

Principles for Financial Market Infrastructures Disclosure

September 28, 2018

Japan Commodity Clearing House Co., Ltd



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Responding institution: Japan Commodity Clearing House, Co., Ltd

Jurisdiction in which the FMI operates: Japan

Authorities regulating, supervising, or overseeing the FMI: Japanese Ministry of Agriculture Forestry and Fisheries and Ministry of Economy, Trade and Industry

Date of disclosure: September 28, 2018

This document is also available at <https://www.jcch.co.jp/i/fmi.html>

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I. Executive Summary

Japan Commodity Clearing House Co., Ltd. (“**JCCH**”) is the sole commodity clearing house in Japan providing clearing services for transactions (“**Business of Assuming Commodity Transaction Debts**” in commodity markets on the Tokyo Commodity Exchange (“**TOCOM**”) and the Osaka Dojima Commodity Exchange (“**ODE**”).

JCCH is licensed under the Commodity Derivatives Act¹ for Business of Assuming Commodity Transaction Debts, and is directly regulated and supervised by the Japanese Ministry of Agriculture Forestry and Fisheries (the “**MAFF**”) and Ministry of Economy, Trade and Industry (the “**METI**”) (together, the “**Competent Ministries**”).

In November 2014, the Competent Ministries released the “Basic Supervision Guidelines of Commodity Clearing Organizations” (“**Supervision Guidelines**”), for the purpose of securing international regulation level under the “Principles for Financial Market Infrastructures” (the “**FMI Principles**”) which are published by the Committee on Payment and Settlement Systems-Board of the International Organization of Securities Commissions (the “**CPSS-IOSCO**” or “**CPMI-IOSCO**”)² in Japanese commodity markets.

In line with these regulatory trends at home and abroad, JCCH recognizes the importance of properly providing clearing services under an appropriate risk management framework and securing reliability as a clearing organization, and thereby establishes the present governance structure in compliance with the FMI Principles and the Supervision Guidelines to form a robust and comprehensive risk management framework.

This disclosure provides details of JCCH’s compliance with the FMI Principles in accordance with the “Principles for Financial Market Infrastructures: Disclosure Framework and Assessment Methodology” released by the CPSS-IOSCO.

Unless otherwise specified, this disclosure is current as of the end of September 2018.

¹ Article 167 of the Commodity Derivatives Act

² Name at the time when the “Principles for Financial Markets Infrastructures” were released. The Committee on Payment and Settlement Systems (CPSS) was changed to the Committee on Payments and Market Infrastructures (CPMI) on September 1, 2014.

II. Summary of Changes since the Previous Update

This document is the first information disclosure published by JCCH regarding its compliance with the FMI Principles.

As Principles 11 (Central Securities Depositories), 12 (Exchange-of-Value Settlement Systems) and 24 (Disclosure of Market Data by Trade Repositories) do not apply to JCCH's business, these principles are not covered in this disclosure.

III. General Background Regarding FMIs

Overview of JCCH's Background and Eligible Transactions for Clearing

JCCH is a subsidiary of TOCOM. Established on December 24, 2004, JCCH was licensed by the Ministers of both the MAFF and the METI to engage in Business of Assuming Commodity Transaction Debts on April 25, 2005, and commenced conducting clearing services on May 2, 2005.

JCCH is the sole clearing house providing clearing and settlement services in the Japanese commodity futures markets, providing clearing services in relation to the products listed on the Designated Commodity Exchange, TOCOM and ODE.

III.-1 JCCH's Eligible Transactions for Clearing

Category by Designated Commodity Exchange	Designated Commodity Market
Tokyo Commodity Exchange, Inc. (TOCOM)	Agricultural products and sugar market
	Rubber market
	Precious metals market
	Oil market
	Chukyo oil market
	Aluminum market (under suspension)
Osaka Dojima Commodity Exchange (ODE)	Agricultural products market
	Fisheries market
	Sugar market
	Agricultural products and feed index market

III.-2 Clearing Statistics

Statistical data, etc. <https://www.jcch.co.jp/b/b08.html>

• General Organization of JCCH

As a vital commodity futures market infrastructure in Japan, JCCH employs a governance structure which ensures robust risk management. JCCH's Board of Directors is composed of two (2) Executive Directors (namely, a CEO and a Director), and six (6) Non-Executive Directors, totaling eight (8). The Board of Directors is responsible for determining basic policy for management and important matters regarding execution of business operations and overseeing the Directors' execution of their duties.

JCCH has a Board of Auditors composed of one (1) full-time Auditor and two (2) part-time Auditors. The Board of Auditors has authority for accounting auditing and business auditing, which is stipulated in the Articles of Incorporation, the Board of Auditors Rules and others, in order to audit the overall execution of the Directors' duties.

JCCH has also established a Discipline Committee, a Risk Management Committee, and various ad-hoc committees and working groups composed of related parties including Clearing Participants as appropriate, and uses such bodies to consider important matters regarding the operation of commodity futures markets (see Principle 2 (Governance) for further details).

According to the Business Rules, JCCH has established a framework for managing the risks involved in clearing eligible products, including a Clearing Participants system for determining the qualifications of Clearing Participants and a collateral system for margins.

JCCH defines and publicizes clearing qualifications from the perspective of managing the credit risk of Clearing Participants. The criteria for participation are reasonable and clear, specifically focusing primarily on the entity's management structure, financial basis and business execution capabilities. JCCH continuously monitors each Clearing Participant's management structure, financial basis and business execution capabilities, and if JCCH recognizes a problematic situation in a Clearing Participant, it has the discretion to suspend clearing services in whole or in part for such Clearing Participant, or revoke its clearing qualification, as necessary (see Principle 18 (Access and Participation Requirements) for further details).

As of the end of September 2018, there were 25 Clearing Participants.

The initial margin is calculated using SPAN®. JCCH marks open positions to market to the

latest market price at least once a day for all products. Furthermore, JCCH is able to make ad-hoc margin calls if it deems it necessary when there are rapid changes in market conditions (see Principle 6 (Margin) for further details).

Legal and Regulatory Framework

JCCH holds a license for Business of Assuming Commodity Transaction Debts in accordance with the Commodity Derivatives Act, and JCCH's business is governed by the Commodity Derivatives Act and other Japanese laws. JCCH conducts Business of Assuming Commodity Transaction Debts under the supervision of the Competent Ministries, which are the relevant regulatory authorities.

JCCH's clearing operations are conducted based on the Business Rules and related rules in accordance with the Commodity Derivatives Act and the Supervision Guidelines; Clearing Participants are obligated to comply with JCCH's rules in accordance with a Clearing Participant agreement entered into with JCCH.

Some of JCCH's Clearing Participants are located in the European Union (the "EU"), and JCCH has therefore applied for and obtained recognition as a Third Country CCP ("TC-CCP")³ under Article 25 (1) of the European Market Infrastructure Regulation (the "EMIR") from the EU's European Securities and Markets Authority (the "ESMA") to provide services to Clearing Participants and trading venues established in EU countries.

JCCH's System and Operations

JCCH provides clearing services as the clearing house for all commodity exchanges in Japan. In its role as the clearing house for commodity transactions, JCCH clears the products at the time transactions are executed in the market, whereby JCCH interposes itself as the counterparty to each transaction between multiple market participants, assuming the buyer's obligation for payment and the seller's obligation for delivery to provide a guarantee for the settlement.

JCCH outsources development and operations of the clearing system. After selecting an

³ JCCH press release regarding approval in accordance with the EMIR:
https://www.jcch.co.jp/uploads/information_en/2017/JCCH_ESMA_recognition.pdf

outsourcee in accordance with the regulations, JCCH outsources the operations of the clearing system and appropriately manages the outsourcing arrangements according to clearly defined outsourcing criteria.

IV. Disclosure for Each Principle

General Organization

Principle 1: Legal Basis

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

Key Consideration 1

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

Material aspects of business requiring legal certainty

JCCH views the following activities as requiring legal certainty to conduct centralized clearing house operations.

- Clearing Business
- Netting
- Settlement finality
- Linkages with other FMIs
- Collateral arrangements
- Default procedure arrangements

JCCH does not conduct securities settlements, and it views that settlement of physical delivery should be conducted by physical delivery in a manner as prescribed by a commodities exchange⁴.

Clearing Business

- JCCH conducts Clearing Business with permission granted under the Commodity Derivatives Act⁵ under the supervision of the Competent Ministries which act as the regulatory authorities.
- JCCH's Clearing Business is conducted in accordance with the Business Rules and related rules in a manner as prescribed by the Commodity Derivatives Act and the

⁴ Article 54, Paragraph 1 of the Business Rules, etc.

⁵ Article 167 of the Commodity Derivatives Act

Supervision Guidelines. Clearing Participants are obligated to comply with JCCH's rules in accordance with Clearing Participant agreements separately entered into with JCCH.

Netting

- JCCH's Business Rules set out the provisions related to close-out netting arrangements in the case of a Clearing Participant default⁶. Additionally, the Commodity Derivatives Act prescribes the legal validity of such close-out netting arrangements⁷.

Settlement Finality

- JCCH's Business Rules and collateral related rules clearly define cut-off times for payment obligations and depositing of collateral between the Clearing Participants and JCCH⁸. Please see Principle 8 (Settlement Finality) for further details.
- This allows for JCCH's Clearing Participants to reliably confirm the time when their obligations to be fulfilled against JCCH are determined.

Linkages with other FMIs

- Please see Principle 20 (Linkage among FMIs) for further details.

Collateral Arrangements

- JCCH holds collateral in the manner specified in Principle 16 (Custody and Investment Risk) in accordance with collateral related rules.
- JCCH holds collateral deposited separately from JCCH's own assets in accordance with the Commodity Derivatives Act⁹.

Default Procedure Arrangements

- The Commodity Derivatives Act states that, in the event of a Clearing Participant default, settlement in accordance with JCCH's rules shall prevail over general bankruptcy proceedings¹⁰.

Key Consideration 2

⁶ Article 68, et seq. of the Business Rules

⁷ Article 181 of the Commodity Derivatives Act

⁸ Article 53 of the Business Rules, and Article 14, et seq. of the Clearing Margin Rules

⁹ Article 179, Paragraph 5 and Article 103, Paragraph 4 of the Commodity Derivatives Act, and Article 74 of the Ordinance for Enforcement of the Commodity Derivatives Act (the "**Ministerial Ordinance**"), etc.

¹⁰ Article 181 of the Commodity Derivatives Act

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

- JCCH establishes and amends its Articles of Incorporation and Business Rules licensed¹¹ and authorized¹² by the Competent Ministries. In amending its primary rules, JCCH voluntarily establishes and revises such rules via a process which includes consultation with Clearing Participants, lawyers, the Competent Ministries and other relevant agencies, etc., and makes sure to confirm the consistency and compliance with laws and regulations.
- To date, no conflict has been identified between JCCH's rules, procedures, and contracts and the related laws and regulations.

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.

- JCCH makes explanations of the legal basis for its activities to the Competent Ministries and Clearing Participants, etc., as necessary.
- Primary rules are made widely publicly available via the Internet or the like.

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 JCCH's Rules, Procedures and Contracts

- JCCH's Rules, Procedures and Contracts are written to ensure they are legally enforceable in all relevant jurisdictions. (See Key Consideration 1 of this Principle for further details)
- The Commodity Derivatives Act stipulates that, in the event of a Clearing Participant default, a central counterparty ("CCP")'s rules shall prevail over general bankruptcy

¹¹ Article 167 and Article 168, Paragraph 2 of the Commodity Derivatives Act

¹² Article 182 of the Commodity Derivatives Act

proceedings for the settlement of cleared transactions between a defaulting Clearing Participant and the CCP¹³, thereby allowing JCCH's rules to limit the impact of the insolvency of a Clearing Participant on JCCH's Clearing Business.

- In the event of the commencement of bankruptcy proceedings in a foreign jurisdiction against a Clearing Participant, the effect of such bankruptcy proceedings extends to Japan only upon a Japanese court making an order for recognition of such proceedings, as specified in the "Act on Recognition of and Assistance for Foreign Insolvency Proceedings." Such proceedings shall apply to the properties of a defaulting Clearing Participant only upon the issuance of an assistance order by a Japanese court. Unless a Japanese court issues such an order, bankruptcy proceedings in a foreign jurisdiction do not directly apply to Japan and will not put collateral posted to JCCH by a defaulting Clearing Participant at risk, even in the event of a default by a foreign Clearing Participant.

Degree of Certainty for JCCH's Rules and Procedures

- JCCH's Clearing Business is governed by the laws of Japan.
- JCCH's Business Rules are subject to approval as required under the Commodity Derivatives Act¹⁴. In this process, the Business Rules are examined to ensure they conform to the laws and regulations and are sufficient for conducting Clearing Business appropriately and smoothly. To date, there has been no instance of any regulatory action taken against any of JCCH's activities in Japan or abroad.

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.

- Although foreign corporations participate in JCCH, there are currently no cross-border participants to whom clearing services are directly provided.
- JCCH identifies and confirms risks arising from conflicts of law across jurisdictions based on the latest information obtained from the Clearing Participants, law firms, Competent Ministries and others.

¹³ Article 181 of the Commodity Derivatives Act

¹⁴ Article 168, Article 169, Paragraph 1, Item (2), and Article 182 of the Commodity Derivatives Act

- Some of JCCH's Clearing Participants are located in the EU, and JCCH has therefore applied for and obtained recognition as a TC-CCP under Article 25 (1) of the EMIR from ESMA, to provide services to Clearing Participants and trading venues established in EU countries.
- Taking into account the facts that: (i) JCCH conducts Clearing Business only within Japan and clears the commodities listed on TOCOM and ODE; (ii) Japanese yen is the only settlement currency; and (iii) the types of securities which may be deposited as collateral are limited to Japanese government bonds, municipal bonds, stocks listed in Japan, and other securities, etc., with low credit risk based on the laws of Japan¹⁵, it is considered that legal risks across multiple jurisdictions are extremely limited.
- JCCH does not clear commodities with complex risk profiles, such as credit default swaps ("**CDS**"), etc.

¹⁵ See "Regulations for Substitute Securities."

Principle 2: Governance

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

Key Consideration 1

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

- For the purpose of securing functions of commodity markets in Japan and protecting customers, etc., the Commodity Derivatives Act and Supervision Guidelines require clearing organizations to perform sound and appropriate business operations.
- JCCH states in its Business Policy that:
“Japan Commodity Clearing House, Co., Ltd. provides its basic policy for business management that it will secure settlement safety and performance, provide a framework for protecting customers’ properties, and smoothly engage in the business of assuming commodity transaction debts, thereby striving to improve the reliability and serviceability of the commodity futures market and contribute to the development of the commodity futures market.”
Further, JCCH states in its Charter of Corporate Behavior that:
“We, Tokyo Commodity Exchange, Inc. Group (Tokyo Commodity Exchange, Inc. and Japan Commodity Clearing House, Co., Ltd.) shall: (i) fully recognize our public missions and responsibilities to contribute to the economy and society through the establishment and operation, etc., of markets necessary for conducting commodity futures transactions; and (ii) strictly comply with all laws, regulations and rules. (basic philosophy)
“We shall recognize that the issue that should be given priority is the stable operation of transactions and the clearing system, and shall take measures toward maintaining stable operations. (7. (1))
“In view of the fact that commodity markets constitute significant infrastructure for the national economy, we will aim to establish market operations which are highly serviceable not only for transaction participants, but also for all market participants and Clearing Participants, as well as in the performance of Clearing Business.”(8)
- In line with such management policy, JCCH establishes medium-term management plan,

and formulates annual business plan based thereon.

- JCCH's executive officers and employees engage in their duties in accordance with this business policy, the medium-term management plan, the business plan and the Code of Conduct, etc.

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.

- JCCH is established as a joint-stock company, under the Companies Act of Japan, and operates as a clearing organization supervised by the Competent Ministries in accordance with the Commodity Derivatives Act.
- JCCH's Articles of Incorporation stipulate basic governance arrangements, and JCCH satisfies the requirements set forth by the Commodity Derivatives Act and Supervision Guidelines for Clearing Participants, etc.

Governance Arrangements

- JCCH's Board of Directors is composed of two (2) Executive Directors (namely, a CEO and a Director), and six (6) Non-Executive Directors, totaling eight (8). The Board of Directors determines important matters concerning basic management policy and execution of operations, and oversees execution of duties by the Directors.
- JCCH also possesses a Board of Auditors, comprising one (1) full-time Auditor and two (2) part-time Auditors. The Board of Auditors has the authority to conduct both accounting audit and business audits, in order to audit the overall execution of duties by the Directors. Such authority is stipulated in the Articles of Incorporation and the Board of Auditors Rules, etc.
- The names and roles of the committees established by JCCH are as follows:
In addition to the committees set forth below, in connection with the establishment of new systems or system operations or material amendments to the Business Rules, JCCH establishes a committee or working group composed of related parties, including Clearing Participants, on an ad-hoc basis¹⁶ as necessary. Related discussions take place at such additional committees or working groups.

¹⁶ Article 11 of the Operation Rules for Committees

(Discipline Committee)

- The Discipline Committee provides opinions upon request for consultation by the Board of Directors in relation to matters regarding measures taken against Clearing Participants.
- The Discipline Committee is composed of members who are appointed by the CEO and have excellent knowledge sufficient to make fair judgments.

(Risk Management Committee)

- JCCH stipulates the Risk Management Rules, and holds a Risk Management Committee meeting composed of the CEO (as the chairperson), full-time Directors, and all of the General Managers and Managers as Committee members, as appropriate, to thereby establish an emergency framework and regularly report an overview of the risk management status to the Board of Directors and the Board of Auditors.

Disclosure of Governance Arrangements

- JCCH's outlines are made widely publicly available as an organizational chart on its website.
- JCCH formulates a medium-term management plan and a business plan each year regarding overall strategies and material matters which need to be decided upon, and reports on the implementation status of such plans to its shareholders, the Competent Ministries, and stakeholders including Clearing Participants. The details of such plans and a summary of the major resolutions based on such plans are made widely available on JCCH's website.

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 of Directors

- The Board of Directors is responsible for making decisions on the execution of operations, the appointment and dismissal of the Representative Director, and for performing oversight on the execution of duties by Directors. Such authority is stipulated

in the Articles of Incorporation, the Board of Directors Rules and the Business Rules, etc.

- The Board of Directors comply with the Articles of Incorporation and resolutions made at general shareholders' meetings. Directors who are the members of the Board of Directors shall perform their responsibilities by exercising the duty of care of a good manager and abiding by their fiduciary duties for JCCH. The Board of Directors regularly receives reports from Executive Directors on the status of execution of operations, the compliance progress status, and the risk management status, and then determine the following material matters:
- Matters relating to management (basic management policy, medium-term management plan, annual business plan, etc.);
- Matters relating to market operations (revision of the Business Rules, etc.);
- Matters relating to execution of operations (material matters regarding compliance, risk management, etc.);
- Matters relating to officers (appointment and dismissal of the Representative Director and Directors with titles, etc.); and
- Other matters (material matters regarding internal control system, etc.)

Managing Conflicts of Interest

- In order to prevent Directors from seeking their own interests, thereby resulting in harming the interests of JCCH in accordance with the Companies Act, in the event that a Director seeks to engage in transactions competing against JCCH, approval from the Board of Directors is required and such Director is prohibited from voting on the relevant matter in relation to such resolution.
- JCCH possesses a Board of Auditors, composed of all the Auditors. In accordance with the Companies Act, Auditors are obligated to report to the Board of Auditors and the Board of Directors without delay if they become aware of any illegal actions or possible illegal actions by Directors, or any violations of laws, regulations or the Articles of Incorporation, or any significantly inappropriate facts, and must report the results of their investigations to the general shareholders meeting.
- As such, the Board of Auditors investigates transactions involving conflicts of interest when preparing its annual audit reports.

Review of Board of Directors' Performance

- JCCH's shareholders are able to monitor the performance of the entire Board of Directors via the **"business report"** submitted to the general shareholders meeting.

Such business report contains financial data and information on achievement of the business plan.

- In order to review the performance of individual Directors, various situations including each Director's participation in board meetings and other meetings, the remarks made in such meetings, and other activities, are all used as a reference during future nomination processes for Directors.

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).

Board Members' Skills

- The Commodity Derivatives Act and the Supervision Guidelines require, in terms of the clearing organization's personnel structure, that "the applicant for a license has the knowledge and experience for properly and securely performing Business of Assuming Commodity Transaction Debts and has sufficient social credibility"¹⁷. Specifically, the Supervision Guidelines include, as major points for consideration, that "The clearing organizations have secured officers and employees who understand the viewpoints regarding governance that are specified under the Commodity Derivatives Act and other relevant regulations, as well as these Guidelines, and who have the knowledge and experience necessary for conducting governance, as well as sufficient knowledge and experience concerning the control environment for compliance and risk management required to properly and reliably execute the Business of Assuming Commodity Transaction Debts", and that officers and employees do not constitute anti-social forces or fall under various other factors¹⁸.
- Based on the above, JCCH's Board of Directors is composed of Directors appointed by a general shareholders meeting who have abundant knowledge of and experience in management, finance and law.

Board Member Incentives

- Board member compensation has been set using suitable standards in order to maintain and improve incentives, taking JCCH's business performance into

¹⁷ Article 169, Paragraph 1, Item (4) of the Commodity Derivatives Act

¹⁸ III-1-3 (1) of the Supervision Guidelines

consideration.

- The compensation system for full-time Directors has been established to provide motivation contributing to maintaining and improving their performances. The compensation for each Director is determined based on the details of the duties and performance of each individual Director, within the amount decided at an ordinary general shareholders meeting.

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

- JCCH's senior management is composed of Directors. Their roles and responsibilities are stipulated in the Companies Act, the Articles of Incorporation and the Board of Directors Rules.
- JCCH's senior management shall be responsible for performing its business operations and striving to improve business performance in accordance with its basic management policy, medium-term management plan, business plan, etc.
- JCCH's senior management reports on JCCH's financial position and an overview of its business operations to the Board of Directors on a monthly basis, and presents a business report and financial results to shareholders annually, following approval by the Board of Directors.

Experience, Skills, and Integrity

- The Commodity Derivatives Act requires, in light of the clearing organization's personnel structure, that "the applicant for a license has the knowledge and experience necessary to properly and securely perform Business of Assuming Commodity Transaction Debts, and has sufficient social credibility."¹⁹
- In line with this, JCCH decides on Director candidates with abundant knowledge and experience regarding management, finance and law, and JCCH's senior management therefore has the sufficient experience, capability and integrity required to fulfil the duties required for operation of a clearing organization and risk management. The Board

¹⁹ Article 169, Paragraph 1, Item (4) of the Commodity Derivatives Act

of Directors has the authority to initiate the dismissal of any Director who is considered to be inappropriate due to breach of the laws or regulations, etc. and seek the resolution of general shareholders' meetings, in accordance with the dismissal procedures pursuant to the Companies Act.

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.

Comprehensive Risk Management Framework

- JCCH's Board of Directors determines material matters regarding risk management, including establishment of Risk Management Rules and a risk management committee, etc. The Board of Directors considers necessary measures upon receiving: (1) regular reports summarizing the risk management status²⁰; and (2) a report following a serious risk event, including any Clearing Participant default or a major system failure²¹.
- JCCH's Board of Directors also receives a report at least once a year on the results of a review on the appropriateness of the overall risk management framework, reviews the basic policies related to risk management and provides necessary instructions to ensure the sufficient operation of the risk management framework (see Principle 3 (Comprehensive Risk Management Framework)).

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

²⁰ Article 9 of the Risk Management Rules

²¹ Articles 2, 6, and 7 of the Crisis Management Rules

- In making material decisions, including on the framework design, regulations and overall strategies, etc., JCCH establishes a committee or working group where relevant, as an ad-hoc committee with members comprised of stakeholders including Clearing Participants. Discussions are conducted at such committees or working groups, taking into consideration the interests of such stakeholders, including Clearing Participants.

Disclosure

JCCH publicizes major decisions on the medium-term management plan and significant rule revisions, etc., on its website.

Principle 3: Framework For the Comprehensive Management of Risks

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

Key Consideration 1

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

Identification of Risks

- JCCH identifies credit risks, liquidity risks, system risks, operational risks, market risks, legal and compliance risks, information risks, reputation risks and other risks as the primary risks to which JCCH is exposed, and has established a risk management framework according to the risk profiles.²²
- JCCH manages systemic risks, business risks, custody and investment risks as stated in Chapter 2 of the FMI Principles as complex risks comprising the above-mentioned risk factors.

Comprehensive Risk Management System

- JCCH's Board of Directors has established Rules for Risk Management which clearly define the primary risks subject to management, the definition of risk management, a management system and management methods, etc.
- The primary rules related to risk management include the following and are reviewed on an annual basis and as necessary:

²² The risks set out in the Risk Management Rules are the following risks (1) through (11) as stated in Article 3 of the said Rules:

- (1) Risks relating to business management and strategies;
- (2) Risks relating to credit risks for the Company;
- (3) Risks relating to finance;
- (4) Risks relating to Clearing Participants;
- (5) Risks relating to compliance;
- (6) Risks relating to financial reporting irregularities;
- (7) Risks relating to organization and labor;
- (8) Risks relating to disasters, accidents, etc.;
- (9) Risks relating to internal and external systems;
- (10) Risks relating to social credibility; and
- (11) Risks relating to other businesses.

- Basic Policy for Internal Control²³;
- Risk Management Rules;
- Basic Policy for Credit Risk Management;
- Liquidity Risk Management Rules;
- Basic Policy Regarding Countermeasures in the Event of System Failure, etc.
- At JCCH, the Risk Management Division manages credit risks arising from Clearing Business, and the Risk Management Committee is established to control company-wide risk management. The activities of the Risk Management Committee are regularly reported to the Board of Directors.
- In regard to operational risks, the Risk Management Committee identifies risks associated with each Business, devises measures to handle the same, and reviews operations as appropriate.
- The Board of Directors decides on material matters related to risk management, and reviews the primary rules related to risk management at least once a year.

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.

Provision of Related Information

- JCCH provides participants with the latest Clearing Margin Requirement and appraisal values of collateral so as to allow Clearing Participants to manage and control their own risks. TOCOM and ODE distribute information on participants' contracts in relation to the listed commodity on a real-time basis.
- JCCH adopts the SPAN® method as a margin system for commodity futures products, and publishes SPAN® files necessary for Clearing Participants to calculate Clearing Margin Requirement of House Account and Customer account on the JCCH website. Clearing Participants may calculate Clearing Margin Requirement of House Account and Customer account by using such SPAN® files.
- In regard to margin transactions, JCCH publishes margin standard amounts (Price Scan Range) on its website.

²³ This policy sets out the basic policy for risk management, as well as the policy for system risk and business operational risk management.

Incentive for Risk Management

- In order to give excessively risky Clearing Participants incentives to proactively manage their positions, JCCH adopts a collection method under the Clearing Funds framework according to the risks involved (comprised of a combination of a build-up method according to transaction volumes and an additional depositing method according to risk), and also takes other measures to reduce risk. JCCH has been considering the Clearing Funds framework according to risk and will make efforts to provide even more effective incentives.
- JCCH designs the abovementioned risk management framework by incorporating the opinions of Clearing Participants and others therein, so as to thereby secure effective risk management.

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.

Management of Interdependencies in relation to Settlement

- The types of entities which JCCH is interdependent with include settlement banks and custodians. For such entities, JCCH has established selection criteria based on credit rating, etc., and regularly monitors their financial information to thereby manage the risks involving in interdependencies.

Addressing System-related Interdependencies

- In accordance with the basic policy for system risk management, JCCH identifies, monitors and manages risks relating to IT service providers, public utilities companies and other related parties.
- JCCH outsources the operation of the clearing system and, with such outsourcees, has formulated an operational manual for the operation of the clearing system and established basic actions to be taken at the time of occurrence of any local system failure, etc.
- More specifically, JCCH has installed clearing system terminals within its business offices, conducts daily Clearing Business while establishing checking items for each process with related parties, and has established a system allowing for regular information exchange with outsourcees on the operational status of the clearing system.

Addressing Risks Arising with Other Entities in Emergencies - Business Continuity System

- JCCH has established a business continuity plan in accordance with the “Basic Policy for Emergency Business Continuity Plan”, has established a framework for contingency plans (emergency action plans) regarding actions in response to local disasters, and has thereby secured a method for recovery of information necessary for clearing at the time of occurrence of any clearing system failure.
- As part of the business continuity plan for wide area disaster measures, JCCH established a redundant clearing system in May 2013, and conducts emergency drills to prepare for clearing system failures, including testing with Clearing Participants, etc., at least once a year.

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.

- The following cases are assumed as risk scenarios under which JCCH fails to provide Clearing Business and services as a going concern: (i) a case where losses arising from a Clearing Participant default cannot be covered by loss compensation resources; (ii) a case where the net asset position is substantially deteriorated by a remarkable reduction in profits due to business failure, increased expenses, or the like.
- As to losses arising from Clearing Participant defaults, the Commodity Derivatives Act stipulates that “A Commodity Clearing Organization shall stipulate in its business rules that a Clearing Participant shall bear the entire loss in the event that a loss occurs as a result of default of liabilities based on Transaction on a Commodity Market and shall take other measures to ensure the appropriate execution of Business of Assuming Commodity Transaction Debts.”²⁴ Thereby, JCCH has established, as part of its Business Rules, a Loss Compensation Scheme allowing for sufficient coverage of losses arising from a Clearing Participant default.

²⁴ Article 178 of the Commodity Derivatives Act

- Related regulatory agencies may issue an order to JCCH seeking reporting, collection and business improvement, if necessary, in accordance with the Commodity Derivatives Act²⁵.

²⁵ Articles 184 and 185 of the Commodity Derivatives Act

Credit and Liquidity Risk Management

Principle 4: Credit Risk

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

Key Consideration 1

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

Sources of Credit Risk Borne by JCCH

- JCCH is exposed to credit exposures arising primarily from Clearing Participant defaults. JCCH also manages credit risks arising from defaults on the part of settlement banks and custodians for various collateral, etc., ("**Settlement Banks etc.**") as sources of risk.
- JCCH has established a robust framework to properly manage such risks.

Framework to Manage Credit Risk against Clearing Participant

- JCCH has established a framework to manage the credit risks borne by individual Clearing Participants and JCCH as a whole in accordance with the "Basic Policy for Credit Risk Management."

- (1) Selection of Clearing Participants

- In order to obtain Clearing Qualification, Clearing Participants are required to have a sound management structure and financial basis as set out in the Business Rules. Further, they must also satisfy the qualification requirements for staffing with a sufficient framework for the execution of business operations, etc.²⁶ This ensures that Clearing Participants are limited, in principle, to such entities that have financial resources to fulfil their payment, clearing and settlement obligations against JCCH.
- Clearing Participants must always fulfill the financial basis requirements determined as qualification requirements, including net assets, net assets regulation ratio, etc., and must routinely report the financial conditions to JCCH²⁷.
- If a Clearing Participant no longer satisfies the requirements determined by JCCH, the relevant Clearing Participant is obligated to immediately report such situation to JCCH²⁸. JCCH monitors the financial conditions of Clearing Participants based on these reportings.

(2) Margin Framework

- JCCH measures and monitors credit risks arising from Clearing Participant defaults on a daily basis, requires Clearing Participants to deposit an initial margin to cover potential future exposures and a variation margin to cover current exposures (execution price differential, settlement price differential, strike price differential, and option premiums), and receives and accepts such margins on a daily basis.
- By raising the deposit amount of the initial margin as necessary, JCCH may require Clearing Participants to deposit additional collateral. In addition, JCCH has a system function in place which may issue emergency margin calls if and when necessary.

(3) Assumption of Expected Loss and Loss Compensation Resources Framework

- In extreme but plausible market conditions (including the periods in which the market experienced the greatest fluctuations during certain past periods), JCCH evaluates the credit risk amount under scenarios assuming potential defaults by Clearing Participants with the largest risk under such conditions as where the prices of all the products are increasing or dropping.
- The loss compensation resources to be used are composed of: (i) the clearing margin, Clearing Funds, etc., deposited by defaulting Clearing Participants; (ii) the Default Compensation Reserve reserved by JCCH; and (iii) the Clearing Funds, etc., deposited

²⁶ Article 7 of the Business Rules

²⁷ Articles 18 and 19 of the Business Rules

²⁸ Article 18 of the Business Rules

by other Clearing Participants excluding the defaulting Clearing Participants (“**Non-Defaulting Clearing Participants**”) which will be appropriated for losses incurred by JCCH due to a Clearing Participant default²⁹.

Framework to Manage Credit Risk of Settlement Banks etc.

- JCCH routinely collects and analyzes the information necessary for risk analysis, including credit rating information and account settlement information, etc., of the settlement banks; if there are any conflicts with JCCH’s standards, such conflicts shall be referred to the Board of Directors and necessary measures shall be taken accordingly.
- JCCH requires custodians to routinely report their segregation and custody conditions and confirm their financial conditions to thereby verify that there are no problems with their conduct of the management services.

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.

JCCH identifies sources of credit risk, routinely measures and monitors credit risk, and controls risks as follows.

Credit Risks from Clearing Participants

- JCCH is exposed to credit risks arising from defaults involving Clearing Participant defaults. This credit risk consists of both current and potential future exposures. Such respective exposures arise from market price fluctuations in the positions held by Clearing Participants.
- JCCH conducts routine measuring of credit exposure by measuring the exposures held by individual Clearing Participants and JCCH as a whole, on both an intra-day and daily basis, in accordance with the “Basic Policy for Credit Risk Management.”
- JCCH monitors current exposure as daily net amount information by marking-to-market every outstanding position to the latest market price at least once per day, further monitors exposure movements based on intra-day price fluctuations at specific times intra-day, and makes changes to parameters as necessary, to thereby measure intra-day exposure.

²⁹ Chapter 11 of the Business Rules

- JCCH measures potential future exposure by assuming a scenario of extreme but plausible market conditions based on historical price fluctuations for all positions held by each Clearing Participant and calculating potential losses as the amount of risk.
- Furthermore, in order to avoid the accumulation of exposures, as an upper limit in relation to the concentrated positions, “**position limits**” are established by a Designated Commodity Exchange under which, based on risk measurement in accordance with ordinary auditing and daily clearing contracts, interdependence between specified Clearing Participants and indirect participants, and status of risk held by indirect participants are reviewed as necessary. As deemed necessary, JCCH recommends Clearing Participants to take risk mitigation measures in accordance with the provisions of the Business Rules³⁰.

Credit Risk from Settlement Banks

- In order to manage the credit risks arising from settlement banks, JCCH has established requirements for the settlement banks in the Clearing Margin Segregation Management Rules and the Clearing Funds Segregation Management Rules, and monitors such credit risks on a continuous basis³¹. Credit risks arising from settlement banks can arise in relation to: (i) fund settlement prices between JCCH and Clearing Participants; and (ii) deposits deposited by JCCH with banks (deposits from Clearing Participants and JCCH's own funds).
- JCCH limits the settlement banks to those having a sound financial basis and monitors their financial conditions and distributes funds to banks with low credit risk, thus managing the credit risks arising from the settlement banks.

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

³⁰ Article 36 of the Business Rules

³¹ Article 17 of the Clearing Margin Segregation Management Rules and Article 19 of the Clearing Funds Segregation Management Rules

of the two participants and their affiliates that would create the largest aggregate credit exposure in the system.

- This consideration does not apply to JCCH, as JCCH has no fund payment system or SSS (Securities Settlement System) function.

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.

Credit Risk from Clearing Participants and Loss Compensation Resources to Cover such Credit Risk

- JCCH covers current and potential future exposures of Clearing Participants by using clearing margins with a high degree of confidence, and covers expected losses calculated assuming a potential default of Clearing Participants by using loss compensation resources including the clearing margin, Default Compensation Reserve and Clearing Funds, etc., as well as through loss compensation and guarantee agreements entered into with the Designated Commodity Exchange.

(1) Margin

- The initial margin is set at a level to cover 99% of historical price fluctuations. For the variation margin, open positions at the end of each trading day are marked-to-market

using a clearing price on a daily basis, following which the difference arising from such mark-to-market process is exchanged with Clearing Participants on the immediately following business day to cover current exposure. In margin trading, JCCH daily calculates the valuation profit/loss by a clearing price for open positions at the end of each trading day, and requires Clearing Participants to maintain the deposit amount exceeding the amount equivalent to the initial margin added by such valuation loss, as the margin required amount. This covers both current and potential future exposures.

- JCCH backtests and verifies the sufficiency of the clearing margin on a daily basis.

(2) Clearing Funds

- JCCH calculates the financial resources to be retained by JCCH in the event of a default by a Clearing Participant (“**Financial Resources for Loss Compensation**”) to cover defaults by Clearing Participants (and their affiliates) with whom JCCH has the largest risk, and financially fragile Clearing Participants. JCCH also takes into account covering any chain of default risks by the inclusion of financially fragile Clearing Participants.
- JCCH covers the Financial Resources for Loss Compensation that will be necessary due to the foregoing, with the clearing margin, Clearing Funds and the Default Compensation Reserve, etc., (including other financial resources such as insurance if necessary).
- In addition, JCCH may issue emergency margin calls for Clearing Funds (depositing of special Clearing Funds) if it deems it necessary.
- If Clearing Funds are used for providing compensation for losses arising from defaults by Clearing Participants, the relevant Clearing Participants must replenish the shortfall arising from such use by the deadline determined by JCCH.

Handling of Substitute Securities

- Clearing Participants may deposit the clearing margin and Clearing Funds either in cash or by providing securities, etc.
- If JCCH deems it necessary, in accordance with the collateral related rules³², JCCH may (1) lower haircut for Substitute Securities; (2) limit the acceptance of specified Substitute Securities; and (3) take other measures as deemed necessary.

Governance Arrangements for Total Loss Compensation Resources

- In accordance with the “Basic Policy for Credit Risk Management”, JCCH conducts daily

³² Regulations for Substitute Securities

stress testing for credit risk and verifies the sufficiency of loss compensation resources. In addition, JCCH is under consideration of conducting daily backtesting for credit risks (see Key Consideration 5 of this Principle for stress testing for credit risks).

- Daily risk measurements include measurements based on stress scenarios. Measurement results are measured and evaluated by the division in charge (i.e. the Risk Management Division) in accordance with the “JCCH Credit Risk Management Services Operation Procedures” which are the subordinate rules for the “Basic Policy for Credit Risk Management”, and internal reporting is conducted on a daily, monthly and annual basis, and supervision on a managerial level and reporting to the Board of Directors on an as-needed basis have therefore been established.

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

- JCCH conducts stress testing for credit risk at least daily to determine whether the loss compensation resources for Loss Compensation comprised of margin and Clearing Funds, etc., are sufficient to provide compensation for potential losses.
- JCCH’s stress testing includes the largest historical market fluctuations during certain sample periods and fluctuations based on hypothetical scenarios as “extreme but plausible market conditions.” This stress testing confirms that JCCH possesses

sufficient loss compensation resources even under stressed market conditions. (see Key Consideration 6 of this Principle for more details)

- The results of stress testing are reported to the full-time Directors and the related division head on a daily basis. If a problem is identified with the sufficiency of the loss compensation resources, JCCH will consider taking necessary actions including review and/or revision of the required amount of Clearing Funds on an ad-hoc basis. The status of credit risk management is reported to the Risk Management Committee and the Board of Directors if necessary.

Review and Verification

- JCCH reviews the parameters regarding analysis of stress testing on at least a monthly basis and validates the scenarios and models on a quarterly basis. JCCH is considering verifying the parameters, scenarios and models at a greater frequency in the future. If there is any increase in the market fluctuation rate or any change in the situations surrounding participants, JCCH will review the stress testing as appropriate. Furthermore, JCCH verifies the overall credit risk management model on an annual basis and reports the results to the Board of Directors as necessary.

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.

- When conducting stress testing, JCCH employs a wide range of price fluctuations scenarios that are extreme but plausible and forward-looking hypothetical scenarios.
- For the scenarios occurring in the past, JCCH assumes extreme but plausible events including the largest historical fluctuations during the sample period.
- By adding hypothetical scenarios as well as the largest historical fluctuations, JCCH also assumes risks arising from fluctuations that it is considered cannot occur under the current market conditions, in preparation for an increase in the fluctuation rate.
- JCCH calculates credit exposure for each Clearing Participant using stress testing; among such calculations, JCCH adds up, as the expected losses, the amount of losses

arising from defaults of the one (1) Clearing Participant company with the largest credit risk against JCCH (on a consolidated basis) and the financially fragile Clearing Participants.

- Even in the event of a default by the Clearing Participant with the largest exposure, as a result of appropriating financial resources in accordance with the loss compensation rules, JCCH can still cover the largest exposure.

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

- JCCH's Business Rules set out the use of loss compensation resources in connection with a default by a Clearing Participant,³³ and such use is published on its website.
- JCCH's Business Rules also clearly define any remaining uncompensated losses in the end that shall be borne by the Clearing Participants in accordance with the principles of the Commodity Derivatives Act^{34 35}.

Replenishment of Loss Compensation Resources

In cases where the Clearing Funds are used to provide compensation for losses arising from a default by a Clearing Participant, the Non-Defaulting Clearing Participants must additionally deposit the shortfall in the Clearing Funds by the date designated by JCCH, in accordance with JCCH's Business Rules³⁶.

³³ Article 72 of the Business Rules

³⁴ Article 178 of the Commodity Derivatives Act

³⁵ Article 72, Paragraph 7 of the Business Rules

³⁶ Article 63 of the Business Rules

Principle 5: Collateral

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

Key Consideration 1

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

Eligible Collateral

- JCCH accepts certain types of assets designated in the Business Rules³⁷ as margins, including the following:
 - Cash (Japanese yen, US dollars)
 - Substitute Securities (government bonds, municipal bonds, equities, corporate bonds, warehouse receipts, etc.)
- JCCH limits the government bonds that it can accept to Japanese government bonds.
- JCCH can only accept equities and corporate bonds that are listed on domestic financial instruments exchanges and comply with the standards set out by JCCH.
- When receiving collateral from Clearing Participants, JCCH confirms whether or not they are eligible as collateral. The collateral management function of JCCH's clearing system checks whether or not collateral deposited is eligible when it is registered. In addition, even if collateral already deposited becomes ineligible, such collateral will be automatically detected, therefore, Clearing Participants may not deposit ineligible collateral.

Wrong-Way Risk

- JCCH does not allow Clearing Participants to deposit their own issued equities (including equity issues, etc., by holding companies of Clearing Participants whose management remarkably affects the price of such equities) as their collateral.³⁸ This enables wrong-way risks to be avoided.

Key Consideration 2

³⁷ Article 60 of the Business Rules, and Clearing Margin Rules

³⁸ 1. (Note) (4) 10 of the Regulations for Substitute Securities

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

Valuation Method

- JCCH values Substitute Securities, including equities listed on domestic financial instruments exchanges, on a monthly basis in accordance with the market price obtained from the relevant domestic financial instruments exchange, etc. In addition, JCCH makes an ad-hoc valuation when the market price becomes lower than the relevant valuation amount on a daily basis.
- The valuation amount of Japanese government bonds is calculated based on the face value as being the market price, multiplied by the collateral haircut determined by JCCH in a conservative manner.

Establishment and Review of Collateral Haircuts

- For securities, etc., JCCH establishes haircuts in JCCH's collateral related regulations so that the price of securities, etc., shall not exceed the upper limit of the allocation price of the Securities stipulated in the Commodity Derivatives Act³⁹.
- In order for the allocation price to be reviewed once a month, JCCH applies a haircut for each allocation issue (at 75% to 85% of the face value for government bonds; at 50% to 70% of the market price for equities or investment trust, etc.).
- In order for foreign-currency (US dollars) to be reviewed on a daily basis, collateral is valued at 97% of the currency conversion rate from US dollars to Japanese yen (the TTB rate) which is published daily by MUFG Bank, Ltd. JCCH confirms that, since the relevant haircut was changed (from 90% to 97%) on June 21, 2011, declines in asset values to less than the foregoing price of the haircuts have not become constant on a daily basis.
- Although the frequency for calculating the allocation prices is once a month in accordance with the regulations, JCCH daily obtains the market price from the financial instruments exchanges, etc., and conducts a daily check as to whether or not the market price lowers the allocation price. If there are any issues whose market price is lower than the allocation price, a new allocation price will be established, with such date being the evaluation amendment date, and this is considered to therefore have the same effect as daily marking-to-market being virtually conducted.

³⁹ Regulations for Substitute Securities

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.

- Since JCCH has established conservative and stable collateral haircuts that are calibrated to cover extreme price movements, including stressed market conditions, JCCH considers that the need for adjusting such haircuts on procyclicality (according to the business cycle) is limited. (please see Key Consideration 2 of this Principle for details on the establishment and review of haircuts)

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.

Concentration Limits

If collateral is concentrated on certain issues, the price of the collateral as a whole may be excessively affected by the price fluctuations of the relevant issue. Therefore, in order to prevent this from occurring, JCCH imposes an upper limit on the number of shares to be deposited for shares with low liquidity. In addition, if JCCH deems it necessary, JCCH may also limit or amend the number of shares to be deposited for shares with high liquidity⁴⁰.

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.

- The only cross-border collateral JCCH can accept is US dollar cash, which has extremely high liquidity and can be used in a timely manner.
- JCCH holds US dollar cash in the form of bank deposits in Japan, and has established a system whereby instructions can be given and liquidation can be processed in a timely manner.

⁴⁰ Paragraph 9 of the Regulations for Substitute Securities

Key Consideration 6

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

Primary Function of Collateral Management System

- By using the collateral management function of its clearing system, JCCH conducts balance management, and the processing of deposits and withdrawals for various forms of collateral on a real-time basis. JCCH values Substitute Securities based on the latest market price data and haircuts, etc., in order to continuously monitor collateral values.
- By accessing JCCH's clearing system, Clearing Participants are able to report on deposits and withdrawals of collateral, and confirm the balance after the implementation on a real-time basis.
- JCCH processes transfers of government bonds via private securities companies to which JCCH outsources the custody services for Substitute Securities. Since JCCH provides instructions, etc., for transfers of government bonds, via data transmission from a system of securities companies to BOJ-NET, JCCH can provide smooth service processing even in times of market stress.

Principle 6: Margins

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.

Key Consideration 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.

Margin Framework

- JCCH calculates Clearing Margin Requirement depending on the product profiles and other information.

Margin Calculation Methods

- As a calculation method for the initial margin, JCCH adopts an initial margin model based on SPAN® provided by CME for listed products. In order to obtain price fluctuations compared with those on the immediately preceding business day during one clearing period, JCCH, by referring to data during a certain historical period, in principle uses a value which can cover 99% of price fluctuations during the relevant period.
- The details regarding the method for calculating the margin and the parameters and standard margin amount are publicly available on JCCH's website.
- For analysis of the coverage of the margin model, JCCH confirms coverage against daily price fluctuations for the parameters set. If there are any fluctuations exceeding the thresholds, JCCH makes an ad-hoc amendment to the parameters as appropriate.

Deposit / Refund of Margin

- For variation margins, JCCH makes daily deposits/payments (mark-to-market and netted profit/loss amount).

Key Consideration 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.

Price Information Source

- JCCH directly obtains price information for establishing the margin from the Designated

Commodity Exchange for which JCCH provides Clearing Business. Such price information is based on contract prices or prevailing market prices, such as final price quotes or theoretical prices.

Key Consideration 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.

Initial Margin Model, Close Out Period, and Sample Period

- The standard margin amount is calculated using the price fluctuation range. The margin parameters are calculated using a 99% confidence level, 1-day close out period and 24-week sample period, in principle.
- The standard margin amount is calculated for each type of product, whereas the Clearing Margin Requirement is calculated by portfolio unit with consideration given to the offsetting effects among the products and different contract months using SPAN® which employs the calculation logic with the worst possible loss arising from the portfolio as the initial margin requirement.

Key Consideration 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.

- JCCH covers current exposures by variation margin. At each market, at least once per day, the positions held by each Clearing Participant are marked-to-market using a clearing price on the same day, and the marked-to-marketing differential or contract price differential arising from the price difference from the clearing price on the immediately preceding day or the contract price on the same day is paid/received as a variation margin with each Clearing Participant on the immediately following business day.
- In addition, JCCH has a system wherein intraday emergency margin calls may be issued if necessary.

Key Consideration 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.

Margin Managed by Portfolio Unit

- For margin management by portfolio unit, JCCH has established and operates span-parameters, in accordance with the “SPAN Parameters Handling Procedures,” which may allow offsetting for positions in the same product but different contract months (intra-product spread premium), or parameters which may allow offsetting for positions between different products (inter-product spread premium).

Intra CCP Cross-margining

- JCCH does not offer cross-margining arrangements with any other CCPs.

Robustness of Calculation Methods

- JCCH conducts daily backtesting to verify the sufficiency of the Clearing Margin Requirement. Thereby, JCCH verifies that the Clearing Margin Requirement calculated applying various parameters sufficiently cover the profits/losses arising from the actual market price fluctuations.
- JCCH sets parameters for the required time for closing out (liquidation of positions at the time of a default), taking into account the regulations established by the Designated

Commodity Exchange and historical default cases and assuming potential liquidation of positions on the business day immediately following a day on which the default takes place.

- JCCH conducts risk measurements based on the parameters stressed in daily exposure measurements, to thereby grasp the margin coverage level.

Key Consideration 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.

Backtesting

- The Risk Management Division conducts daily backtesting to confirm that the Clearing Margin Requirement covers the losses arising from actual positions and market price fluctuations, and reports the verification results to the CEO.
- The Risk Management Division summarizes the results of backtesting for the risks borne by JCCH on a monthly basis, verifies the appropriateness of the margin calculation method and parameters, and reports the results to the Risk Management Committee if necessary. The Risk Management Committee discusses the measures to be taken as appropriate.

Key Consideration 7

A CCP should regularly review and validate its margin system.

- JCCH verifies and analyzes the appropriateness of the margin system on a monthly basis, and reports the results to the Risk Management Committee.
- In conducting regular evaluation/verification of the margin system, while making trial calculation of parameters by employing other models, JCCH conducts verification and review of the current model every several months.
- For revision of the margin system and changes of parameters, JCCH determines

authority for the revision and abolition, decides on the procedures thereof, and publishes the related rules on its website⁴¹.

⁴¹ Clearing Margin Rules, JCCH's website: "Handling of SPAN parameters" and others

Principle 7: Liquidity Risk

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

Key Consideration 1

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

Liquidity Resources

- JCCH has emergency lines of credit in place with multiple settlement banks designated by JCCH through which JCCH has secured liquidity supply facilities at a level sufficient to avoid same-day fund settlement risks. In addition, in preparation for emergencies, JCCH itself has secured deposits as liquidity resources at multiple commercial banks.
- As liquidity resources relating to Clearing Participants, JCCH has secured cash and securities as the clearing margin, as well as Clearing Funds and other deposits.

Liquidity Providers

- JCCH's primary liquidity providers are multiple settlement banks. In order to secure the credibility of these settlement banks, JCCH regularly monitors the credit rating thereof and demands these settlement banks to obtain at least a certain level of credit rating under which such banks form part of a robust framework of liquidity providers. In addition, JCCH regularly grasps and monitors the disclosure documents of each settlement bank to ensure the financial soundness thereof.

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.

- JCCH assumes an intraday default of each Clearing Participant and has secured

liquidity at a level which enables same-day fund settlement risk with the settlement banks to be avoided.

- JCCH has also established a system, in advance, under which the use of a liquidity facility is not required to avoid intraday funds settlement risks except in the event of a default by a Clearing Participant. JCCH conducts rigorous operation by monitoring settlement situations every business day regarding the possible use of intraday liquidity (liquidity resources that can be used for settling intraday payment obligations).
- JCCH conducts monitoring of the funds procurement amount every business day, assuming a default, etc., by Clearing Participants.
- In addition, in the case where the financial conditions of Clearing Participants tend to be deteriorating, JCCH obtains information regarding such Clearing Participants' funding, analyzes and examines such information, and takes necessary measures if there are any problems.
- Furthermore, JCCH has established a framework under which performance of settlement by Clearing Participants is monitored on a daily basis.

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.

- JCCH has no payment system or SSS (securities settlement system) in place.

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.

- JCCH has secured liquidity supply facilities from multiple settlement banks designated by JCCH at a level which enables same-day funds settlement risks to be avoided.
- Since all of JCCH's Clearing Business is settled in Japanese yen, JCCH has procured liquidity supply facilities in Japanese yen.
- Assuming that JCCH does not fall under a systemically important CCP in multiple jurisdictions, even in the event of a default by any Clearing Participant which may cause the largest payment obligations (Lamfalussy Standards), JCCH considers that the largest relevant exposure can be covered as a result of using loss compensation resources in accordance with the loss compensation rules.
- In calculating such exposure, JCCH assumes extreme but plausible market conditions. Specifically, as a stress scenario under which multiple participants may simultaneously default, JCCH employs a scenario where the one participant with the largest exposure (Lamfalussy Standards) and two financially fragile Clearing Participants default simultaneously and calculates the total exposure, thereby confirming that such exposure can be covered by the liquidity supply facilities, etc.

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.

- JCCH's qualifying liquid resources are composed of deposits held in a creditworthy settlement bank with a certain credit rating, emergency lines of credit established with

multiple settlement banks, and highly marketable collateral assets held in custody or investments.

- Among these collateral assets, cash or emergency lines of credit are available or can be procured by receiving refunds or loans even in extreme but plausible market conditions.
- JCCH has no access to routine credit at a central bank of issue.

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.

- JCCH can procure the required amount by qualifying liquid resources. Although JCCH has no direct relationship with a central bank of issue, it has entered into agreements with three (3) settlement banks, allowing for emergency lines of credit in the amount of JPY 15,000,000,000, and JCCH therefore considers that it has sufficient credit from such three (3) banks.
- In addition, JCCH may use its proprietary assets as supplementary liquid resources as appropriate.

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.

- JCCH confirms that its settlement banks, which are qualifying liquid resource providers, have a certain credit rating. In addition, JCCH regularly obtains and monitors disclosure documents from the settlement banks, thereby confirming that emergency lines of credit entered into with such settlement banks are capable of providing liquidity upon JCCH's request.
- All settlement banks have obtained a banking license in accordance with the Banking Act, are currently under the supervision of the Financial Services Agency, and can access the Bank of Japan's funds supplying operations.
- JCCH deposits clearing margins and Clearing Funds deposited by Clearing Participants with financial institutions having a certain credit rating in accordance with the Clearing Margin Segregation Management Rules, and the Clearing Funds Segregation Management Rules. In addition, JCCH confirms that the liquid resources held in custody or investments are composed of highly marketable collateral assets.
- JCCH regularly conducts default procedure drills relating to its procedures for accessing its qualifying liquid resources jointly with the Designated Commodity Exchange, thereby regularly testing such procedures.

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.

- Although JCCH has no access to central bank accounts and securities services, it uses an account established at a settlement bank as a payment service for daily settlement of funds.

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.

Historical Scenario

- By using parameters (historical scenarios) calculated based on price fluctuations over certain past periods (historical data), JCCH calculates exposure for each Clearing Participant at the interval of once a day based on open positions at the time of calculation.
Parameters are calculated for each product, since they need to take into consideration the nature of products involved.
- Furthermore, by using exposures calculated based on such historical scenarios, JCCH measures liquidity risks assuming the simultaneous default of multiple Clearing Participants. JCCH confirms on a daily basis that the measured liquidity risks are within the range of qualifying liquidity resources and conducts detailed analysis each month.
- A review of such historical scenarios itself is conducted at least once a year.

Stress Scenario

- By using parameters (forward-looking hypothetical scenarios) calculated by further loading price fluctuations over certain past periods (historical data), JCCH calculates exposures at the interval of once a day for each Clearing Participant based on open positions at the time of calculation. Parameters are calculated for each product, since they need to take into consideration the nature of products involved.
- Furthermore, by using exposures calculated based on such forward-looking hypothetical scenarios, JCCH measures liquidity risks assuming the simultaneous default of multiple Clearing Participants. JCCH confirms on a daily basis that the measured liquidity risks are within the range of qualifying liquidity resources and conducts detailed analysis each month.
- A review of such stress scenarios itself is conducted at least once a year.

Verification of Liquidity Facilities

- JCCH confirms that each settlement bank which plays an important role in providing

liquidity facilities has a certain credit rating, and regularly obtains and reviews disclosure documents from the settlement bank to thereby confirm whether or not the liquidity facilities are sufficient to cover a potential (under a stressed scenario) required amount of liquidity.

- JCCH deposits clearing margins and Clearing Funds deposited by Clearing Participants with financial institutions having a certain credit rating, in accordance with the Clearing Margin Segregation Management Rules and the Clearing Funds Segregation Management Rules. In addition, by regularly obtaining and monitoring the disclosure documents of relevant financial institutions, JCCH confirms that the liquid resources held in custody or investments are composed of highly marketable collateral.

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.

- In the Business Rules, JCCH has established comprehensive rules⁴² concerning a change of settlement cut-off times and deferment of settlement.
- JCCH has also established rules⁴³ concerning the deferment of settlement cut-off times at the time of system failure, etc., and rules⁴⁴ concerning emergency measures upon natural disasters and other factors.
- Based on the above, in order to settle payment obligations in the scheduled timeframe, in addition to the above, JCCH has prepared a manual to address liquidity shortfalls in the event of default, conducts its operations in accordance with such manual, and regularly conducts default procedure drills jointly with the Designated Commodity Exchange relating to JCCH's procedures for accessing its qualifying liquid resources.

⁴² Article 53, Paragraph 3 of the Business Rules

⁴³ Article 77 of the Business Rules

⁴⁴ Article 78 of the Business Rules

Settlement

Principle 8: Settlement Finality

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

Key Consideration 1

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

Point of Settlement Finality

- The point of settlement finality is when the necessary funds have been transferred from the Clearing Participant's account to JCCH's account or have been transferred from JCCH's account to the Clearing Participant's account.

Recognition of Having Fulfilled Obligations Pertaining to Settlement

- Article 53.2 of the Business Rules prescribes that the settlement cut-off times shall be noon of the following business day (clearing period).
- An agreement with a settlement bank specifies the specified book-entry transfer procedures before the relevant settlement cut-off time.
- JCCH routinely confirms the settlement status with settlement banks.

Legal Certainty of Finality

- Each settlement to be made by JCCH is irrevocable after completion of the book-entry transfer⁴⁵.

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.

- Each settlement to be made by JCCH is designed to complete final settlement no later than the end of the value date by defining the settlement cut-off times and specifying the

⁴⁵ Article 19-2 of the Regulations for Business Rules

book-entry transfer procedures, etc., before the relevant settlement cut-off times in an agreement with a settlement bank.

- JCCH has never experienced an incident where the final settlement is deferred past the scheduled settlement date.
- Settlement is made on a real-time basis during the day. Clearing Participants can confirm the fulfilment of final settlement via JCCH's clearing system at any time.

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.

- JCCH only uses Japanese yen for settlements which are completed on the same day. Therefore, JCCH does not specify the point after which payments and settlement instructions, etc., may not be revoked.

Principle 9: Money Settlements

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

Key Consideration 1

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

- JCCH only uses Japanese yen for settlements.
- Due to the diversity of Clearing Participants, JCCH uses accounts at commercial banks (three banks, four branches) designated by JCCH for daily funds settlement.
- JCCH holds accounts at commercial banks (three banks) designated by JCCH for funds settlement. Funds settlement between each Clearing Participant and JCCH is performed between accounts at the same bank selected by each Clearing Participant.

Key Consideration 2

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

- JCCH only designates settlement banks which satisfy certain standards established by JCCH.
- Settlement banks approved by JCCH are those having a presence in Japan and having sufficient capitalization and high credit. All settlement banks are subject to supervision by the Financial Services Agency, and examination or monitoring by the Bank of Japan.

Key Consideration 3

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

- In order to eliminate credit risks accompanying the use of commercial bank money, to

the extent possible, as stated in Key Consideration 2 above, JCCH designates only commercial banks with sufficient capitalization and high credit as its settlement banks in accordance with certain standards.

- As for the creditworthiness of settlement banks, JCCH's Board of Directors establishes strict standards every year (at least a certain level of credit rating provided by a rating specialized company is applied as its standard: Selection is made from banks with A3 or higher credit ratings provided by Moody's Japan K.K.; if any selected bank's credit rating becomes Baa1 or lower, JCCH promptly transfers all deposits, etc., to other banks) and monitors such standards as appropriate.
- If a settlement bank fails to satisfy the standards established by JCCH due to events such as a change in the credit rating given provided to such settlement bank, JCCH shall transfer all deposits, etc., to other banks to avoid potential losses, etc., from occurring.
- For operational reliability, JCCH set outs, in an agreement with a settlement bank, instructions for daily funds transfers between JCCH's account and the Clearing Participant's account, and operations including reporting the results of such operations, in order to thereby routinely monitor the operational situation.
- By selecting three (3) banks and four (4) branches from among the commercial banks, JCCH diversifies its settlement risk in cases where funds settlement is not conducted as scheduled due to a default of a settlement bank.
- All accounts established by JCCH at a settlement bank for funds settlement are settlement accounts covered by the Japanese Deposit Insurance System, and credit risks arising from the settlement banks are therefore extremely limited.

Key Consideration 4

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

- JCCH conducts all money settlements through settlement banks. No money settlements are conducted on its own books.

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.

- Agreements with settlement banks specifically state the book-entry transfer procedures, etc., before the settlement cut-off time (noon of the following business day). The finalization of the settlement takes place at the time when the funds have been transferred from the Clearing Participant's account to JCCH's account, or the time when the funds have been transferred from JCCH's account to the Clearing Participant's account.
- Agreements with settlement banks also set forth obligations that the transaction settlement between JCCH and the Clearing Participants shall be conducted no later than noon of the day designated as the settlement day.

Principle 10: Physical Delivery

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.

Key Consideration 1

An FMI's rules should clearly state its obligations with respect to the delivery of physical instruments or commodities.

- Settlement of Physical Delivery Futures Transactions by delivery shall be considered conducted between JCCH and a Clearing Participant⁴⁶ upon delivery between a member taking delivery and a member making delivery in the manner prescribed by the Designated Commodity Exchange.

Key Consideration 2

An FMI should identify, monitor, and manage the risks and costs associated with the storage and delivery of physical instruments or commodities.

- JCCH consigns the services relating to physical delivery to the Designated Commodity Exchange, and is not directly involved in the process, thereby reducing the risks associated with physical delivery.
- JCCH causes the Designated Commodity Exchange to report the operational situation of the above-mentioned services at any time, and thereby monitors the same.
- For the physical delivery obligations to be fulfilled by JCCH by way of assuming obligations, JCCH specifies settlement by delivery and default procedure including calculation of losses incurred from default relating to delivery positions, in the Business Rules approved by the Competent Ministry and the Regulations for Business Rules.

⁴⁶ Article 54, Paragraph 1 of the Business Rules

Central Securities Depositories and Exchange-of-Value Settlement Systems

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.

- This principle does not apply as JCCH is not a central securities depository (CSD).

Principle 12: Exchange-of-Value Settlement Systems

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

Key Consideration 1

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

- JCCH is of the view that this principle does not apply to JCCH.

Procedures for Default

Principle 13: Participant-Default Rules and Procedures

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

Key Consideration 1

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

Clearing Participant Default

- JCCH's rules set out the details of the default procedures, including the events constituting a default, the sequencing of the process in the event of a Clearing Participant default, and the obligations of the parties involved. JCCH will deem that a Clearing Participant is in default if such participant is, or is likely to be, unable to perform its obligations, according to the determination of JCCH's senior management⁴⁷. If a default is deemed to have arisen, JCCH takes measures for suspension assuming obligations for any new transaction, causes any Unsettled Clearing Contracts of the Defaulting Clearing Participant to be transferred to another Clearing Participant, and takes other actions as deemed necessary by JCCH⁴⁸, to thereby determine the amount of losses.
- More specifically, by causing the transactions in the commodity market to be transferred to other Clearing Participants⁴⁹, JCCH liquidates the defaulting Clearing Participant's positions. The transfer of positions and collateral to other Clearing Participants is enabled by liquidating the positions in relation to customer transactions⁵⁰. JCCH covers losses arising from default procedure via loss compensation resources in accordance with its rules⁵¹.

⁴⁷ Article 68, Paragraph 1 of the Business Rules

⁴⁸ Article 68, Paragraph 1 of the Business Rules

⁴⁹ Article 68, Paragraph 1 of the Business Rules; Article 24, Paragraph 1 and Article 25 of the Clearing Margin Rules

⁵⁰ Article 25, and Article 27, Paragraph 1 of the Clearing Margin Rules

⁵¹ Article 72 of the Business Rules

- Even when a Clearing Participant default occurs, JCCH performs settlement without changing the regular settlement schedule. In order to perform such settlement in this manner, JCCH has entered into agreements with designated settlement banks regarding “emergency lines of credit” to procure temporarily needed liquidity.
- In terms of transactions in the commodity market, losses arising from a Clearing Participant default are covered in each Designated Commodity Market in accordance with the following order (The amounts, if any, stated in the following items 1 through 3, after providing compensation for each Designated Commodity Market, are applied to the losses in other Designated Commodity Markets that could not be covered) as set forth in Article 72 of the JCCH Business Rules:
 - 1 Clearing Margin of the Clearing Participant deposited for the house account with JCCH; Ordinary Clearing Funds and Other Funds of the Clearing Participant deposited with JCCH; and Clearing Margin of the Clearing Participant’s Customer Account where the Clearing Participant has a Claim for Refund;⁵²
 - 2 Special Clearing Funds of the Clearing Participant deposited with JCCH; Monies; Securities; and foreign currency to which the Clearing Participant has a Claim for Refund;⁵³
 - 3 Guarantee Funds deposited with the Designated Commodity Exchange on which the Clearing Participant is a Member (If Customer has exercised its right of preferential payment against such funds, the remaining balance thereof);⁵⁴
 - 4 Portion of surplus funds set aside by JCCH as the Default Compensation Reserve;⁵⁵
 - 5 Monies received as compensation for losses or security against losses by third parties in each of the Designated Commodity Market; other monies and assets set aside expressly for the purpose of compensating losses, where such monies or assets exist;⁵⁶
 - 6 Ordinary Clearing Funds deposited with JCCH by other Clearing Participants with respect to the relevant Designated Commodity Market;⁵⁷ and
 - 7 Such other compensation that JCCH shall cause other Clearing Participants, who holds the same Clearing Qualification class relating to the Designated Commodity

⁵² Article 72, Paragraph 1 of the Business Rules

⁵³ Article 72, Paragraph 2 of the Business Rules

⁵⁴ Article 72, Paragraph 3 of the Business Rules

⁵⁵ Article 72, Paragraph 4 of the Business Rules

⁵⁶ Article 72, Paragraph 5 of the Business Rules

⁵⁷ Article 72, Paragraph 6 of the Business Rules

Market where the uncompensable loss has taken place, to make⁵⁸

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.

- JCCH provides for default procedures in its Business Rules and internal rules. These rules define a series of default procedures including determination of default⁵⁹, liquidation of defaulting Clearing Participant's positions⁶⁰, and compensation from loss compensation resources⁶¹.
- These procedures also provide for information sharing with the Competent Ministries regarding recognition of default and subsequent procedures⁶², notices to Clearing Participants⁶³, and public announcement of information. The procedures also define the roles and responsibilities for each of JCCH's divisions and the involvement of officers.
- In order to ensure the effectiveness of default procedures, JCCH has conducted default procedures drills at least once a year since January 2015. In January 2017, for the purpose of setting out the necessary matters for default procedures drills, JCCH established the "Regulations for Operation of Default Procedure Drills."

Key Consideration 3

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

- JCCH's procedures for Clearing Participant defaults are provided for in its Business Rules, etc., which are available on JCCH's website.
- When a Clearing Participant defaults in effect, JCCH discloses to market related persons (to the extent possible), important information pertaining to the default procedures, including the handling of a defaulting Clearing Participant, the liquidation method for the positions of such defaulting Clearing Participant and customers, methods for providing compensation, etc.

⁵⁸ Article 72, Paragraph 7 of the Business Rules

⁵⁹ Article 68, Paragraph 1 of the Business Rules

⁶⁰ Article 68, Paragraph 1 of the Business Rules

⁶¹ Article 72 of the Business Rules

⁶² Article 71, Paragraph 1 of the Business Rules

⁶³ Article 71, Paragraph 1 of the Business Rules

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.

- In order to ensure the effectiveness of the procedures for a Clearing Participant default, JCCH conducts safety-drills with the participation of the Clearing Participants at least once a year in accordance with the "Regulation for Operation of Default Procedure Drills". The results of the safety-drills are expected to be reflected in the testing and review of the default rules and procedures.
- In revising the rules regarding the procedures for a Clearing Participant default, JCCH consults with Clearing Participants and establishes committees or working groups (if necessary) so that the opinions of participants will be reflected therein.

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.

Key Consideration 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.

Segregated Management of Customer Positions and Margins

- For transactions in commodity markets, JCCH segregates each Clearing Participant's customer positions/margins and proprietary positions/margins, and manages the positions/margins of each customer in an omnibus account which is managed for each customer on a gross basis⁶⁴. Although the positions/margins of each customer are managed by the Clearing Participant in a segregated manner, JCCH has the authority to request that Clearing Participants submit the positions/margin information of individual customers if required.

Arrangement regarding Transfer of Positions/Margins

- JCCH has adopted the following customer position/margin transfer arrangements for the products it clears.
- For transactions in commodity markets, when a JCCH Clearing Participant defaults, JCCH may transfer the positions/margins of such Clearing Participant's customers to another Clearing Participant (the "**accepting Clearing Participant**")⁶⁵.
- When customer's positions are transferred to an accepting Clearing Participant, the margin of the relevant customer deposited with JCCH initially via a defaulting Clearing Participant is considered to have been deposited via the accepting Clearing Participant acting as an agent. Any claim made by a customer for refund of margin will be exercised

⁶⁴ Article 19 of the Clearing Margin Rules; Articles 3 and 4 of the Clearing Margin Segregation Management Rules; further in accordance with Article 179, Paragraph 5 and Article 103 of the Commodity Derivatives Act, and Article 74 of the Ministerial Ordinance

⁶⁵ Article 25, Paragraph 1 and Article 27, Paragraph 1 of the Clearing Margin Rules

by the accepting Clearing Participant acting as an agent⁶⁶.

Protection of Other Customers at the Time of Default of Clearing Participant and its Affiliated Customer

- JCCH has adopted the following arrangements to protect other customers using the same Clearing Participant from the risk of default by the Clearing Participant due to a default of its affiliated customers (“**Fellow Customer Risk**”).
- Customers’ positions/margin are managed in an omnibus account managed on a gross basis for each customer.
- JCCH’s rules and the Brokerage Rules established by each exchange require a Clearing Participant acting as the agent of a customer to deposit the margin deposited from each customer with JCCH on a gross basis⁶⁷. This means that Clearing Participants are unable to offset the positions of each customer with those of other customers when calculating margins.
- In addition, a claim by a customer for refund of margin deposited with JCCH shall be exercised in accordance with the provisions of the rules, even in the event of a Clearing Participant default. JCCH eliminates Fellow Customer Risk by way of these arrangements.
- Although customer positions/margins in an omnibus account are managed by a Clearing Participant⁶⁸, JCCH has the authority to request a Clearing Participant to submit the position/margin information of individual customers when the Clearing Participant defaults⁶⁹. Clearing Participants are obligated to promptly submit the relevant information upon JCCH’s request.

Legal Validity

- The Commodity Derivatives Act stipulates that, for transactions in the commodities market, even in the event of the commencement of bankruptcy proceedings (special liquidation proceedings, bankruptcy proceedings, rehabilitation proceedings and reorganization proceedings) against a Clearing Participant, JCCH’s Business Rules shall be applied in preference to general bankruptcy proceedings for the management of

⁶⁶ Article 30, Paragraph 1 of the Clearing Margin Rules

⁶⁷ Articles 11, 12, and 13 of the Clearing Margin Rules

⁶⁸ Articles 19 and 20 of the Clearing Margin Rules

⁶⁹ Article 22 of the Clearing Margin Rules

outstanding obligations of a defaulting participant⁷⁰. The legal validity of JCCH's Business Rules is recognized in relation to the bankruptcy proceedings of a Clearing Participant. In the event of a default by a JCCH Clearing Participant, the customer positions of the defaulting Clearing Participant will be transferred or liquidated for transactions in commodities markets by causing other Clearing Participants to assume positions⁷¹.

Key Consideration 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.

- Please see "Key Consideration 1" of this Principle for the account structure as to how the customer positions/margins of a Clearing Participant are segregated from those of the Clearing Participant itself at JCCH.
- The customer's margin is deposited with JCCH to ensure the fulfillment of obligations and this covers the losses relating to the relevant customer's positions.
- Clearing Participants are unable to apply certain customers' margins to compensate for the losses of other customers, and Fellow Customer Risk is therefore eliminated.

Key Consideration 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.

- As in the preceding Key Consideration 1 of this Principle, transfer of customer positions/margin will be conducted in accordance with the arrangements regarding the transfer of JCCH's customer accounts.
- When the transfer is completed, the margin of the relevant customer initially deposited with JCCH via a defaulting Clearing Participant shall be considered to have been deposited with JCCH by an accepting Clearing Participant acting as an agent. Any claim by a customer for refund of margin shall be exercised by the accepting Clearing Participant acting as an agent.

⁷⁰ Article 181 of the Commodity Derivatives Act

⁷¹ Article 68 of the Business Rules; Article 24, Paragraph 1, and Article 25 of the Clearing Margin Rules

Key Consideration 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.

Disclosure of Arrangements for Segregation and Portability

- JCCH sets out the arrangements for the segregation and portability of a Clearing Participant's customer's positions/margins and the fact that the customer margin shall be protected in an omnibus account in its Business Rules and Clearing Margin Rules, which are also stipulated in the Market Rules and the Brokerage Rules established by each exchange. These rules are publicly available on the websites of both JCCH and each exchange.

Disclosure of Legal and Operational Restrictions

(1) Legal restrictions

- The Commodity Derivatives Act stipulates that, even in the event of bankruptcy proceedings (special liquidation proceedings, bankruptcy proceedings, rehabilitation proceedings and reorganization proceedings) being commenced against a Clearing Participant, JCCH's Business Rules shall apply to the settlement of outstanding obligations between JCCH and a defaulting Clearing Participant⁷². The validity of the Business Rules is recognized in relation to the bankruptcy proceedings against a Clearing Participant.
- In the event of a Clearing Participant default, in accordance with the provisions of the Business Rules, the defaulting Clearing Participant's own positions shall be liquidated, while the defaulting Clearing Participant's customer positions shall be transferred or liquidated to other Clearing Participants⁷³. Therefore, JCCH considers that there are no legal restrictions in relation to the segregation, management and transfer of collateral.

(2) Operational restrictions

⁷² Article 181 of the Commodity Derivatives Act

⁷³ Article 68, Paragraph 1 of the Business Rules; Article 24, Paragraph 1, Article 25 and Article 27, Paragraph 1 of the Clearing Margin Rules

- In the event of a Clearing Participant default, in order to transfer the defaulting Clearing Participant's customer positions in the customer accounts to other Clearing Participants, it is necessary for the defaulting Clearing Participant, the other Clearing Participants and the customers to enter into an agreement and for such agreement to be approved by the commodities exchange and JCCH.

Business and Operational Risk Management

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.

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.

Identification of General Business Risks

- The general business risks present at JCCH comprise the operational risks (including administrative risks and system risks) that may arise from JCCH's execution of operations, management and administration, and do not include credit risks and liquidity risks arising from Clearing Participant defaults.

Monitoring and Management of General Business Risks

- JCCH takes the following measures in order to properly monitor and manage such general business risks.
- JCCH formulates a medium-term management plan (key strategies) based on which it prepares business plan and statements of cash receipts and disbursements and obtains approval from the Board of Directors.
- JCCH regularly makes business reports to the Board of Directors, which then provides its approval thereto, and reports the same to the related parties. JCCH reports on the operational performance and risk management status to the Board of Directors and the Board of Auditors on a monthly basis.
- Other measures include governance arrangements regarding risk management (see Principle 2 (Governance)), comprehensive risk management framework, and reporting to the Board of Directors under such framework (see Principle 3 (Framework for the Comprehensive Management of Risks)).

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.

- JCCH prepares annual statements of cash receipts and disbursements and manages liquid net assets funded by equity so that it can continue operations and the provision of services even if it incurs general business losses.
- JCCH considers that the above-described liquid net assets funded by equity must be sufficient to cover six months or more of operating expenses in order to cover JCCH's operational risks. Accordingly, JCCH secures, at all times, a minimum of six months of operating expenses funded by equity as its liquid net assets.
- JCCH manages and confirms the sufficiency of the above-described liquid net assets and other financial conditions in its comprehensive risk management framework (see Principle 3 (Comprehensive Risk Management Framework)), makes regular reports to the Board of Directors and the Board of Auditors (once each three months)⁷⁴, and adopts a substantive management system where JCCH immediately makes reports to all of the Directors in certain circumstances⁷⁵.

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.

⁷⁴ See Article 9 of the Risk Management Rules.

⁷⁵ See Articles 2, 6, and 7 of the Crisis Management Rules.

- As mentioned in Key Consideration 2, JCCH holds liquid net assets funded by equity to cover operating expenses for six months. These liquid assets are managed separately from the resources for responding to risks of a Clearing Participant default (the Default Compensation Reserve, etc.).
- Therefore, even in the event of JCCH's recovery and orderly wind-down being required, Clearing Participants will still have sufficient time to address the transition in their operations.
- With regard to recovery and orderly wind-down plans, JCCH shares awareness for problems for taking measures in line with the legal framework regarding clearing organization defaults in Japan (i.e. the Commodity Derivative Act and the Financial Instruments and Exchange Act) based on the trends of international regulations (such as the international standards for an FMI's recovery and default management process published by CPMI-IOSCO and the Financial Stability Board in October 2014), through communications with regulatory agencies and related parties, including Clearing Participants.

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.

- JCCH manages and holds liquid net assets funded by equity held in the form of Japanese yen cash (bank deposits) to cover general business risks. These assets are of high quality and highly liquid even in stressed market conditions. Such assets are managed by using banks which meet the criteria for investment risk as stated below (see Principle 16 (Custody and Investment Risks)).

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.

- If JCCH's capital decreases significantly, or if it falls below the level required to cover six months of operating expenses, JCCH assumes that it should take the following actions, and proceeds with discussion on a viable plan including the following:
 - Comprehensive review of expenses;

- Review of clearing fees;
 - Review of JCCH's business;
 - Injection of additional capital, and discussion thereof, etc.;
 - Restructuring of JCCH's business.
- For such capital recovery plan, JCCH proceeds with and discusses verification (and revision if necessary), reporting to the Board of Directors for their approval at least once a year.

Principle 16: Custody and Investment Risks

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

Key Consideration 1

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

Custodians of Assets for Clearing Participants and Risk Management Thereof

- JCCH manages each Clearing Participants' assets separately from JCCH's own assets⁷⁶.
- JCCH holds cash deposits in the form of bank deposits, money trusts, government bonds, and municipal bonds. In cases where assets are held as bank deposits or money trusts, the Board of Directors selects financial institutions having a certain level of credit rating provided by a leading rating company, and continuously monitors such selected financial institutions⁷⁷.
- JCCH consigns domestic custodians (organizations holding and managing securities) to hold and manage securities. The selection of custodians is properly verified from the perspective that, among other features, the organization is a company listed on the first section of the Tokyo Stock Exchange⁷⁸.
- Custodians consigned by JCCH manage JCCH's customers' assets separately from the custodian's own assets; thus, even in the event of a custodian default, the customers' assets can be protected and returned.

Custodian for JCCH's Assets

- JCCH manages its own assets in the form of bank deposits so that any unexpected events including a Clearing Participant default will not cause any disturbances. JCCH also limits the products subject to asset management for its own assets in accordance

⁷⁶ Article 74 of the Ordinance for Enforcement of the Commodity Derivatives Act; Article 4 of the Clearing Margin Segregation Management Rules; and Article 4 of the Clearing Funds Segregation Management Rules

⁷⁷ Article 77 of the Clearing Margin Segregation Management Rules; Article 19 of the Clearing Funds Segregation Management Rules

⁷⁸ Article 7 of the Clearing Margin Segregation Management Rules; Article 8 of the Clearing Funds Segregation Management Rules

with the “Asset Management Rules”⁷⁹ and regularly compares the balance of bank deposits and assets under management⁸⁰.

- JCCH limits the custodians for its own assets to those financial institutions which have been selected in accordance with the criteria established by JCCH, and continuously monitors such custodians to thereby strive for credit risk management⁸¹.

Key Consideration 2

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

Access to JCCH's Own Assets

- JCCH holds its own assets in bank accounts under its own name (ordinary deposit or term deposit), thus allowing for prompt access to such assets when necessary.

Access to Clearing Participant and Customer Deposit Assets

- Collateral deposited by Clearing Participants and customers is held in accounts under JCCH's name for the purpose of collateral custody, thus allowing for JCCH to have prompt access to such assets when necessary.

Legal Basis

- Japanese law provides a sound legal basis for the rights of an account holder to access its assets.
- The Commodity Derivatives Act states that, in the event of a Clearing Participant default, if there is a prescription in the CCP's Business Rules, a defaulting Clearing Participant's collateral can be applied to the fulfillment of obligations with the CCP in preference to general bankruptcy proceedings, thereby ensuring JCCH's stable access to collateral⁸².

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.

Credit Risk Management

⁷⁹ Article 3 of the Asset Management Rules

⁸⁰ Article 3-2 of the Asset Management Rules

⁸¹ Article 5 of the Asset Management Rules

⁸² Article 181 of the Commodity Derivatives Act; Chapter 11 of the Business Rules, et seq.

- With a view to eliminating, to the extent possible, the credit risk of custodians where collateral is deposited for Clearing Participants and their customers, JCCH has established strict requirements when selecting custodian banks, under which the custodian banks are selected and verified by the Board of Directors (see Principle 16, Key Consideration 2).
- JCCH confirms the publicly available information regarding the custodian banks from time to time, strives to collect further information, and monitors the financial conditions, the status of deposits, and the smoothness of other settlement operations of each bank.

Concentration Risk Management

- JCCH properly diversifies the custodians and managers of the collateral deposited by Clearing Participants, and monitors the degree of concentration of risk exposure for each bank.

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.

- JCCH has established its fund management policy in its "Fund Management Rules" and the "Operation policy for Clearing Margin" which are publicly available on JCCH's website⁸³.
- Ensuring safety
JCCH limits the products for investment to bank deposits, money trusts (limited to those whose principal is secured), government bonds, municipal bonds or government guaranteed bonds; for investments in the form of bank deposits or money trusts, asset managers are restricted to high-quality financial institutions (financial institutions having been granted an A rating by a leading rating company).
In addition, JCCH continuously monitors such ratings.
JCCH manages government bonds as held-to-maturity securities which are not subject to price fluctuation risk, and bank deposits in the form of ordinary deposits or term deposits which can be cancelled before maturity.

⁸³ https://www.jcch.co.jp/i/i_f.html

- Securing liquidity

JCCH limits the scope for management so as to allow for prompt conversion into cash under stressed market conditions. In addition, in light of the difference between cash deposit amounts and cash return amounts for a certain period, and historical minimum cash deposit balances, etc., JCCH calculates and manages the amount reasonably estimated to be retained in JCCH for a certain period.

- Risk management

JCCH conducts its management plan after obtaining approval from the Board of Directors, and reports to the Board of Directors on the management status from time to time.

JCCH manages bank deposits in the form of ordinary deposits or term deposits which can be cancelled before maturity and government bonds as held-to-maturity securities which are not subject to price fluctuation risk. For the management of securities, JCCH regularly manages valuation profit/loss by paying attention to price fluctuation risks and taking into account the remaining period and the product profiles.

JCCH appropriately diversifies asset managers to avoid concentration risks.

Principle 17: Operational Risk

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

Key Consideration 1

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

Identification of Operational Risk

- As a framework to identify, monitor, and manage operational risks in Clearing Business, JCCH formulates an annual plan for risk management in accordance with the Risk Management Rules established by the Board of Directors, determines policies and systems regarding risk management, and thereby takes effective and efficient measures.
- In accordance with the Risk Management Rules, JCCH has established the Risk Management Committee as a company-wide organization. The Risk Management Committee identifies risks associated with each operation, including potential risks, and devises measures and reviews operations as appropriate (see Principle 3 (Framework for the Comprehensive Management of Risks)).
- Under such risk management framework, JCCH classifies operational risks into general operation risks and system risks. General operation risks indicate operational problems caused by personnel factors, inadequate information systems, internal procedures, etc., while system risks mean system failures or problems caused by unauthorized use of systems, etc.
- At JCCH, the Chairperson of the Risk Management Committee, and other persons, regularly (once every three months) report to the Board of Directors and the Board of Auditors on the compliance status of the risk management policy for general operation risks, system risks and risks relating to business continuity plans. Any specific case detected will be immediately reported to all of the Directors in effect in accordance with the Crisis Management Rules.

- In addition, JCCH reviews its risk management basic policy at least once a year, and through this process it reviews its management policy for operational risks (see Principle 3 (Framework for the Comprehensive Management of Risks)).

General Operation Risk Management

- JCCH's Risk Management Rules, etc., stipulate basic management and policy for general operation risks, and specifically, stipulate the establishment of the Risk Management Committee, improvement of the reporting system, preparation of a business continuity plan, and overall company-wide countermeasures against the occurrence of crisis, etc.
- JCCH has clearing system terminals in place within its offices, conducts daily Clearing Business while establishing check items for each process with related parties, and improves the framework which enables information exchange with outsourcees on the operational status of the clearing system on a daily basis, to thereby strive to identify and analyze general operation risks.
- JCCH stipulates in its Crisis Management Rules that, in the event of a general operation risk occurring, countermeasures head office will be established where collection and analysis of information, discussion, determination and implementation of solutions and recurrence prevention, communication and response to related organizations, and reporting to the Board of Directors, etc., are conducted. Through this process, JCCH is able to continuously control general operation risks.

System Risk Management

- JCCH's Risk Management Rules and the "Basic Policy Regarding Countermeasures in the Event of System Failure, etc." stipulate basic management and policy for countermeasures regarding system risks.
- JCCH strives to establish redundant configurations for the primary device of the clearing system to ensure stable operations and also strives to take security measures for information communication with participants, etc. (USB authentication key, ID, password), and thereby places emphasis on the security of the clearing system.
- JCCH verifies the system capacity and performance of the clearing system on a regular basis or at the time of system revision or system function change. At the time of system revision, JCCH conducts stress testing if necessary, in order to determine various values. Stress testing is conducted from the perspectives of confirming that there are no operational problems and that no network devices cause any problems, etc.
- JCCH reports on the system risk status and the like to the Risk Management

Committee. Should a system failure occur, JCCH investigates the cause and devises measures, including recurrence prevention measures, which it reports to the Risk Management Committee depending on the degree of the effect. Through this process, JCCH is able to continuously control system risks.

- Since the commencement of JCCH's operations in May 2005, no data damage or system failure which may cause problems to its operations has ever occurred.

Outsourcing Management

- In accordance with the "Policy and Procedure Rules regarding Operations for Outsourcing and Selection of Outsourcees", JCCH properly selects outsourcees and outsources the operation of the clearing system thereto. For outsourcees, JCCH has prepared an operation manual for the operation of the clearing system and established basic countermeasures in the event of the occurrence of any local system failure.
- Appropriate numbers of qualified persons are assigned at each outsourcee. Through checking the amount of daily processing performed by a system, JCCH monitors at all times whether or not any problems have occurred in the processing capacity of each outsourcee and receives regular reporting from each outsourcee.

Management of Single Points of Failure

- JCCH strives to establish redundant configurations for the primary devices of clearing system to ensure stable operations and avoid single points of failure in one system.
- JCCH verifies, through a review by way of conducting system testing, that requirements have been appropriately incorporated in the design and that there are no potential single points of failure.

Business Continuity Plan

- JCCH's "Basic Policy for Emergency Business Continuity Plan"⁸⁴ is publicly available on its website.
- JCCH has established a contingency plan framework for taking countermeasures upon the occurrence of a local disaster, and has secured a system for restoring the information necessary for business continuity and clearing at back-up offices and a DR site (Disaster Recovery site; namely, an emergency substitute base to be used when it becomes difficult to continue business at a primary base) upon the occurrence of a clearing system failure.

⁸⁴ <https://www.jcch.co.jp/b/b11.html> (in Japanese)

- As a target for restoring business operations, JCCH aims to achieve restoration within two hours in general for essential information systems handling important operations.
- JCCH reports on the progress status of the above-mentioned efforts to the Risk Management Committee. Through this process, JCCH confirms that the business continuity system has functioned in a continuous and effective manner.

Efforts to Secure Necessary Personnel and Employee Compliance

- JCCH's operations are managed by full-time Directors. Personnel having appropriate experience, etc., are assigned and personnel necessary for the operations are secured for each operation.
- With the aim of cultivating human resources, JCCH strives to provide employee education, including by way of conducting regular job rotation.
 - JCCH specifies and thoroughly informs the matters those officers and employees should comply with in its "Charter of Corporate Behavior" and "Code of Conduct". In addition, JCCH strives to strengthen compliance within the "framework for ensuring that the execution of duties by Directors and employees conforms to the laws and regulations and the Articles of Incorporation" in "the Basic Policy for Internal Control".

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.

Roles, Responsibilities and Framework

- JCCH's Board of Directors clearly defines the roles and responsibilities for addressing operational risk, and sets forth the risk management framework. The Board of Directors also determines material matters regarding operational risk management and reviews the basic policies, etc., on an annual basis.
- As part of its comprehensive risk management framework, JCCH has established the Risk Management Committee as a company-wide organization. The Risk Management Committee reports to the Board of Directors on a regular basis regarding its activities and its compliance with the risk management policy for operational risks, as well as providing a review of operations including identifying risks associated with each business and devising countermeasures, etc.

Review, Auditing and Verification

- JCCH has the function of conducting internal auditing by way of checks and balances to audit whether each division is properly performing its business in accordance with the rules and procedures.
- For operational risks, the Risk Management Committee identifies risks associated with each business, devises countermeasures and engages in other acts to thereby review operations as appropriate. The Risk Management Committee verifies the appropriateness of the general operation risk management framework and the system risk management framework and reports on the results thereof to the Board of Directors at least once a year. The Board of Directors receives such verification reporting and confirms that the operational risk management framework is appropriate.
- Furthermore, JCCH receives internal control auditing and system auditing by external experts. Among these audits, under the auditing of internal control, operational risk management is subject to auditing, while under the auditing of systems, both the clearing system and the internal system, etc., are subject to auditing.
- With regard to the clearing system, JCCH verifies the system capacity and performance on a regular basis or at the time of system revision or system function change. In addition, at the time of system revision, JCCH conducts stress testing, if necessary, in order to determine various values.
- JCCH has also established the “JCCH Security Measure Standards” which provide for the measures to be taken by users of information systems in order to prevent risks so that Clearing Business will be smoothly conducted, the effects which may arise will be minimized, and prompt recovery can be strived for.

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.

- In the “Basic Policy Regarding Countermeasures in the Event of System Failure, etc.” established by JCCH, JCCH sets out its philosophy that “JCCH will continue settlement services to the extent possible in the event of system failure, etc., and prevent the occurrence of default by Clearing Participants and systemic risks. In addition, in the case of taking an emergency response, JCCH will minimize the effects caused by such response and prevent the occurrence of disruption throughout the settlement system.”
- Based on the above-mentioned philosophy, for operational risks, the Risk Management

Committee identifies risks associated with each business and devises countermeasures, etc., and thereby reviews operations as appropriate.

- Furthermore, JCCH regularly verifies that material systems have sufficient processing capacity to deal with current levels of utilization and forecasted future requirements.

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.

- JCCH has put in place the following measures to ensure its systems have sufficient processing capabilities:
 - JCCH verifies and secures system capacity and performance each time a system revision or system function change is made, based on the forecasted transaction scale for the expected utilization period. In addition, at the time of system revision, JCCH conducts stress testing if necessary for determining various values.
 - After the system is running, JCCH conducts trend analysis, considers whether or not expansion is necessary for performance and capacity according to the increased number of commodities, transaction volumes, etc., and verifies the system on a regular basis.
- Even in the event where processing that exceeds certain values is conducted, processing will never be impossible, although processing speed may be slower due to reduced processing performance.

Key Consideration 5

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

Physical Security

- JCCH selects a data center conforming to the “Security Guidelines on Computer Systems for Banking and Related Financial Institutions,” which are the standards for system security measures in Japan established by the Center for Financial Industry Information Systems (“FISC”). The current data center has taken measures to obtain ISMS certification.
- JCCH requires a data center manager to comply with JCCH’s Security Guidelines. Upon receiving monthly reports from a data center manager, JCCH confirms that physical security measures have been taken and measures against potential

vulnerability and threats have been appropriately implemented.

Information Security

- In its “Information Management Rules”, JCCH provides basic matters including definition and classification of information assets, information security management framework, and system security guidelines.
- JCCH confirms that information is appropriately managed in accordance with its Information Management Rules, and further confirms its regular review of the policy and strives for the optimization thereof. JCCH has formulated the “JCCH Security Guidelines” in accordance with the “FISC Security Guidelines.”
- Under such Security Guidelines, JCCH provides personnel measures, physical measures, technological measures and other requirements that the management of an outsourcee should satisfy, and conducts verification and review of the appropriateness of the requirements as appropriate.

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 Planning (“BCP”) in the Case of an Emergency Event

- JCCH set outs the following objectives in its Basic Policy for Emergency Business Continuity Plan:
 - Giving first priority to Clearing Business and external transmission of information, etc., thus, striving to achieve business continuity to the extent possible;
 - Minimizing effects on stakeholders including the commodities exchanges, Clearing Participants, and customers;
 - Endeavoring to provide support for the security of local residents, early recovery of local communities; and
 - Endeavoring to establish facility and operational frameworks, including the back-up of material information assets even from the normal times.

Design of BCP

- JCCH has established its BCP (Business Continuity Plan) manual based on the Risk Management Rules. JCCH sets forth, in its Basic Policy for Emergency Business Continuity Plan, that it shall take measures which enable the prompt recovery and resumption of material business operations (such as establishing a countermeasures head office). In addition, JCCH has established a contingency plan framework for addressing major matters which may be assumed to occur.
- More specifically, JCCH sets forth securing system redundancy giving consideration to security, establishing a back-up center and a back-up office, and establishing communication flow with internal and external critical stakeholders and regulators.
- JCCH aims to achieve the complete recovery of business operations within two hours after the occurrence of risk events.

Secondary Site

- Under the current system, JCCH has established a secondary site (DR site) as a back-up center equipped with the processing capacity equivalent to that of the primary site on which the clearing system is located. In the event that the primary site becomes incapable, JCCH aims to achieve business continuation within two hours in general by switching to the secondary site (DR site) through manual labor. JCCH has taken the following measures to reduce the possibility of both sites being simultaneously affected by a disaster:
 - Operation by separate electric power; and
 - Geographic separation of both sites.
- Furthermore, JCCH aims to achieve a reduction of the possibility of data loss by taking the following measures:
 - Conducting data transfer between the sites four times a day; and
 - Should data loss occur, recovering lost data by receiving data or information from a Designated Commodity Exchange or Clearing Participant.

Review and Verification

- In order to verify the completeness and effectiveness of the BCP, JCCH conducts the following measures as BCP operation safety-drills at least once a year:
 - Regular data center switchover drills, and secondary site running operations drills;
 - Maintenance of the back-up office (including confirming the performance of devices installed within the back-up office); and

- Updating of various manuals and employee education.
- JCCH implements BCP safety-drills assuming a wide-ranging and serious disaster at least once a year, and Clearing Participants participate in such BCP safety-drills.
- JCCH reports to the Risk Management Committee on the results of safety-drills and the response to reviews of the drills, such as opinions/recommendations, and confirms whether the business continuity framework has continued to be effective; JCCH revises the details of the “BCP Basic Plan” from time to time, based on the above.

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.

Management of Risks to JCCH's Operations from Outside Entities

- In the BCP manual and the “Basic Policy Regarding Countermeasures in the Event of System Failure, etc.”, JCCH provides the policies for handling the occurrence of risk events which may result in suspension of business operations.
- In the “Basic Policy Regarding Countermeasures in the Event of System Failure, etc.”, JCCH provides contingency plans for events where a failure occurs to the system for each Designated Commodity Exchange, settlement banks, managers of Substitute Securities and Clearing Participants. The effectiveness of these plans is confirmed by way of the above-mentioned BCP safety-drills.
- JCCH has established an operation manual for operation of the clearing system in relation to outsourcees, identifies risks associated with the development and operations conducted by outsourcees, regularly confirms the status of countermeasures, and has established basic contingency plans upon the occurrence of local system failure. In addition, by regularly conducting secondary center (DR site) switchover drills assuming the materialization of wide-ranging disaster risks, JCCH confirms the reliability and the fulfillment of contingency requirements.
- The risks faced by JCCH due to possible Clearing Participant system failures are assumed only for “cases where calculation of the Clearing Margin required of customer account becomes impossible.” In terms of the handling thereof, JCCH specifies the Clearing Participants’ obligations to report to JCCH upon the occurrence of system

failure on its website⁸⁵, and conducts monitoring from time to time after receiving such report until the failure is eliminated.

Measures taken so that JCCH will not affect other FMIs

- JCCH does not have any links to other FMIs.
- Should any risks materialize in relation to Clearing Participants and other related parties, JCCH will continue its business to the extent possible in accordance with the BCP. If JCCH discontinues its business due to any unavoidable reasons, JCCH endeavors to minimize the effects on related parties by achieving prompt and efficient recovery.

⁸⁵ <http://www.jcch.co.jp/b/b11.html> (in Japanese)

Principle 18: Access and Participation Requirements

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

Key Consideration 1

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

- JCCH's Business Rules and the Regulations for Business Rules set forth JCCH's participation requirements⁸⁶ which are made publicly available on its website and include items as follows:
 - (1) Being a member of a Designated Commodity Exchange, etc.;
 - (2) Having sound management structure;
 - (3) Having a domestic base;
 - (4) Being equipped with proper business operation structure;
 - (5) Having a sufficient financial basis (based on financial standards including capital, net assets and net assets regulation ratio).
- The participation requirements mentioned above are rationally aligned with risks, do not impose excessive restrictions on entities eligible for participation, and ensure open access to those applying to become Clearing Participants.
- JCCH has established no limitations on the attributes of Clearing Participant customers and does not charge fees that operate to overly limit participation.
- These participation requirements are detailed in the Business Rules for each Clearing Business and have been approved by the Competent Ministries. This approval is based on the prohibition of discriminatory treatment under Article 177 of the Commodity Derivatives Act and affirms the open access provided by the criteria.

Key Consideration 2

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

⁸⁶ Article 7 of the Business Rules, etc.

Justification and Rationality of Participation Requirements (Qualification Requirements)

- JCCH has established reasonable qualification requirements aligned with the nature and risks of each Clearing Business. JCCH has a qualification system which, in principle, allows for a participant having the same Clearing Qualifications to receive the same access.
- JCCH has established criteria for financial soundness according to the different business categories of Clearing Participants. JCCH also allows for an applicant whose net assets fail to meet certain criteria to be able to participate in Clearing Business subject to being guaranteed by its parent company.
- JCCH divides the participation of Clearing Business into principal and agency, and the requirements for being a Clearing Participant agency are stricter than those for being a Clearing Participant principal.

Review and Disclosure of Participation Requirements

- The participation requirements are made publicly available on JCCH's website⁸⁷ which is accessible by all current and potential Clearing Participants.
- JCCH reviews the participation requirements as needed, according to changes in the regulatory and general market conditions.

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.

- JCCH continuously monitors the Clearing Participants to ensure their ongoing compliance with the Clearing Qualifications.

Ongoing Monitoring of Compliance with Participation Requirements

- Monitoring of compliance with financial requirements
 - In relation to the requirements of financial soundness, JCCH receives reports from Clearing Participants on a monthly, quarterly and annual basis, and conducts

⁸⁷ <https://www.jcch.co.jp/d/d01.html> (in Japanese)

- monitoring⁸⁸. The materials to be attached to the reports submitted by Clearing Participants to JCCH are the same as those submitted to the regulatory agencies.
- JCCH monitors news on Clearing Participant finances, as well as the credit ratings and market information (stock prices, etc.) of the Clearing Participants.
 - Monitoring of compliance with requirements for management and business operation structures
 - In relation to the requirements of sufficiency of the business operations structure, JCCH adopts a structure wherein it receives reports if there are any changes in the manner or content, etc. of business operations⁸⁹.
 - Certain matters including changes of office locations of Clearing Participants are subject to prior notification to JCCH⁹⁰.
 - In addition, JCCH monitors reports and news on the management and business operations structures of Clearing Participants. JCCH also conducts sufficient monitoring of daily Clearing Business with settlement banks and securities companies to which JCCH consigns management services for Substitute Securities, with such monitoring including money payments and whether or not depositing and return of Substitute Securities have been conducted before the designated deadlines.
 - Auditing of Clearing Participants if JCCH deems it necessary⁹¹
 - JCCH sets forth that, if it deems it necessary, auditors will conduct on-site examination at the headquarters, etc., of Clearing Participants or examine materials submitted by Clearing Participants⁹².
 - If, as a result of auditing, it is considered that an act of a Clearing Participant is problematic in view of JCCH's Business Rules or other various rules, JCCH may point out the problem to the Clearing Participant and require such Clearing Participant to improve such matters, and submit reports, etc., stating measures for improvement if necessary unless JCCH imposes punishment or measures or makes a recommendation in accordance with its Business Rules.⁹³

Measures against Clearing Participants

⁸⁸ Article 18, Paragraph 1, Items (21) and (22) of the Business Rules; Article 7, Paragraphs 2 and 3 of the Regulations for Business Rules

⁸⁹ Article 18 of the Business Rules

⁹⁰ Article 17 of the Business Rules

⁹¹ Article 19 of the Business Rules

⁹² Article 6 of the Rules for Audit of Clearing Members

⁹³ Article 10 of the Rules for Audit of Clearing Members

- In cases where JCCH determines that a Clearing Participant does not satisfy the participation requirements or has violated any of JCCH's rules, JCCH may take various disciplinary measures against such Clearing Participant according to the methods prescribed in the Business Rules.
- The measures to be taken by JCCH against Clearing Participants include suspension of all or part of JCCH's assumption of obligations against such Clearing Participants and the revocation of their Clearing Qualifications.⁹⁴
- For transactions on exchanges, if the measure taken by JCCH against a Clearing Participant involves the revocation of its Clearing Qualification and the Board of Directors considers it necessary, JCCH will consult with the Discipline Committee, an advisory council of the Board of Directors composed of experts and academics, regarding the appropriateness of the measure taken.⁹⁵
- In the case of measures taken against a violation of the requirements for financial basis, in accordance with Article 7-4 of the Regulations for Business Rules, JCCH will require such Clearing Participants to make reports and submit materials, and will confirm the current and forecast statuses, etc.
- In order to promote improvement at a Clearing Participant, JCCH may issue a recommendation to the relevant Clearing Participant to take appropriate remedial action⁹⁶.
- In cases where a Clearing Participant withdraws from Clearing Business due to revocation of its Clearing Qualification, such Clearing Participant is required to dissolve its positions and fulfill its various obligations before its Clearing Qualification is revoked⁹⁷. As such, JCCH ensures that the withdrawal of Clearing Participants is conducted in an orderly manner.
- If JCCH suspends clearing for a Clearing Participant or revokes a Clearing Qualification, JCCH will notify other Clearing Participants and stakeholders, including the Designated Commodity Exchange⁹⁸, and make a public announcement.

⁹⁴ Articles 26, 27 of the Business Rules, etc.

⁹⁵ Article 32-2 of the Business Rules; Article 3, Paragraph 1 of the Discipline Committee Rules

⁹⁶ Article 36 of the Business Rules

⁹⁷ Article 35 of the Business Rules

⁹⁸ Articles 33 and 71 of the Business Rules

Principle 19: Tiered Participation Arrangements

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

Key Consideration 1

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

Tiered Participation at JCCH

- The tier of Clearing Participants at JCCH is as follows:
 - Direct Participants: direct participants who can access JCCH's Clearing Business;
 - Indirect Participants: persons who use a clearing system through Clearing Participants (namely, the Clearing Participants' customers, Non-Clearing Participants, and the Non-Clearing Participants' customers)
- The scope of Indirect Participants at JCCH may vary by Clearing Business, and may include brokers, banks, asset managers, pension funds, hedge funds, corporate entities and individuals.
- JCCH may require a Clearing Participant to submit reports or materials necessary to ascertain the business operation or financial conditions, or cause JCCH's staff to examine such Clearing Participant's business operations, financial condition, ledgers, documentation or other articles, and Clearing Participants are obligated to make reports to JCCH⁹⁹. Based on such authority, JCCH is capable of obtaining information regarding Indirect Participants through the Clearing Participants.

Risks to JCCH arising from Tiered Participation

See Principle 19, Key Considerations 3 and 4 for the risks to JCCH arising from the tiered participants' arrangements and the management of such.

Key Consideration 2

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

⁹⁹ Article 19 of the Business Rules; Article 16 of the Clearing Contract Agreement

- By auditing in accordance with Article 19 of the Business Rules and measuring risk in accordance with daily clearing contracts, JCCH identifies and verifies dependencies between specified Clearing Participants and Indirect Participants, as well as ascertaining the risk status of Indirect Participants.
- JCCH obtains information as necessary from Clearing Participants regarding the positions of individual Indirect Participants and their risk management, and confirms whether there are any issues in relation to the financial strength of such Clearing Participant and the degree of effects caused to such Clearing Participants by Direct and Indirect Participants.

Key Consideration 3

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

Monitoring of Compliance with Participation Requirements

- Irrespective of whether or not Indirect Participants fulfill their obligations to Clearing Participants, Clearing Participants are still responsible for their related Indirect Participants' financial obligations to JCCH.
- If a Clearing Participant possesses excessive positions in comparison to its financial strength, the risk relating to such Clearing Participant's fulfilment of its obligations to JCCH will increase. Therefore, JCCH monitors each Clearing Participant's positions in comparison to its financial strength on a daily basis. If JCCH considers that a Clearing Participant possesses excessive risk, it examines such Clearing Participant's risk possession status. Through this process, JCCH is able to grasp the details of the positions held by Indirect Participants, and the risk management status for Indirect Participants, and identifies any Indirect Participants who may have a significant impact on the Clearing Participant risk management. JCCH conducts the risk management through these measures.

Key Consideration 4

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

- JCCH measures the position risks of individual Clearing Participants on a daily basis, and if it deems the business operations or asset status of any Clearing Participant to be inappropriate considering the operation of the business of assuming commodity transaction debts, JCCH will investigate the risk possession status and may recommend a Clearing Participant to take appropriate remedial action and require it to submit a report showing the remedial action taken¹⁰⁰. Furthermore, if JCCH does not find any improvement by the relevant Clearing Participant, JCCH may take measures of raising the margin or requiring the deposit of Special Clearing Funds¹⁰¹.

¹⁰⁰ Article 36 of the Business Rules

¹⁰¹ Article 61, Paragraph 2 of the Business Rules; Article 3 of the Regulations for Clearing Funds

Principle 20: FMI Links

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

Key Consideration 1

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

- JCCH has no links with other FMIs in its settlement and collateral management operations.

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.

- JCCH has no links with other FMIs.

Key Consideration 3

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

- JCCH does not provide Central Securities Depository (“CSD”) functionality.

Key Consideration 4

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

- JCCH does not provide CSD functionality.

Key Consideration 5

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

- JCCH does not provide CSD functionality.

Key Consideration 6

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

- JCCH does not provide CSD functionality.

Key Consideration 7

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

- JCCH has not established a link with any other CCPs.

Key Consideration 8

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

- JCCH has not established a link with any 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.

- JCCH does not provide trade repository ("TR") functionality.

Efficiency

Principle 21: Efficiency and Effectiveness

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

Key Consideration 1

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

- JCCH establishes a committee, a working group, or other bodies as necessary, with related organizations (including Clearing Participants) as its members in order to ensure that its development of products and services is in line with market needs.¹⁰² By this, JCCH grasps the needs of Clearing Participants and reflects opinions from the Clearing Participants' practical viewpoints on the operational structure (see Key Consideration 2 of Principle 2 (Governance)).
- JCCH provides for procedures wherein the Board of Directors or CEO consults with a committee or working group when it revises the clearing and settlement arrangements or regulations, the operating structure, the products being cleared, and the system, etc., respecting the opinions of Clearing Participants, related organizations and others. Through the procedures of exchanging opinions with Clearing Participants or market-related persons, JCCH seeks to satisfy both participants and market needs on as broad a scale as possible.
- The results and feedback obtained through these procedures are made publicly available on JCCH's website. Through each procedure, JCCH aims to make sure that JCCH's efforts are well publicized.

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.

¹⁰² Article 11 of the Operation Rules for Committees

- JCCH's Charter of Corporate Behavior sets out JCCH's public mission and responsibility of "contributing to the economy and society through market establishment and operation, etc., necessary for conducting commodity future transactions." In addition, JCCH sets out its business management policy that it "aims to enhance the reliability and serviceability of the commodities futures market by ensuring safety and performance of settlement, providing a framework which protects customer properties, and facilitating the business of assuming commodity transaction debts."
- In order to realize the above, JCCH formulates a medium-term management plan and annual business plan in view of the previous year's business operations status, including service level, risk management, etc.
- In the medium-term management plan from 2016 to 2018, JCCH sets out "establishment of the basis for performing Clearing Business", "efforts towards strengthening regulations relating to risk management", and "addressing new business management issues" as its key strategic aims.
- JCCH conducts its business operations based on such medium-term management plan. JCCH reports to the Board of Directors on the status of achieving the goals set forth in the plans, and the Board of Directors then reviews the same. The measurability and achievability of objectives under such plans are secured by the Board of Directors' review.

Key Consideration 3

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

- JCCH formulates its business strategies through its medium-term management plan and business plan, and reports the implementation status to the Board of Directors for its review.
- Such review also confirms the system, business operations and cost aspects.

Principle 22: Communication Procedures and Standards

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

Key Consideration 1

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

- JCCH uses widely accepted communication procedures and standards for communications with Clearing Participants and fund settlement banks under Clearing Business. JCCH adopts the following procedures and standards for external communications.

Between JCCH and Clearing Participants

- JCCH uses HTTPS (Hypertext Transfer Protocol Secure) provided by internet communication lines.

Between JCCH and Exchanges

- JCCH uses FTP (File Transfer Protocol) or HTTP provided by INS (Information Network System) line.

Between JCCH and Settlement Banks

- JCCH uses Bank TCP/IP (Transmission Control Protocol/Internet Protocol) provided by INS line.

Between JCCH and CSD

- JCCH uses FTP provided by INS line.

Between JCCH and Other Providers

- JCCH uses FTP provided by INS line.
- “Other service providers” include providers preparing unit price files for Substitute Securities to be registered on a clearing system.

Transparency

Principle 23: Disclosure of Rules, Key Procedures, and Market Data

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

Key Consideration 1

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

JCCH's Rules

- JCCH expressly sets forth comprehensive rules and procedures relating to Clearing Business in its Business Rules, the subordinate rules thereto, and related rules¹⁰³, and publishes the primary rules and procedures on its website¹⁰⁴ both in Japanese and English. These rules stipulate the qualification requirements and obligations of Clearing Participants, the claims and obligations between JCCH and the Clearing Participants regarding clearing and settlement, the settlement process, the loss compensation resources framework (including margins, and Clearing Funds, etc.).

Procedures for Revision of JCCH's Rules

- If JCCH needs to revise its Business Rules and their subordinate rules for Clearing Business, and if a revision to the Business Rules or the subordinate rules thereto would impact Clearing Participants, JCCH compiles an outline of the proposed revision and consults with a committee, working group or other body, featuring the related organizations (including Clearing Participants) as members thereof, which are established as necessary (see Principle 2 (Governance)), and exchanges opinions targeting all Clearing Participants.
- Through the documents related to such exchange of opinions, Clearing Participants are

¹⁰³ Clearing Margin Rules; Regulations for Business Rules; Regulations for Clearing Margin Rules; Regulations for Clearing Funds; Regulations for Substitute Securities; Regulations for Substitute Foreign Currency; Regulations for LG Contracts for Replacement Deposits; Regulations for LG Contract for Direct Deposits, etc.

¹⁰⁴ https://www.jcch.co.jp/i/i_c.html

able to understand the aim of the revision to the Business Rules and subordinate rules and the impact involved in such revision.

- JCCH informs each Clearing Participant of any revision to the rules and publishes the same on its website. JCCH holds explanatory sessions in the case of a material revision to the rules.

JCCH's Information on its Website

- JCCH's website is publicly accessible and publishes the following information related to clearing and settlement:
 - Company overview, and business management and financial information;
 - Related rules (including the Business Rules);
 - Overview of clearing and settlement system, and Clearing Participants system, and clearing related data;
 - The margin system, and responses to settlement failure; and
 - Market information (statistical information relating to monthly trade counts and trade volumes, etc.).

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.

- Descriptions of JCCH's clearing system, including the claims and obligations between JCCH and the Clearing Participants and the operational procedures involved, are stipulated in the Business Rules and the subordinate rules for each JCCH Clearing Business. JCCH's Business Rules and subordinate rules are publicly available on JCCH's website (see Key Consideration 1 of this Principle).
- The details which compose the core of JCCH's clearing system are stipulated in JCCH's Business Rules and subordinate rules. When revising these rules, JCCH provides the details of the revisions to interested parties via its website or the like (see Key Consideration 1 of this Principle).
- Additionally, the Business Rules and subordinate rules stipulate the scope of matters that JCCH is able to determine at its discretion in the course of its Clearing Business operations.
- JCCH provides a wide range of information to Clearing Participants, to enable Clearing Participants to identify and evaluate the risks and costs pertaining to the use of the

clearing service, including the following:

- Information relating to clearing methods and clearing conditions;
- Information relating to collateral;
- Responsibility for margin and clearing funds, acceptable collateral, and collateral haircuts, etc.;
- Information relating to Clearing Participant default procedures;
- Order of priority for application of loss compensation resources (margin, clearing funds, Default Compensation Reserve), handling of outstanding positions of defaulting Clearing Participants; and
- Loss Compensation Scheme for each Clearing Participant.

This information is included in JCCH's Business Rules and subordinate rules, which are public documents.

- JCCH also provides Clearing Participants with its Operational Procedures which stipulate details regarding the operation of each Clearing Business.

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.

- JCCH holds explanatory sessions for persons newly to become Clearing Participants, to facilitate their understanding of the clearing framework and procedures to be granted Clearing Qualifications, etc.
- When revising its rules, JCCH provides explanations and information regarding the contents of the revision to Clearing Participants as necessary.
- The ongoing compliance of Clearing Participants with JCCH's rules and procedures demonstrates their full understanding of such.
- If JCCH recognizes any deficiency in a Clearing Participant's understanding of JCCH's rules and procedures and the risks pertaining to participation, or any problem of a Clearing Participant in light of its Business Rules or other various rules, JCCH may point out such and require improvement from the relevant Clearing Participant¹⁰⁵.

Key Consideration 4

An FMI should publicly disclose its fees at the level of individual services it offers as

¹⁰⁵ Article 10 of the Rules for Audit of Clearing Members

well as its policies on any available discounts. The FMI should provide clear descriptions of priced services for comparability purposes.

- JCCH publicly discloses the clearing fee structure on its website. Rules relating to fees, including details of the fee rates for each product, are also published¹⁰⁶.
- For important service and fee revisions, JCCH establishes a Committee, a working group, or another body, with related organizations (including Clearing Participants) as its members¹⁰⁷, and endeavors to make determinations after submitting proposals therefor to such Committee, working group or body in advance and going through discussions with the Clearing Participants. Such revised contents are then informed to the Clearing Participants and published on the website.
- JCCH provides information on technology and communication procedures to existing Clearing Participants and persons seeking to become Clearing Participants, and thereby enables such parties to estimate the costs related to participation.

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.

- This document is a disclosure document in accordance with the “disclosure framework for financial market infrastructures” published by the Committee on Payment and Settlement Systems-Board of the International Organization of Securities Commissions (“CPSS-IOSCO”).
- JCCH will update this disclosure document if there are any significant changes in the description, or at a minimum of once every two years.

Data Disclosure

- JCCH discloses statistical information for monthly trade counts, trade values, etc., pertaining to Clearing Business on its website. This statistical information includes the following:
 - Eligible products for clearing;
 - Clearing Participant qualification criteria;

¹⁰⁶ Article 6 of the Regulations for Business Rules

¹⁰⁷ Article 11 of the Operation Rules for Committees

- Existing Clearing Participants;
- Information about JCCH's clearing and settlement operations (cleared volume, changes in trade values, etc.); and
- Outline of overall risk management system (including margin framework).

Principle 24: Disclosure of Market Data by Trade Repositories

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

- This principle does not apply because JCCH does not provide TR functionality.

V. Public Information

JCCH's Business Rules, etc.

https://www.jcch.co.jp/i/i_c.html

JCCH's balance sheet and profit and loss statement (in Japanese)

<https://www.jcch.co.jp/b/b05.html>

JCCH's company profile

https://www.jcch.co.jp/i/i_b.html

JCCH's clearing and settlement system

https://www.jcch.co.jp/i/i_e.html

JCCH's Clearing Qualification

https://www.jcch.co.jp/i/i_d.html

List of JCCH's Clearing Participants

https://www.jcch.co.jp/i/i_d.html

JCCH's statistical data, etc. (in Japanese)

<https://www.jcch.co.jp/b/b08.html>

Tokyo Commodity Exchange, Inc.

<https://www.tocom.or.jp/>

Osaka Dojima Commodity Exchange

<http://ode.or.jp/english/>

The Commodity Futures Association of Japan (in Japanese)

<https://www.nisshokyo.or.jp/>

Japan Commodity Futures Industry Association (in Japanese)

<http://www.jcfia.gr.jp/>

National Futures Protection Fund (in Japanese)

<http://www.hogokikin.or.jp/>

The Center for Financial Industry Information Systems (FISC)

<https://www.fisc.or.jp/english/>

Ministry of Agriculture, Forestry and Fisheries

<http://www.maff.go.jp/e/>

Ministry of Economy, Trade and Industry

<https://www.meti.go.jp/english/>

Commodity Derivatives Act

<http://www.japaneselawtranslation.go.jp/law/detail/?id=3191&vm=04&re=01>

Order for Enforcement of the Commodity Derivatives Act

<http://www.japaneselawtranslation.go.jp/law/detail/?ft=1&re=01&dn=1&x=0&y=0&co=01&ia=03&ky=%E5%95%86%E5%93%81%E5%85%88%E7%89%A9%E5%8F%96%E5%BC%95%E6%B3%95&page=18>

Ordinance for Enforcement of the Commodity Derivatives Act

<http://www.japaneselawtranslation.go.jp/law/detail/?ft=1&re=01&dn=1&x=0&y=0&co=01&ia=03&ky=%E5%95%86%E5%93%81%E5%85%88%E7%89%A9%E5%8F%96%E5%BC%95%E6%B3%95&page=17>

Basic Guidelines on Supervision of Commodity Clearing Organizations (in Japanese)

http://www.maff.go.jp/j/shokusan/syoutori/dealing/pdf/shishin_261126.pdf

Civil Code

<http://www.japaneselawtranslation.go.jp/law/detail/?ft=1&re=01&dn=1&x=0&y=0&co=01&ia=03&ky=%E6%B0%91%E6%B3%95&page=156>

<http://www.japaneselawtranslation.go.jp/law/detail/?ft=1&re=01&dn=1&x=0&y=0&co=01&ia=03&ky=%E6%B0%91%E6%B3%95&page=157>

Companies Act

<http://www.japaneselawtranslation.go.jp/law/detail/?re=01&dn=1&x=0&y=0&co=1&yo=&gn=&sy=&ht=&no=&bu=&ta=&ky=%E4%BC%9A%E7%A4%BE%E6%B3%95&page=15>

<http://www.japaneselawtranslation.go.jp/law/detail/?re=01&dn=1&x=0&y=0&co=1&yo=&gn=&sy=&ht=&no=&bu=&ta=&ky=%E4%BC%9A%E7%A4%BE%E6%B3%95&page=16>

Principles for Financial Market Infrastructures (FMI Principles)

<https://www.bis.org/cpmi/publ/d101a.pdf>

FMI Principles: Disclosure Framework and Assessment Methodology

<http://www.iosco.org/library/pubdocs/pdf/IOSCOPD396.pdf>

European Market Infrastructure Regulation (EMIR)

<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32012R0648>

VI. List of Abbreviations

BCP	Business Continuity Planning
CCP	Central Counterparty
CME	Chicago Mercantile Exchange
CPSS	The Committee on Payment and Settlement Systems
EMIR	European Market Infrastructure Regulation
ESMA	European Securities and Markets Authority
FISC	The Center for Financial Industry Information Systems
FMI	Financial Market Infrastructures
FMI Principles	Principles for Financial Market Infrastructures
IOSCO	The International Organization of Securities Commissions
ISMS	Information Security Management System
JCCH	Japan Commodity Clearing House Co., Ltd.
LVPS	Large-Value Payment System
ODE	Osaka Dojima Commodity Exchange
RPF	Risk Parameter File
SPAN	Standard Portfolio Analysis of Risk
SSS	Securities Settlement System
TC-CCP	Third Country CCP
TCP	Transmission Control Protocol
TOCOM	Tokyo Commodity Exchange, Inc.
TR	Trade Repository
VaR	Value-at-Risk