (Securities-to-be-Received and Pledged Securities) of each DVP participant and DVP Participant Group over the liquidation period (2 business days). The test subjects the Assurance Assets to the highest stress level actually experienced (either price fluctuations for a two-day period since the DVP settlement system for NETDs was established in 2004, or price fluctuations for a two-day period around Black Monday in 1987, whichever is higher) to verify whether the Assurance Assets can sufficiently cover JDCC's exposures even in such stressed situations.

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.

Allocation of credit losses

- JDCC rules stipulate that if a participant defaults, JDCC may recover the Participants Fund or repay to the Commitment Line Banks by using in the order of (1) the defaulting participant's Assurance Assets, (2) default compensation charges, and (3) extra default compensation charges.

Replenishment of financial resources

- JDCC Business Rules, etc. stipulate that if the credit loss of the defaulting participant is unable to be covered by (1) its Assurance Assets, then JDCC's financial resources can be supplemented by (2) default compensation charge, and (3) extra default compensation charge(*).

  * Default compensation charge and extra default compensation charge

  - Default compensation charge: If JDCC is left facing a loss even after using defaulting participant's assurance assets, then JDCC can charge DVP participants who are in the position of receiving funds from the defaulting participant (limited to the obligation that JDCC has assumed) an amount in proportion to the total receiving amount to compensate the loss JDCC faces.
  - Extra default compensation charge: If JDCC is left facing a loss even after recovering by the above-mentioned default compensation charge, JDCC can charge DVP participants (other than the defaulting participant and DVP participants who failed to pay the above-mentioned default compensation charge) an amount in proportion to the required amount of the Participants Fund (the amount equal to the sum of the Basic required fund amount and the Additional required fund amount prescribed in Article 3 and Schedule of the Rules Concerning the Required Participants Fund Amount) to compensate the loss JDCC faces.

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.

(Applicable FMIs : PS、SSS、CCP)

Key consideration 1

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

- JDCC does not accept collateral other than Participants Fund (cash), securities handled at JASDEC (stocks, CBs, etc.) and JGBs.

- The monitoring of whether or not a collateral fulfills the criteria for acceptance is implemented in the processing systems that conduct book-entry transfers and other processes accompanying DVP settlement for stocks, etc.

- When a DVP participant deposits stocks and other securities as Pledged Securities, JDCC does not permit the participant to deposit more than 5% of the listed securities volume. Nor does JDCC allow the DVP participant to deposit the stocks and other securities issued by that DVP participant and DVP Participant's Associated Company Group.

  * DVP Participant's Associated Company Group: the group which consists of the relevant DVP Participant and its subsidiary company, its affiliated company and its parent company as well as subsidiary company and affiliated company of such parent company (Schedule of the Treatment of Business Rules).

Key consideration 2

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

Valuation practices

- JDCC makes daily assessment of the value of the collateral, based on the closing price on the day before the settlement day.

- JDCC's Business Rules allow JDCC to temporarily change the assessed value if the market price is fluctuating wildly.

Haircutting practices

- JDCC applies conservative appraisal rates (haircuts) in assessing collateral. The sufficiency of these rates is verified via daily back tests. JDCC has confirmed that its appraisal rates (haircuts) can provide adequate cover for price fluctuation risk based on the results of verification using data going back to 1984.

- JDCC has conducted daily stress tests to verify the assessed values of the Assurance Assets (Securities-to-be-Received and Pledged Securities) of each DVP participant and DVP Participant Group over the liquidation period (2 business days). The test subjects the Assurance Assets to the highest stress level actually experienced (either price fluctuations for a two-day period since the DVP settlement system for NETDs was established in 2004, or price fluctuations for a two-day period around Black Monday in 1987, whichever is higher) to verify whether the Assurance Assets can sufficiently cover JDCC's exposures even in such stressed situations.

- JDCC reviews the verification results of the back tests and stress tests, and revises the appraisal rates (haircuts) if necessary.

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.

- JDCC sets the level for the appraisal rates (haircuts) sufficient enough to cover the exposures even if there are large price fluctuations. JDCC verifies the sufficiency of the appraisal rates (haircuts) through daily bask tests. JDCC has confirmed that its appraisal rates (haircuts) can provide adequate cover for price fluctuation risk based on the results of verification using data going back to 1984.

- JDCC has conducted daily stress tests to verify the assessed values of the Assurance Assets (Securities-to-be-Received and Pledged Securities) of each DVP participant and DVP Participant Group over the liquidation period (2 business days). The test subjects the Assurance Assets to the highest stress level actually experienced (either price fluctuations for a two-day period since the DVP settlement system for NETDs was established in 2004, or price fluctuations for a two-day period around Black Monday in 1987, whichever is higher) to verify whether the Assurance Assets can sufficiently cover JDCC's exposures even in such stressed situations.

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.

- When a DVP participant deposits stocks and other securities as Pledged Securities, JDCC does not permit the participant to deposit more than 5% of the listed securities volume.

- Policy regarding concentration is stipulated in the Treatment of Business Rules. In the process of annual review of “service stability and efficiency risk” (in the Basic Policy on Risk Management of the JASDEC Group), JDCC considers whether its current handling is appropriate or not.

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.

- JDCC does not accept cross-border collateral.

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

Collateral management system design

- The functions needed for a collateral management system are implemented in the processing systems that conduct book-entry transfers and other processes accompanying DVP settlement for stocks, etc. These systems are managed by JASDEC. JDCC entrusts its system development and operation to JASDEC.

- JDCC does not reuse collateral.

Operational flexibility

- Through the JASDEC's processing systems for book-entry transfer, JDCC effectively carries out collateral management, including the continuous monitoring, etc. of Pledged Securities.

- Collateral management operation has been largely automated through JASDEC's processing systems for book-entry transfer. Even at times of market stress, extra personnel are not required to carry out this operation.

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.

(Applicable FMIs : CCP)

Key considerations

1. A CCP should have a margin system that establishes margin levels commensurate with the risks and particular attributes of each product, portfolio, and market it serves.
2. A CCP should have a reliable source of timely price data for its margin system. A CCP should also have procedures and sound valuation models for addressing circumstances in which pricing data are not readily available or reliable.
3. A CCP should adopt initial margin models and parameters that are risk-based and generate margin requirements sufficient to cover its potential future exposure to participants in the interval between the last margin collection and the close out of positions following a participant default. Initial margin should meet an established single-tailed confidence level of at least 99 percent with respect to the estimated distribution of future exposure. For a CCP that calculates margin at the portfolio level, this requirement applies to each portfolio's distribution of future exposure. For a CCP that calculates margin at more-granular levels, such as at the subportfolio level or by product, the requirement must be met for the corresponding distributions of future exposure. The model should (a) use a conservative estimate of the time horizons for the effective hedging or close out of the particular types of products cleared by the CCP (including in stressed market conditions), (b) have an appropriate method for measuring credit exposure that accounts for relevant product risk factors and portfolio effects across products, and (c) to the extent practicable and prudent, limit the need for destabilising, procyclical changes.
4. A CCP should mark participant positions to market and collect variation margin at least daily to limit the build-up of current exposures. A CCP should have the authority and operational capacity to make intraday margin calls and payments, both scheduled and unscheduled, to participants.
5. In calculating margin requirements, a CCP may allow offsets or reductions in required margin across products that it clears or between products that it and another CCP clear, if the risk of one product is significantly and reliably correlated with the risk of the other product. Where two or more CCPs are authorised to offer cross-margining, they must have appropriate safeguards and harmonised overall risk-management systems.
6. A CCP should analyse and monitor its model performance and overall margin

coverage by conducting rigorous daily backtesting and at least monthly, and more-frequent where appropriate, sensitivity analysis. A CCP should regularly conduct an assessment of the theoretical and empirical properties of its margin model for all products it clears. In conducting sensitivity analysis of the model's coverage, a CCP should take into account a wide range of parameters and assumptions that reflect possible market conditions, including the most-volatile periods that have been experienced by the markets it serves and extreme changes in the correlations between prices.

7. A CCP should regularly review and validate its margin system.

- JDCC assumes obligations provided that the net debit of each DVP participant is within the range of the assessed value of their Assurance Assets (Participants Fund, Pledge Securities, and Securities-to-be-Received).

- JDCC does not apply a margin system because this scheme of Assurance Assets covers JDCC's exposure to DVP participant credit risk.

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.

(Applicable FMIs : PS、SSS、CCP)

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.

(Current Status)

- To reduce its exposure to each DVP participant, JDCC sets an upper limit on each DVP participant's net debit (Net Debit Cap), and also sets an upper net debit cap of 30 billion yen. Furthermore, in order to cover the default of a DVP Participant Group, JDCC sets an upper limit (60 billion yen) for the Total Net Debit Cap of the DVP Participant Group.

- JDCC has made provisions for 60 billion yen in liquidity consisting of 15 billion yen from Participants Fund and 45 billion yen from bank commitment line from the viewpoint of covering the default of two DVP participants (on a non-consolidated basis), which would create the largest aggregate liquidity exposure in JDCC y having the maximum net debit cap of 30 billion yen each, or a DVP Participant Group.

- Furthermore, even in case where one of Commitment Line Banks defaults, JDCC can still maintain fund liquidity of 45 billion yen from bank commitment line by borrowing from other banks supplying liquidity.

- JDCC also monitors the financial circumstances of the Commitment Line Banks regularly.

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.

- Each time JDCC assumes an obligation, it suppresses its exposure to the DVP participant. Therefore JDCC is able to complete the day's settlement by using the liquidity resources that it has prepared in advance, even if there is a fund settlement default.

- The liquidity resources that JDCC has prepared in advance is total 60 billion yen, which consists of15 billion yen from Participants Fund and 45 billion yen from the bank commitment line based on contracted commitment line agreements (even if one of Commitment Line Banks defaults, JDCC can still maintain fund liquidity of 45 billion yen from bank commitment line). JDCC can use these resources on a timely basis if a DVP participant defaults.

- JDCC monitors the net debit of each DVP participant in real time. This enables JDCC to identify how much liquidity it needs when there is a fund settlement default.

- JDCC's rules stipulate the order in which it draws on these liquidity resources. First, JDCC draws on the Participants Fund, followed by the bank commitment line.

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.

- JDCC is neither a payment system nor an SSS.

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.

Sufficient liquid resources

- JDCC has determined the level of its liquidity resources to be sufficient to cover the default of two DVP participants (on a non-consolidated basis) which require the maximum level of liquidity, in other words: the Lamfalussy Standard + 1. Furthermore, in order to cover the default of a DVP Participant Group, JDCC sets an upper limit (60 billion yen) for the Total Net Debit Cap of the DVP Participant Group.

- JDCC reduces its maximum exposure by setting a net debit cap which upper limit is set as 30 billion yen for each DVP participant as well as setting the upper limit on Total Net Debit Cap to be 60 billion yen for each DVP Participant Group. JDCC has also made provisions for 60 billion in liquidity from the viewpoint of covering itself in the instance of default of two DVP participants having the maximum net debit cap of 30 billion yen each, or a DVP Participant Group.

Risk profile and systemic importance in multiple jurisdictions

- JDCC does not operate under multiple jurisdictions.

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.

Size and composition of qualifying liquid resources

- JDCC has a total of 60 billion yen in liquidity resources which consists of 15 billion yen from Participants Fund and 45 billion yen from the bank commitment line based on contracted commitment line agreements (even if one of Commitment Line Banks defaults, JDCC can still maintain fund liquidity of 45 billion yen from bank commitment line).

- JDCC can utilize all of these liquidity resources immediately on the day that a default occurs.

Availability and coverage of qualifying liquid resources

- JDCC does not have any agreements to procure funds through the conversion of investments or collateral into cash, but rather on 15 billion yen from Participants Fund and 45 billion yen from the bank commitment line based on commitment line agreements (even if one of Commitment Line Banks defaults, JDCC can still maintain fund liquidity of 45 billion yen from bank commitment line), which provide JDCC with 60 billion yen in liquidity funding.

- The Participants Fund and bank credit line based on commitment line agreements can both be immediately used by JDCC on the day that a default occurs.

- JDCC does not have any agreements to receive credit from the central bank.

- JDCC keeps liquidity resources of 60 billion which covers the default of two DVP participants (on a non-consolidated basis that requires maximum liquidity resources) or a DVP Participant Group.

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.

Size and composition of supplemental liquid resources

- JDCC has not prepared any other fund liquidity, as the Participants Fund and bank credit line based on commitment line agreements provide sufficient fund liquidity.

Availability of supplemental liquid resources

- JDCC does not have any supplemental liquid resources.

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.

Use of liquidity providers

- JDCC deposits Participants Fund in financial institutions and concludes commitment line agreements with financial institutions after it has confirmed that a) these institutions are subject to the Banking Act, b) they have been undergone an inspection by supervisory authorities, and c) they have the ability to supply liquidity based on appropriate risk management.

Reliability of liquidity providers

- The financial institutions in which JDCC has deposited the Participants Fund and the financial institutions with which JDCC has contracted commitment line agreements are suppliers of liquidity who are subject to the Banking Act, have undergone an inspection by supervisory authorities, and carry out appropriate risk management.

- When JDCC selects a Commitment Line Bank, it does not consider the possibility of that bank accessing to credit from the central bank. However, currently all Commitment Line Banks are currently eligible counterparties in a BOJ's fund provision operation.

- JDCC periodically monitors the financial institutions in which it has deposited the Participants Fund and the financial institutions with which it has contracted commitment line agreements. JDCC does this through interviews, financial data, ratings and other information.

- As to the procedures relating to managing a participant default, which includes withdrawal from the Participants Fund, drill is periodically (at least once a year) carried out in collaboration with the financial institutions in which JDCC has deposited the Participants Fund.

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.

- JDCC uses BOJ-NET on a daily basis in its fund settlement and deposits of JGB collateral, and so maintains the qualifications and environment that enable it to have access to this network.

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.

- JDCC limits its exposure to each DVP participant to 30 billion yen and also sets an upper limit on the Total Net Debit Cap for each DVP Participant Group as 60 billion yen. This scheme covers the liquidity risk created in a scenario in which two DVP participants (on a non-consolidated basis) each with a maximum net debit of 30 billion yen default at the same time or one DVP Participant Group which Total Net Debit Cap is 60 billion yen defaults, and maintains 60 billion yen in liquidity for fund settlement on the day of default (such liquidity will be maintained even in the default of one of Commitment Line Banks).

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.

Same day settlement

- JDCC Business Rules stipulate that fund settlement in case of a DVP participant default will be completed by JDCC on the settlement date by the time determined by JDCC in each case.

- JDCC Business Rules also stipulate that a different date and time for the fund settlement may be selected by JDCC to address unforeseen and potentially uncovered liquidity shortfalls.

Replenishment of liquidity resources

- JDCC covers its payment obligations through funds obtained from Participants Fund, borrowing based on commitment line agreements, and other means that JDCC deems appropriate.

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.

(Applicable FMIs : PS、SSS、CCP)

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

Point of settlement finality

- Fund settlement is carried out through current account transactions within the BOJ (the central bank), and becomes final at the moment when the fund transfer between the current accounts of the DVP participant and JDCC takes place.

- The settlement of securities is as follows. For stocks, etc., settlement is made by the book-entry transfer between the accounts of participants in the JASDEC BETS for Stocks, etc. For JGBs, settlement is made by the book-entry transfer between the accounts of the participants in the JGB Book-Entry System at the BOJ. Finality of the securities settlement is assured by the Transfer Act.

- The relationship between the bankruptcy legislation is set forth in the FIEA Article 156-11-2, and the validity of settlement carried out in accordance with the Business Rules is assured.

- The Transfer Act and its related laws assure the finality of the book-entry transfer of securities. The finality of fund settlement is assured by using the current account of the BOJ (the central bank).

Finality in the case of links

- JDCC assumes obligations relating to the NETDs at JASDEC, and delivery/receipt of securities between JDCC and DVP participants uses JASDEC BETS for Stocks, etc.

- The settlement of securities takes place via book-entry transfer between the accounts of participants in the JASDEC BETS for Stocks, etc. Finality of the securities settlement is assured by the Transfer Act.

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.

Final settlement on the value date

- Fund settlement is carried out through current account transactions within the BOJ (the central bank), and becomes final at the moment when the fund transfer between the current accounts of the DVP participant and JDCC takes place.

- The settlement of securities is as follows. For stocks, etc., settlement is made by the book-entry transfer between the accounts of participants in the JASDEC BETS for Stocks, etc. For JGBs, settlement is made by the book-entry transfer between the accounts of the participants in the JGB Book-Entry System at the BOJ. Finality of the securities settlement is assured by the Transfer Act.

- Final settlement has never been deferred until the following business day.

Intraday or real-time final settlement

- Book-entry transfer can be performed intra-day in real time at JASDEC. Central bank money from BOJ-NET is used in fund settlement.

- JDCC does not perform multiple times batch processing.

- JDCC is not an LVPSs or SSSs.

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.

- JDCC's Business Rules stipulate that DVP book-entry transfer request cannot be cancelled after JDCC completes the obligation assumption.

- After matched at PSMS, DVP book-entry transfer can be cancelled with the agreement of the other counterparty until the point at which JDCC completes the obligation assumption. Before being matched at PSMS, either counterparty may cancel the request (without the agreement of the other counterparty).

- No exceptions or extensions are approved for the cancellation cut-off time.

- Details of the cancellation process are explained in the Business Rules and in the manual for DVP participants.

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.

(Applicable FMIs : PS、SSS、CCP)

Key considerations

1. An FMI should conduct its money settlements in central bank money, where practical and available, to avoid credit and liquidity risks.
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.
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.
4. If an FMI conducts money settlements on its own books, it should minimise and strictly control its credit and liquidity risks.

- JDCC fund settlement is made in Japanese yen through current account transactions within the BOJ (the central bank).

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.

- BOJ's "Rules on Current Account" stipulate that a book-entry transfer request cannot be cancelled, assuring the finality of fund settlement.

- JDCC makes the payment of funds to the fund-receiving participant by 3:30 p.m. on the settlement date.

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.

(Applicable FMIs : CSD、SSS、CCP)

Key considerations

1. An FMI's rules should clearly state its obligations with respect to the delivery of physical instruments or commodities.
2. An FMI should identify, monitor, and manage the risks and costs associated with the storage and delivery of physical instruments or commodities.

- Stocks and other securities handled in JDCC's DVP Settlement System for NETDs are dematerialized (i.e., paperless).

- JDCC does not provide services to the commodities markets.

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.

(Applicable FMIs : CSD)

- JDCC is a CCP, which is not applicable to this principle.

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.

(Applicable FMIs : PS、SSS、CCP)

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.

- JDCC provides DVP settlement for NETDs in JASDEC.
- In the DVP Settlement System for NETDs, the amount of the participant settlement is calculated at 2:00 p.m. According to the calculation result, JDCC immediately conducts book-entry transfer of the Securities-to-be-Received to the fund-receiving participant. Book-entry transfer of the Securities-to-be-Received from JDCC to the fund-paying participant is conducted after the completion of payment by the participant, which assures the fund payment obligations of the DVP participant.
- In the DVP Settlement System for NETDs, securities settlement is carried out on a gross basis and fund settlement is carried out on a net basis.
- JDCC receives the securities from the DVP participant when it assumes obligation. The obligation of fund payment is linked to the securities transfer that does not allow fund-paying participant to receive securities unless it completes fund payment.
- After the amount of the participant settlement is fixed at 2:00 p.m., the deadline for the fund-paying participant to pay the funds to JDCC is 3:10 p.m. The deadline for payment from JDCC to the fund-receiving participant is 3:30 p.m.
- The Securities-to-be-Received remain in the JDCC account until the funds are paid, and cannot be accessed by a third party.
- JDCC does not rely on any other DVP services.

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.

(Applicable FMIs : PS、CSD、SSS、CCP)

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.

Participant default rules and procedures

- JDCC Business Rules and other regulations stipulate the way of identifying the default of a DVP participant, and measures JDCC can take in the event of a DVP participant default.

- According to JDCC rules and procedures, measures taken in the event of a DVP participant default are generally as follows.
  - When a participant defaults, JDCC takes steps that include the suspension of obligation assumption from the defaulting participant (suspension of obligation assumption, suspension of refund of the settlement progress payments, suspension of refund of the Participants Fund, suspension of refund of the Pledged Securities, and suspension of "completion" of the securities transfer) to prevent new risks increasing and to prevent any reduction in the Assurance Assets.
  - In response to a fund settlement default, JDCC uses the Participants Fund and borrows funds from Commitment Line Banks to complete the day's settlement.
  - In addition, after making the defaulting participant forfeit the benefit of time, close-out netting and netting calculation (offsetting) between JDCC and the defaulting participant is carried out so that JDCC can recover the losses incurred. If JDCC losses still remain, JDCC recovers these through its default compensation charge and extra default compensation charge scheme.
  - As a mechanism to suppress the effects of a participant default, JDCC may suspend its obligation assumption for reasons such as the participant's conflict with JDCC's financial standards for the obligation assumption, prior to the actual default of the participant. There is no direct relationship between JDCC and the participant's clients.

Use of financial resources

- Liquidity procurement on the day of a fund settlement default is firstly obtained from the use of the Participants Fund and then from borrowing from Commitment Line Banks. JDCC has structure in place to ensure that these can be implemented rapidly on request.

- Cash obtained by selling the defaulting participant's Assurance Assets is used to recover the Participants Fund and to repay the borrowed funds.

- JDCC recovers its claim through close-out netting and netting calculation (offsetting) between itself and the defaulting participant. JDCC has established default compensation charge and extra default compensation charge scheme, so that if JDCC is left with a loss after carrying out these processes, other DVP participants shall bear the remaining loss.

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.

- JDCC rules and manuals stipulate the default procedures that JDCC will take. In addition, the Rules for Job Authorization explain roles and responsibilities with respect to default procedures.

- The president of JDCC makes final approval for taking the measures against a defaulting participant and conducting fund procurement accompanying a participant's fund settlement default.

- To ensure timely notification, JDCC identifies in advance the phone numbers and other contact details of stakeholders and also uses a website to simultaneously notify the all DVP participants at once (”Target” webpage for the DVP participants).

- JDCC makes reviews of its default procedures, etc. when deemed necessary. Revisions accompanying rule amendments are approved by resolution of the Board of Directors.

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

- Important matters regarding participant’s default are stipulated in JDCC Business Rules, etc. and are disclosed on JDCC's website.

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 procedures to be taken in the participant's default were verified when the DVP settlement system for NETDs was set up. Since then, rules and procedures have not been significantly changed. Internal procedures are reviewed annually.

- If important rules or procedures in the participant's default are to be changed, JDCC will request DVP participants to be involved in the discussion for example by holding DVP Business Operations Committee.

- Verification report will be shared with the Board of Directors, Integrated Risk Management Council and the regulatory authorities as necessary.

- An annual review of the necessary measures to be taken by JDCC in the event of a default or other incident of a DVP participant is conducted to ensure smooth continuity of business. If necessary, rules and manuals will be revised. JDCC also notifies the DVP participants of points that they need to consider in the event of a default, for the purpose of requesting them to revise their operational structures so that they will continue business smoothly, and to verify the feasibility of these points. These are to cover the various measures to be taken in the event of a default..

- In the JDCC's DVP Settlement System for NETDs, the procurement of funds on the day of participant default is deemed to be important; therefore, JDCC, the financial institutions in which JDCC has deposited the Participants Fund and the Commitment Line Banks confirm the operational flow annually or whenever there is a personnel change to the person at the bank who is in charge of the procedure. Moreover, in collaboration with the financial institutions in which JDCC has deposited the Participants Fund, JDCC periodically (at least once a year) confirms the administrative procedures to be carried out in the event of withdrawal from the Participants Fund, between such financial institutions and JDCC.

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.

(Applicable FMIs : CCP)

Key considerations

1. A CCP should, at a minimum, have segregation and portability arrangements that effectively protect a participant's customers' positions and related collateral from the default or insolvency of that participant. If the CCP additionally offers protection of such customer positions and collateral against the concurrent default of the participant and a fellow customer, the CCP should take steps to ensure that such protection is effective.
2. A CCP should employ an account structure that enables it readily to identify positions of a participant's customers and to segregate related collateral. A CCP should maintain customer positions and collateral in individual customer accounts or in omnibus customer accounts.
3. A CCP should structure its portability arrangements in a way that makes it highly likely that the positions and collateral of a defaulting participant's customers will be transferred to one or more other participants.
4. A CCP should disclose its rules, policies, and procedures relating to the segregation and portability of a participant's customers' positions and related collateral. In particular, the CCP should disclose whether customer collateral is protected on an individual or omnibus basis. In addition, a CCP should disclose any constraints, such as legal or operational constraints, that may impair its ability to segregate or port a participant's customers' positions and related collateral.

- In derivative transactions, segregation and portability are provided, since the opportunity of conducting offsetting transactions would be lost if a CCP were to forcefully clear the participant's client position in the event of participant default. However, since JDCC only handles cash transactions and a relationship of credit and debt is established between JDCC and the DVP participant, JDCC has not made segregation and portability arrangements for DVP participant's client's position and collateral.

- Moreover, since JDCC eliminates principal risk by providing clearing business of securities and cash transactions for customer side, JDCC's DVP Settlement System for NETDs itself becomes one means of protecting investors.

- Legal structures, such as those described in the FIEA Article 43-2 (Separate Management) and Article 79-20 (Investor Protection Fund) exist for the safeguarding of assets of customers of defaulting participants, from the viewpoint of customer protection.

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.

(Applicable FMIs : PS、CSD、SSS、CCP、TR)

Key consideration 1

An FMI should have robust management and control systems to identify, monitor, and manage general business risks, including losses from poor execution of business strategy, negative cash flows, or unexpected and excessively large operating expenses.

- In the JASDEC Group's Basic Policy on Risk Management, JASDEC classifies the JASDEC Group's general business risk into the following categories.
  - Business risk: Risk of worsening of business performance arising from the impact of reputational or publicity issues, poor implementation of business strategy, ineffective response to competition, loss caused by entry into new business areas or other business factors.
  - Financial risk: Risk of worsening of financial position arising from decline in fee income, increase in expenses, inappropriate budget planning or implementation, deficient tax or accounting treatment or other issues.

- The policies and procedures for the identification and management of each risk, including general business risk, are given in **"Principle 3: Framework for the comprehensive management of risks, Key consideration 1."**

Key consideration 2
An FMI should hold liquid net assets funded by equity (such as common stock, disclosed reserves, or other retained earnings) so that it can continue operations and services as a going concern if it incurs general business losses. The amount of liquid net assets funded by equity an FMI should hold should be determined by its general business risk profile and the length of time required to achieve a recovery or orderly wind-down, as appropriate, of its critical operations and services if such action is taken.

- JDCC conducts financial management to maintain a stable and ample amount of liquid net assets funded by equity so that it can continue DVP Settlement System for NETDs as a going concern. JDCC does this by taking into consideration the risks that it bears and the changes in the environment.

- JDCC continuously identifies and manages its risks exposures. Although it is difficult to envisage the sudden outflow of current liquid assets or equity impairment to JDCC considering the nature of the risks that it bears, JDCC has identified scenarios in which it could become unable to offer critical operations and services, and measures to be taken in its recovery in the event of these scenarios, based on the risks that it has identified.
  * For details, refer to **"Principle 3: Framework for the comprehensive management of risks, Key consideration 4."**

- JDCC decides the amount of liquid net assets funded by equity it will hold in consideration to the risk scenarios it has identified and the nature of its recovery measures.

Key consideration 3

An FMI should maintain a viable recovery or orderly wind-down plan and should hold sufficient liquid net assets funded by equity to implement this plan. At a minimum, an FMI should hold liquid net assets funded by equity equal to at least six months of current operating expenses. These assets are in addition to resources held to cover participant defaults or other risks covered under the financial resources principles. However, equity held under international risk-based capital standards can be included where relevant and appropriate to avoid duplicate capital requirements.

Recovery or orderly wind-down plan

- The details of JDCC's recovery plan appear in **"Principle 3: Framework for the comprehensive management of risks, Key consideration 4."**

- Based on the approach described in "**Key consideration 15.2**," JDCC maintains at least the following level of liquid net assets funded by equity as financial resources.

  Minimum required amount = Annual operating expenses (excluding depreciation expenses) for 9 months + 15% of annual operating income

  * The annual figure producing the greatest above total is adopted among the actual figures from the previous 5 business years and the planned figures from the next 5 business years in the medium-term management plan.

- Actual non-consolidated figures for the financial year ending March 31, 2023, show that JDCC's retained earnings (932 million yen), net assets (1,932 million yen) and liquid net assets funded by equity (1,922 million yen) exceeded the minimum required amount (681 million yen).

- The Participants Fund deposited by DVP participants is held in trust and is kept segregated from JDCC's own cash.

Key consideration 4
Assets held to cover general business risk should be of high quality and sufficiently liquid in order to allow the FMI to meet its current and projected operating expenses under a range of scenarios, including in adverse market conditions.

- As described in **"Key consideration 15.3,"** JDCC in the financial year ending March 31, 2023 had net liquid assets funded by equity of 1,922 million yen, compared with a minimum required amount of 681 million yen.

- JDCC holds the majority of this amount in the form of cash and deposits, and does not invest in securities and other assets as of March 31, 2023.
  * Refer to **"Principle 16: Custody and investment risks, Key consideration 4."**

- Once every three months, JDCC's directors check the details of the organization's net liquid assets funded by equity.

Key consideration 5
An FMI should maintain a viable plan for raising additional equity should its equity fall close to or below the amount needed. This plan should be approved by the board of directors and updated regularly.

- The details of JDCC's recovery plan appear in **"Principle 3: Framework for the comprehensive management of risks, Key consideration 4."**

- JDCC assumes its measures to raise additional equity by allocating insurance proceeds, receiving financial support by JASDEC (e.g. reduce debt), freezing investment projects, cutting back on personnel costs, raising its fee charges, and increasing capital (through third party allocation, etc.)as measures to procure additional funds.

- In addition, JDCC's risk scenario and measures to respond to it are, in principle, assessed for effectiveness and appropriateness at least once a year in light of ongoing identification and management of risks, and, if necessary, can be reviewed by a resolution of the Board of Directors.

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.

(Applicable FMIs : PS、CSD、SSS、CCP)

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.

(Own assets)

- JDCC's own assets are deposited into financial institutions that have undergone an inspection by supervisory authorities and carry out appropriate risk management under the Banking Act.

(Deposited assets from DVP participants)

- Participants Fund is entrusted to a bank that provides trust services, to be managed and invested as money in trust. Pledged Securities are registered in JDCC accounts with JASDEC and the BOJ. No custodians are used.

- JDCC periodically monitors the financial institution with which it has entrusted Participants Fund through interviews, financial data, ratings and other information.

Key consideration 2

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

(Own assets)

- Deposit agreements and other contracts ensure the legal basis for the cash deposits in commercial banks. These deposits can be withdrawn in a timely manner.

(Deposited assets from DVP participants)

- Since the Participants Fund is held in trust at the trust bank (being as a trustee), its legal basis is assured.

- As the Participants Fund is a source of liquidity in the event of DVP participant default, the scheme in place enables funds to be rapidly remitted to JDCC. There is no fund transfer located in a different time zone or in a different jurisdiction.

- Pledged Securities are registered in JDCC accounts with JASDEC or the BOJ, assuring their legal basis.

- If a DVP participant defaults on their obligations, the Assurance Assets of that DVP participant will be sold and converted to cash; and rapid access to Pledged Securities is assured as they are recorded in JDCC accounts with JASDEC or the BOJ.

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.

- While JDCC deposits its own cash in ordinary savings accounts, deposited assets from DVP participants are trusted in a trust bank or recorded in JDCC accounts with JASDEC or the BOJ, and no custodial banks are used.

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.

- To ensure soundness and reliability as the settlement infrastructure, together with JASDEC, JDCC has established a "Basic Policy on Risk Management" and emphasizes risk management through the establishment of its risk management system. JASDEC Group also emphasizes risk management in the investment of its own assets, limiting instruments to bank deposits, Japanese Government Bonds, and government-guaranteed bonds to ensure security and liquidity

- The deposited Participants Fund from DVP participants is held in trust at the trust bank (being as a trustee), which is an investment with low risk and high liquidity.

- JDCC receives deposits of Pledged Securities from DVP participants , however it does not invest these assets.

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.

(Applicable FMIs : PS、CSD、SSS、CCP、TR)

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.

Identification and management of operational risk

- JDCC Basic Policy on Internal Control stipulates that the development of the JASDEC Group's risk management structure is to be promoted (a) through the Integrated Risk Management Council that JASDEC has established and which the head of JDCC's business operations group attends, and (b) in accordance with the Group's Basic Policy on Risk Management.

- In the JASDEC Group's Basic Policy on Risk Management, JASDEC classifies the Group's operational risk into the following categories. JDCC follows this classification as well.
  - System risk: Risk of loss of system effectiveness, user trust, security, efficiency or compliance caused by inappropriate use of system, failure in system development, a flaw in the system including system crash and malfunction, or cyberattacks.
  - Business processing risk: Risk of unintended, delayed or suspended business processes arising from failure to conduct proper operations, accident or fraud by directors or employees.
  - Accident & disaster risk: Risk of damage to JASDEC Group or danger to directors and employees of the Group arising from accident, unlawful entry, threats, natural disaster, pandemics or other such events.
  - Personnel risk: Risk of insufficient human resources, loss of motivation, moral

hazard or other such impacts arising from inappropriate HR policy or worsening of the work environment.

- Compliance risk: Risk of business management or legal problems arising from failure to comply with laws & regulations and internal rules or transaction contracts, or unfavorable contracts.

・ The policies and procedures for the identification and management of risks, including operational risk, are given in **"Principle 3: Framework for the comprehensive management of risks, Key consideration 1."**

・ JDCC entrusts its system development and operation to JASDEC. JASDEC ensures the availability of an alternate office as well as redundancy in its hardware, network, and computer center, so that such facilities cannot be single point of failure.

Policies, processes and controls

・ Of those risks classified as operational risk, JASDEC manages the JASDEC Group's business processing risk, personnel risk and information system risk using the following policies, processes and controls. JDCC manages in accordance with these policies, etc. as well.

(Business processing risk)

- JASDEC has set forth the following management policies to ensure the JASDEC Group's appropriate business processes.
    - Preparation of manuals and checklists, etc., to prevent administrative errors and the carrying out of administration in accordance with these.
    - Administration using a two-person system and use of checklists to prevent any administrative errors.
    - Conducting administration after confirming the personnel related to said administration (including personnel in other departments and offices and outside of JASDEC) and the scope of each of their duties to prevent administrative processes falling out of alignment.
    - An understanding in advance of scale of influence of any administrative errors made by JASDEC or a related party, to enable rapid responses to administrative errors.
    - Prior coordination between one or more staff in response to exceptional business procedures to prevent errors.
    - In the event of an administrative error, work to correct the error undertaken with a direct supervisor aware of the method, etc., in order to

prevent a recurrence of said error.

- ✧ Identification, analysis and assessment of risks in advance, prior to business processes being added, changed or eliminated (including division of roles), with relevant changes being included in manuals and checklists, etc., and training programs implemented for people in charge.
- ✧ Proper handover with takeover documentation when a person in charge changes due to personnel transfers, etc., and training of their replacement.
- ✧ Review of manuals and checklists at least once a year so that they do not become out of date.
- ✧ Training programs at least once a year to overcome lack of understanding or lack of awareness on the part of people in charge.
- ✧ Regarding administration of outsourcing companies, at least once a year, interview the outsourcing companies, carry out investigations, and take other necessary supervisory measures, in order to prevent administrative errors being made by such outsourcing companies.
- ✧ Continuous review of administrative processes (at least once a year). Elimination of unnecessary administration, and promotion of work simplification and automation.

(Personnel risk)

- ➢ While paying attention to the balanced age structure of the workforce and their suitability to JASDEC's businesses, a constant number of new graduates is employed each year to ensure that operations may continue indefinitely. After granting employment, job rotation is adopted for new employees to whom mandatory rotation assignment to Business Operations Group and IT System Group is applied so that they can become properly responsible for JASDEC businesses. JASDEC informs its staff of the skills and roles expected of them and has educational and training programs to develop those skills and roles.
- ➢ To reduce risk arising from the departure or unavailability of personnel, JASDEC prepares manuals covering each operation and prevents reliance on single individuals.
- ➢ Periodic training in aspects of compliance is given to prevent inappropriate practices by employees. Work regulations set forth types of disciplinary actions and their methods of application to prevent fraud. In addition, if an employee is to be subject to disciplinary action, JASDEC will refer him/her to the disciplinary committee, and carry out disciplinary measures in accordance with a report from the committee.

(Information system risk)

- JDCC entrusts its system development to JASDEC. By making clear the management procedures regarding changes to its information systems, JASDEC ensures the uniform operation of its information systems. The procedures incorporate the ITIL approach, which is global best practice in IT service management.
- In addition, projects to upgrade information systems are developed in accordance with JASDEC's System Development Standards. These system development standards divide a development project into phases: the project planning phase, requirement definition phase, development phase, inspection and approval test phase, transition phase, and servicing phase. For each of the phases, the standards clarify the deliverables, assessment methods and other relevant matters.

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.

<u>Roles, responsibilities and framework</u>

- JDCC Basic Policy on Internal Control stipulates that the development of the JASDEC Group's risk management structure is to be promoted (a) through the Integrated Risk Management Council that JASDEC has established and which the head of JDCC's business operations group attends, and (b) in accordance with the Group's Basic Policy on Risk Management.

- In its Basic Policy on Risk Management, JASDEC sets forth the roles, responsibilities and framework for the management of the JASDEC Group's each type of risk, including operational risk. The details are given in **"Principle 3: Framework for the comprehensive management of risks, Key consideration 1."**

- JASDEC decides its Basic Policy on Risk Management by resolution of the Board of Directors. In principle, at least once a year the effectiveness, appropriateness and other aspects of the Policy are reviewed, and it is revised if deemed necessary.

- When reviewing the effectiveness, appropriateness and other aspects of the Policy, consultation is given by the Integrated Risk Management Council, chaired by the CRO, and which the head of JDCC's business operations group attends, and also independently by the Risk Committee, which gives advice to JASDEC's Board of Directors.

Review, audit and testing

- JASDEC reviews, audits and tests its systems, operations policies, processes and controls used in operational risk management of the JASDEC Group, as follows. JDCC is also subject to this review.

(Review and testing)

- JASDEC reviews at least once a year whether or not it needs to change its internal rules concerning the JASDEC Group's operational risk management, considering the actualized risks and the changes to the environment, both inside and outside of the organization.
- JASDEC reviews at least once a year whether or not it needs to revise its System Operation Manual for Disaster and Long System Failure. It also conducts a test each year in which it switches over from its main center to its backup center and verifies the procedures involved. This test involves companies outside of JASDEC, including participants.

(Auditing)

- JASDEC has an internal audit division that is independent of the operational departments of the organization. There are employees that concurrently serve as JDCC employees in this division, and conducts integrated internal audit as the JASDEC Group.

- The JASDEC Group's internal audit division audits each department to see whether the department is following internal rules and Business Regulations, and audits the status of risk management, including operational risk.

- JASDEC Group's internal audit division has developed a medium-term system audit plan and conducts an internal audit of its important systems at least once a year. For matters that require specialized knowledge, the internal audit division utilizes professionals outside JASDEC Group if deemed necessary.

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.

- JASDEC stipulates and discloses the following two points in its Basic Management Policy, to ensure that the JASDEC Group takes appropriate and timely measures, and achieves operational reliability.

  - Ensure continuous and stable operational management, such as creating a corporate culture that emphasizes risk management, from the standpoint of concentrating operations in settlement infrastructure while expanding the scope of services.
  - Recognize the public nature of JASDEC's operations and ensure active disclosure and management transparency.

- Since the majority of JASDEC operations are performed by processing systems, JASDEC has set targets related to system operation rates and indices to maintain operational reliability. It periodically measures and assesses these operation rates, and reports the findings to its Board of Directors.

- JASDEC has formulated internal rules concerning the development and operation of its information systems. As shown below, these ensure a high level of operational reliability.

  - In system development, JASDEC assesses the level of quality at each stage in the development process (requirement definition, development, testing, etc.). If necessary, it conducts load tests, user tests and other tests to ensure reliability.
  - In the operation of its systems, JASDEC constantly monitors and assesses the use of disks, CPUs and memory, adding resources when a threshold is reached. JASDEC also has internal rules concerning the steps to take in response to system failure, to minimize the time taken until recovery.

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.

- JDCC entrusts its system development and operation to JASDEC. In order to provide adequate, scalable capacity, JASDEC handles as follows.
  - JASDEC sets limits on the number of transactions when it replaces information systems. This is based on the average volume and maximum volume of past actual data, as well as forecasts of future processing volume.
  - In addition, before changing its existing systems, JASDEC verifies that there will be no problems with processing performance associated with the change.
  - As mentioned earlier, JASDEC manages capacity during the normal operation of its systems. It constantly monitors and assesses the use of disks, CPUs and memory and adds resources when a threshold is reached.

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

Physical security

- JDCC entrusts its system development and operation to JASDEC. JASDEC has set strict rules for the granting of authority to enter offices and computer centers and for controlling entry/exit. These rules apply to JDCC as well.

- In particular, JASDEC does not disclose the location of its computer centers, and strictly controls access to them. This prevents unlawful physical access to the computers and helps prevent attacks from external sources.

- JASDEC utilizes the voluntary standards for the safety of financial information systems, which are set by The Center for Financial Industry Information Systems (FISC); Security Guidelines on Computer Systems for Banking and Related Financial Institutions, and has set up a physical security framework for its computer centers where its systems are installed.

Information security

- To ensure information security, JASDEC Group has set forth its General Principles of Information Security Policy and a range of internal rules concerning the organization's approach to the issue of information security. These policy and rules apply to JDCC as well. JASDEC's General Principles of Information Security Policy consists of the following five principles, and is disclosed on the website.

    1. Establishment of administrative control for information security
    2. Establishment of thorough control system for information security
    3. Advancing the understanding of information security
    4. Implementation and maintenance of internal audits
    5. Enforcement of control over contractors

- Administrative control for information security is structured around a Chief Information Security Officer (CISO) appointed to integrate the information security of the Group.

- In accordance with the Act on the Protection of Personal Information and other related Japanese laws and regulations, as well as the EU's General Data Protection Regulation (GDPR), JDCC has established its Policy on Personal Information Protection and has created internal rules. JDCC's Policy on Personal Information Protection is disclosed on the website.

- JDCC entrusts its system development and operation to JASDEC. JASDEC handles information security management as follows.
    - Information security is taken very seriously at JASDEC, particularly with regard to information system development, maintenance and operation. JASDEC operates and adheres to Rules regarding Information Security Measures. JASDEC has set up information systems within its computer centers that are designed to ensure robust physical security. Measures are in place to prevent data leakage through the removal of system devices. In addition, all persons who need to take data outside of the computer centers require authorization from the manager. There are frameworks in place to prevent unlimited access by the person in charge and the leakage of information that could occur as a result.
    - JASDEC has designed its dedicated systems and network for the management of personal data, and carries out data encryption and strict access management.
    - JASDEC also utilizes the above-mentioned *Security Guidelines on Computer Systems for Banking and Related Financial Institutions* (facility standards) published by FISC as specific safety measure guidelines in the setting up and operation of information systems.

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.

Objectives of business continuity plan

- JASDEC formulates the JASDEC Group's Basic BCP (Business Continuity Plan) Policy and discloses on the website. JDCC follows this Policy as well.

- The fundamental idea in this policy is that in the event of a significant business disruption, the JASDEC Group will continue to conduct business as far as possible, or resume business operations as soon as possible in order to minimize the effect on JASDEC participants and related entities.

- The policy clarifies the risks that are supposed to be addressed by the policy, and the scope of the policy. The policy stipulates how JASDEC is to respond to each of the following categories of disaster: regional disasters/local disasters/system failures. The policy also has provisions for the establishment of framework for emergency preparedness in terms of organizations, personnel, means, facilities, and information systems, etc.

- In addition, JASDEC has set out its Basic Policy on Response to System Failure to enable the organization to make a rapid and efficient system recovery in the event that transaction processing is disrupted by failures of systems or network connections of the JASDEC Group, JSCC, the BOJ or users. JASDEC discloses this policy on the website.

Design of business continuity plan

Recovery goals

- The Basic BCP Policy sets an approximate recovery time objective of under two hours (this is the target time taken from the halt of the operations due to the occurrence of a supposed risk (widespread disasters due to a natural disaster, epidemic, or disruption of social infrastructure; isolated disasters due to fire, or terrorist attack; and system failures within the Group, etc.) until the recovery of the operations).JASDEC has laid down various internal rules of the JASDEC Group (including its BCP Countermeasures Rules) regarding specific aspects of business continuity.

- In addition to the Basic BCP Policy, the Basic Policy on Response to System Failure states that, "In cases where a failure occurs in JDCC, such as interruption of systemic exchange of information with users, an alternative method of transmission will be used if available and normal transaction processing will continue to the extent possible."

Information system construction

- JASDEC has set up the following redundant information systems to ensure that the above-mentioned target is achievable and there is no hindrance to its business continuity. JDCC entrusts its system development and operation to JASDEC, and the information system for DVP Settlement System for NETDs is subject to this redundancy as well.
  - JASDEC's information system built-in redundancy as preparation for cases where a problem occurs in the main center's information systems. When a system failure occurs, JASDEC switches over to the backup system throughout an automatic and instant process (or through a rapid manual process).
  - If the main center is affected by a disaster, then the processes switch over to the information system in the backup center. A recovery time objective of two hours is set for the restoration of operations.

- In each redundant information system, the data in the information systems of the main center and the backup center is synchronized through constant replication. When the systems switch over, one concern is that the data being processed at that moment of switchover may not correctly reflect results generated from the process.

- To address this issue, JASDEC has defined the following points in its "Systems Operation Manual for Switching to JASDEC's Back-up Centers in the case of Disaster or Other Unforeseen Circumstances" that is disclosed to its participants. Points related to JDCC's DVP Settlement System for NETDs are also included in this Manual.
  - JASDEC's participants are required to confirm whether or not the data that they input has been processed to completion when the systems switch over.
  - If the systems switch over while the input data is being processed, the data may not be properly processed, so participants need to have alternative means of confirmation, including maintaining multiple connection interfaces.

Participants need to resume operations after checking that the data has been completely processed.

- JASDEC has processes that enable JDCC and DVP participants to check the state of processing of data in JASDEC's systems in a timely manner.

Responding to supposed risks

- In the event of a supposed risk occurrence, effective communication within and outside the organization with important stakeholders and the authorities is important; therefore, JASDEC has prepared an in-house manual that clarifies specific steps to take in the event of a supposed risk occurrence, including setting up a BCP Countermeasure Office, confirming the situation, communicating with the public, communicating both within JASDEC and with entities outside the organization, and restoring operations. JDCC is also regarded as a business continuity division within the JASDEC Group.

- If there are concerns of supposed risks having a negative impact on the JASDEC Group's business operations, the BCP Countermeasure Office will be set up within the JASDEC Group. This office will assess the situation within the JASDEC Group, compile information, and distribute communications and directions within the JASDEC Group. JDCC's head will attend the BCP Countermeasure Office and will take necessary actions.

- In addition, frameworks have been set up to communicate information about the JASDEC Group's business operation status, its systems running status and future responses and other issues, to participants, supervisory authorities, stock exchanges, and FMIs outside of the JASDEC Group (BOJ, JSCC), etc.

__Secondary site__

- The JASDEC Group established the Osaka office as an alternative office. Additionally, JASDEC has identified priority business operations to be maintained and restored, and has established procedures for resuming operations within a target recovery time. In order to take appropriate measures in the event of the supposed risk, staff is stationed in the Osaka office, and daily business operations are carried out in both the head office and the Osaka office.

- Based on the Basic BCP Policy, while taking into account the geographical factors, the JASDEC Group has established a backup center, where personnel will be able to continue operations even in the event of its main center being rendered inoperable.

- The backup center has the necessary resources, processing performance and functions to ensure that JDCC can continue its operations even if the main center become inoperable.

- In addition to these measures, JASDEC offers connection functions via Web-based terminals that participants are required to install. These functions can be used as an alternative to real-time connections between systems, so that participants can continue to use the main functions of JASDEC's information systems in the event of a supposed risk occurrence—even if the participant's internal systems or normal communication lines have failed. These Web-based terminals can be used by DVP participants for the operation of JDCC's DVP settlement system for NETDs.

Review and testing

- JASDEC periodically carries out the following drills to review and test that the JASDEC Group's business continuity and contingency arrangements are functioning effectively. JDCC participates in these drills as well.
  - Practice drills to check the safety of executives and employees, on the assumption that a regional disaster has occurred.
  - Drills to set up the BCP Countermeasure Office and carry out decision-making in accordance with the situation, on the assumption that regional disaster/local disaster/system failure have occurred.
  - Drills involving participants in system operation continuity when the switch-over to the backup center is made, on the assumption that the main center has been impacted by a disaster.

- In accordance with the JASDEC Group's Basic BCP Policy, at least once a year tests are carried out covering switching from the main system to the backup system both in the main center, switching from main center systems to backup center systems, and other such tests.

- These tests involve not only participants but also companies that provide the connectivity service between participant systems and JASDEC systems, as well as relevant FMIs (BOJ, JSCC). By confirming whether or not business continuity can be maintained and by checking the procedures in place when a disaster occurs, these tests assess and verify the effectiveness of the JASDEC Group's BCP.

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.

Risks to the FMI's own operations

- The policies and procedures for the identification and management of each risk, including risks to the FMI's own operations are given in **"Principle 3: Framework for the comprehensive management of risks, Key consideration 1."**

- JDCC understands the following risks to its own operations that might arise from its major participants, other FMIs (BOJ, JSCC, JASDEC), service providers (JASDEC's contractors entrusted with information system development, maintenance and operation), and utility companies (telecommunications companies, power companies).
  - The risk that the system failure, etc. of a major participant prevents a significant part of the day's settlements from being completed
  - The risk that the system failure, etc. of another FMI (BOJ, JSCC, JASDEC) will cause problems for JDCC's business operations
  - The risk that administrative errors, etc. by a service provider (JASDEC's contractors entrusted with information system development, maintenance and operation) will cause the JASDEC Group's system failure
  - The risk that the suspension of service by a utilities company (a telecommunications company or a power company) will prevent the operation of the JASDEC Group's systems

- JDCC entrusts its system development and operation to JASDEC. JASDEC has taken the following steps to reduce these risks.
  - JASDEC constantly monitors the status of connections between its systems and those of other FMIs. JASDEC has structures in place to enable rapid contact to be made if a situation arises that will affect the JASDEC Group.
  - In cases where the specifications of the connections with the systems of participants or with other FMIs are changed, or new systems or services are launched, JASDEC carries out user tests in advance, to check the system connections, business procedures, etc.
  - JASDEC holds weekly or monthly meetings with its service vendors entrusted with information system development, to confirm the progress and quality level of data system development. In addition, with respect to information system maintenance and operation, JASDEC has concluded SLOs (Service Level Objectives) with its outside contractors, and checks the status of their

contracted operations at least once a month.

- JASDEC has prepared for the event of a suspension of service by a utility provider (a telecommunications company or a power company) through redundancy in its networks and by having its own in-house power generation facilities.

- JDCC entrusts its system administrative processing to JASDEC. JDCC holds weekly meetings with the JASDEC IT System Group about the system status related to the entrusted operations, based on the agreements it has concluded with JASDEC. At these meetings, JDCC receives reports concerning the progress of development and operation of the system, which enables JDCC to directly check the status of the system it has entrusted.

- In addition, the progress of development and operation of the system are checked through monthly meetings consisting of top managements and heads from the JASDEC Group overall. JDCC also attends these meetings and makes necessary contributions and requests.

Risks posed to other FMIs

- The policies and procedures for the identification and management of each risk, including risks that JDCC could pose to other FMIs, are given in **"Principle 3: Framework for the comprehensive management of risks, Key consideration 1."**

- Significant risks that JDCC might pose to other FMIs could come about if there was a failure, etc. in the JASDEC Group's systems, etc. which could harm other FMI's operations.

- To reduce the possibility of these risks, the JASDEC Group constantly monitors the status of connections between its systems and those of other FMIs. The JASDEC Group has a structure in place to enable rapid contact to be made if a situation arises that will affect other FMIs.

- JDCC entrusts its system administrative processing to JASDEC. JDCC holds weekly meetings with the JASDEC IT System Group about the system status related to the entrusted operations, based on the agreements it has concluded with JASDEC. At these meetings, JDCC receives reports concerning the progress of development and operation of the system, which enables JDCC to directly check the status of the system it has entrusted.

- In addition, the progress of development and operation of the system are checked through monthly meetings consisting of top managements and heads from the JASDEC Group overall. JDCC also attends these meetings and makes necessary contributions and requests.

- To foster cooperation between other FMIs, the JASDEC Group participates in an annual system failure practice drill conducted by the BOJ, as well as conferences, committee meetings and other events organized by the Japan Securities Dealers Association and the Japanese Bankers Association, which are concerned with the setting up of market-wide BCPs.

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.

（Applicable FMIs : PS、CSD、SSS、CCP、TR）

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.

Participation criteria and requirements

- JDCC has set forth the following requirements and criteria for clearing qualification when a company wishes to participate in JDCC:

  (1) Have opened an account with JASDEC and be a user of the JASDEC PSMS (Business Rules Article 8-2).
  (2) Have a sound management structure (Business Rules Article 10-1-1).
  (3) Meet certain financial criteria, such as amount of capital and net assets (Business Rules Article 10-1-2).
  (4) Have an appropriate administrative processing structure (Business Rules Article 10-1-3).

- JDCC clearly stipulates these participation requirements and criteria in its Business Rules to ensure transparency. As will be stated later, these requirements have been established in the context of how the JDCC systems work, the risks involved, and JDCC's position in the industry. They enable fair and open access, and there is no room for an arbitrary operation and abuse of position.

Access to trade repositories

- JDCC is not a TR, and does not apply.

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 endeavor to set requirements that have the least-restrictive impact on access that circumstances permit.

Justification and rationale of participation criteria

- Of the above mentioned participation requirements and criteria, requirement (1) is a mandatory requirement considering the framework of the system JDCC provides. Since JDCC bears the participant's credit risk, requirement (3) assures the financial soundness of the participant by setting up certain financial criteria (FMI's soundness). Requirement (4) seeks an appropriate business operation structure to comply with the matters prescribed in the Business Rules, to ensure efficient securities settlements, mainly from the perspective of the operational risk involving the transfer of money and securities between JDCC and its participants (FMI's effectiveness). Requirement (2) seeks a sound management structure. Since JDCC has a public role handling a large number of transactions eligible to clear intensively, it must not grant a clearing qualification to, for example, any entities who are controlled by anti-social forces (FMI's role in the market).

- As described above, requirements and criteria are based on JDCC's soundness, effectiveness and its role in the market. They are appropriate as they do not impose harsh requirements and criteria that are out of proportion to the degree of the risks involved.

Disclosure of criteria

- The requirements and criteria for participation in the JDCC's DVP Settlement System for NETDs is set forth in JDCC Business Rules and disclosed on its website.

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.

Monitoring compliance

- JDCC periodically collects reports on the financial status from each DVP participant. Article 22 of the Business Rules and Article 6 of the Treatment of Business Rules stipulates that participants are obliged to submit materials that are to be used in surveys of their financial status. In addition, some of the materials for surveys of financial circumstances are required to have an audit report attached, to ensure their reliability.

- If a DVP participant's financial circumstances deteriorate, JDCC may require such DVP participant to submit a report (Business Rules, Article 23). Furthermore, Article 35 of the Business Rules authorizes JDCC to recommend to the DVP participant that they take appropriate measures. JDCC may also require financial reports to be submitted at intervals shorter than one month.

Suspension and orderly exit

- Article 30-3 of JDCC Business Rules stipulates that JDCC may, after hearing is held for a DVP participant, completely or partially suspend its obligation assumption of the DVP participant if any of the criteria in Article 30-3 apply, until the cause of such suspension is eliminated. If the participant eliminates the cause within a certain period, the suspension may be lifted; however, if the cause cannot be eliminated within 1 year, JDCC may revoke the participant's clearing qualifications under Article 31 of the Business Rules.

- The reasons for JDCC suspension of obligation assumption and the procedures for the forfeiture of clearing qualifications are clearly stipulated in the Business Rules and disclosed on its website.

Principle 19: Tiered participation arrangements

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

(Applicable FMIs : PS、CSD、SSS、CCP、TR)

Key considerations

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.
2. An FMI should identify material dependencies between direct and indirect participants that might affect the FMI.
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.
4. An FMI should regularly review risks arising from tiered participation arrangements and should take mitigating action when appropriate.

- All DVP participants are direct participants. The credit and debt relationship with JDCC is established between JDCC and DVP participants who are direct participants.

- Even if a client of a DVP participant (a non DVP participant) defaults, the DVP participant is not permitted to default its obligation against JDCC for the reason of its client's default because credit and debt relationship is established between JDCC and the DVP participant. Therefore, JDCC does not consider there is a significant risk caused by non-DVP participants, from a legal perspective.

- In its DVP Settlement System for NETDs, JDCC sets net debit risk management conditions for each DVP participant according to their use of obligation assumption. This prevents in advance the risk caused by either transactions of the DVP participant or the DVP participant clients from increasing without limit. Therefore, in terms of the actual condition of the DVP Settlement System for NETDs, there is no need for JDCC to identify significant risks arising from clients of DVP participants.

- In this way, JDCC does not consider there to be any significant risks related to indirect participation in the DVP Settlement System for NETDs, from both legal risk aspects and risk management structure aspects.

Principle 20: FMI links

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

(Applicable FMIs： CSD、SSS、CCP、TR)

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 party at the other end of JDCC links are: a) JASDEC, which is a book-entry transfer institution for stocks, etc. and b) the BOJ which operates BOJ-NET (current account transactions/JGB Book-Entry System). The risk arising from these links is limited to the operational risk, and they are constantly managed by the JASDEC Group risk management structure.

- Refer to "**Principle 17: Operational risk, Key consideration 1**" for details about the management of operational risk in the JASDEC Group.

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.

- The jurisdiction of the links with JASDEC and the BOJ is limited to Japan. In addition, since JDCC uses JASDEC accounts for book-entry transfer of securities, the related legal framework is the Transfer Act.

Key considerations

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.
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.
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.
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.

- JDCC is a CCP, which is not applicable to these Key considerations.

Key considerations

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.
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.

- JDCC does not have a link with other CCPs.

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.

- JDCC is a CCP, which is not applicable to these Key considerations.

Principle 21: Efficiency and effectiveness

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

(Applicable FMIs : PS、CSD、SSS、CCP、TR)

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.

- JDCC undertakes user-oriented operational management under the JASDEC Group's Basic Management Policy.

- JDCC's DVP Settlement System for NETDs was designed to eliminate principal risk in NETDs with due consideration of DVP participants' needs, after holding repeated meetings with them.

- JDCC has established a DVP Business Operations Committee comprising its major DVP participants. The Committee examines JDCC rules and major procedures, thus JDCC conducts its business to meet the needs of DVP participants and the market. The DVP Business Operations Committee's deliberations are disclosed to DVP participants.

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.

- JDCC conducts its business in accordance with the JASDEC Group's Corporate Philosophy of offering highly reliable, convenient and efficient services.

- In more specific terms, since the majority of the JASDEC Group services are performed by information systems, JASDEC has set targets related to system operation rates, as indices to maintain the reliability of information systems. It periodically measures and assesses these operation rates, and reports the findings to its Board of Directors.

  * Refer to **"Principle 17: Operational risk, Key consideration 3."** for details.

Key consideration 3
An FMI should have established mechanisms for the regular review of its efficiency and effectiveness.

- JDCC, as a member of the JASDEC Group, formulates an annual business plan in accordance with the JASDEC Group Corporate Philosophy and Basic Management Policy. From the standpoint of accurately responding to changes in the business environment, every fiscal year JDCC Board of Directors makes an evaluation of the execution of the annual business plan accordingly. The outcome of this review is reported to the JASDEC Board of Directors as well.

- The performance of JDCC president and full-time directors is evaluated at the shareholders' meeting, based on the Companies Act. Since JDCC directors are appointed from JASDEC executive officers, they are evaluated by JASDEC Nominating Committee and Compensation Committee.

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.

(Applicable FMIs : PS、CSD、SSS、CCP、TR)

Key consideration 1

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

Communication procedures

- Internationally acceptable communication procedures, such as HTTP, TCP/IP and MQ are used in communications between JASDEC and its participants. JDCC uses JASDEC's system.

- As JDCC does not engage in cross-border business, it is not in any communications with foreign entities such as custodian banks.

Communication standards

- JDCC entrusts its system development and operation to JASDEC. In JASDEC, among its own massage formats connecting JASDEC and its participants, the real-time system connections can use XML messaging in conformity with the international ISO 20022 standard.

- For transmitting files, JASDEC uses its own message formats and defines the data in the connection specifications. However, some of these formats give consideration to compatibility with XML messaging in conformity with the international ISO 20022 standard.

- JASDEC enables the use of BIC (Business Identifier Code) to identify counterparties, etc. and ISIN (International Securities Identification Number) to identify issues of securities. These are widely used as international standard codes.

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.

(Applicable FMIs : PS、CSD、SSS、CCP、TR)

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.

Rules and procedures

- JDCC rules and major procedures are stipulated in JDCC Business Rules and other regulations and are disclosed on its website and other points of contact. (Some documents are disclosed only in Japanese.)

- The legal division checks any work done to formulate or amend rules. Also, formulation or amendment of important rules and procedures are subject to discussion at DVP Business Operations Committee. Approval, etc. from authorities to formulate or amend rules is also necessary. These processes ensure the clarity and comprehensiveness of the rules, etc.

Disclosure

- The JASDEC Group's Basic BCP Policy, which contains rules and procedures concerning actions to take in the case of non-routine, though foreseeable, events, is disclosed on its website. This lists the JASDEC Group's basic response policy (to continue operations to the greatest extent possible, and to switch to a backup center if necessary). JDCC follows this Policy as well.

Key consideration 2

An FMI should disclose clear descriptions of the 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.

- The JASDEC Group has created a connection specification document about its system design and operation, and discloses this to its system users. Information of

JDCC's DVP settlement system for NETDs is also included in this connection specification document as well. JASDEC decides important matters that will directly affect the operation of its systems, through the discussions carried out by above-mentioned Advisory Committees and through appropriate in-house processes. These processes are generally disclosed on JASDEC website.

- JDCC has stipulated participant rights, obligations and risk in its Business Rules and other regulations and discloses on its website.

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 risks that participants may be exposed to are listed in the Business Rules, etc., and disclosed to the public general via its website. In addition, JDCC encourages the understanding through the answers to inquiries from DVP participants and individual lectures for entities who wish to participate in the system.

- JDCC considers that this training structure is functioning effectively, because there have not been any instances of serious problems related to rules until now, procedures and risks to be faced from participation caused by a lack of understanding.

- If there are any participants who do not have sufficient understanding of the rules, procedures and risks to be faced from participation, JDCC provides additional explanation when deemed necessary.

- DVP participants are obliged to comply with JDCC Business Rules and other regulations, as well as its business procedures. If a DVP participant has violated the Business Rules, JDCC will conduct hearings with that participant and may take measures that include the suspension of obligation assumption, as stipulated in the Business Rules.

- In addition, the Business Rules stipulate that if a DVP participant's operations or financial circumstances are inappropriate, JDCC may recommend to the participant that they take appropriate measures.

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.

- JDCC discloses its rules concerning fees and table of fees on its website.

- When JDCC amends its Rules Concerning Fees, DVP participants are notified of the amendments first and are disclosed to the public general via its website.

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.

- JDCC discloses information responding to CPSS-IOSCO's *Disclosure framework for financial market infrastructures*, at least once every two years.

- In addition, on JASDEC website JDCC discloses monthly statistical data including the number of DVP settlement transactions and settlement amount, etc.

- JDCC also publicly discloses its quantitative data based on "Public quantitative disclosure standards for central counterparties", which was formulated and published by CPMI-IOSCO in February 2015.

- Furthermore, the JASDEC Group discloses its General Principles of Information Security Policy and its Basic BCP Policy on its website.

- In principle, JDCC discloses information in Japanese; however, disclosure based on the PFMI and other important information are also disclosed in English.

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.

(Applicable FMIs :　TR)

- JDCC is a CCP, which is not applicable to this principle.

V. Related links

Links related to laws and regulations

Japanese Law Translation Database system (Ministry of Justice)	https://www.japaneselawtranslation.go.jp/?re=02
Financial Services Agency	https://www.fsa.go.jp/en/index.html

Links related to JDCC

JDCC	https://www.jasdec.com/en/about/jdcc/index.html
—Company outline	https://www.jasdec.com/en/about/jdcc/outline/index.html
—DVP Settlement Services for NETDs	https://www.jasdec.com/en/system/dvp/index.html
—Regulations and fees	https://www.jasdec.com/en/rule/dvp/index.html
—Statistics	https://www.jasdec.com/en/statistics/index.html

Links related to JASDEC

JASDEC	https://www.jasdec.com/en/index.html
—Company data	https://www.jasdec.com/en/about/office/index.html
—Activities report	https://www.jasdec.com/en/about/action/index.html
—Risk management initiatives	https://www.jasdec.com/en/about/security/index.html
—About the systems (Outline and fee, etc.)	
BETS for Shares, etc.	https://www.jasdec.com/en/system/less/index.html
Custody Services for Foreign Share Certificates, etc.	https://www.jasdec.com/en/system/foreign/index.html
PSMS	https://www.jasdec.com/en/system/finance/index.html

Information disclosure based on "Principles for financial market infrastructures"
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