

**Outlines Regarding Reinforcement of Risk Management Framework related Default Management
in Securities and Similar Contracts Clearing Business**

September 28, 2017

Japan Securities Clearing Corporation

I. Purpose

As a central counterparty engaging in Securities and Similar Contracts Clearing Business (referring to Financial Instruments Debt Assumption Service related to cash products, such as stocks, traded at all Japanese exchange markets and Proprietary Trading System (PTS) and Market Transactions of Derivatives (Listed Derivatives) traded at Osaka Exchange; the same applies hereinafter) , OTC Derivatives Clearing Business and OTC JGB Clearing Business, JSCC is expected to fulfil the important role of blocking systemic risks in Japanese financial system.

In order to fully perform such role, JSCC has established its risk management framework. Now, JSCC will make necessary revisions in light of the international regulations, such as the CPSS-IOSCO “Resilience and recovery of central counterparties (CCPs): Further guidance on the PFMI,” and would like to further reinforce its risk management framework related to default management.

II. Overview

Item	Overview	Remarks
1. Establishment of Margin Increase Scheme to Keep Sufficient Prefunded Financial Resources	<ul style="list-style-type: none"> • To realize further sophisticated loss compensation framework for Listed derivatives in light of the international regulations, Further guidance on the PFMI, JSCC will put in place a scheme of increasing Margin requirement to maintain the status wherein loss expected at stressed market conditions can be solely covered by the prefunded financial resources. 	<ul style="list-style-type: none"> • “Prefunded financial resources” means the loss compensation financial resources CCP secures in advance of a default of a Clearing Participant, and refers, under Listed derivatives, to Margin and the like of the

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(1) Increase Judgment Criteria and Judgment Method	<ul style="list-style-type: none"> ▪ For each of the JGB Futures Clearing Qualification and Index Futures Clearing Qualification, when there is a shortfall in the sum of (i) to (iii) below in respect of the Clearing Participant’s “Risk Amount Exceeding Collateral,” JSCC will increase Margin requirement for Clearing Participant’s House to cover such shortfall: <ul style="list-style-type: none"> (i) Assets received through third party (Market Operator)’s loss compensation; (ii) JSCC’s Securities and Similar Contracts Settlement Guarantee Reserve; and (iii) Sum of Clearing Participants’ Clearing Fund requirements. ▪ A Clearing Participant’s “Risk Amount Exceeding Collateral” means the sum total of the portion of the stressed risk equivalent related to House and each Client Account of a Clearing Participant exceeding the amount equivalent to the deposited amount of Margin and the like for each account (only positive value in respect of Client accounts). 	<p>defaulting Clearing Participant, contributions by the Exchange and JSCC, and Clearing Fund.</p> <ul style="list-style-type: none"> ▪ The “stressed risk equivalent” means the amount of loss arising from outstanding contracts under the stress scenario (the same as stress scenario related to Clearing Fund requirement calculation). ▪ “Margin and the like” refers to Margin and Initial Margin related to JGB Futures Clearing Qualification.
(2) Amount of Margin Requirement Increase	<ul style="list-style-type: none"> ▪ When Margin requirement increase for a Clearing Participant’s House applies pursuant to (1) above, the Margin requirement after the increase shall be the sum total of the deposited Margin for the Clearing Participant’s House account and 	

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(3) Treatment when There is Another Clearing Participant Falling under Affiliate	<p>the shortfall calculated under (1).</p> <ul style="list-style-type: none"> ▪ When there is another Clearing Participant falling under an Affiliate of the Clearing Participant, the shortfall under (1) shall be, for each of JGB Futures Clearing Qualification and Index Futures Clearing Qualification, the amount of shortfall in the sum total of (i) to (iii) under (1) in respect of the sum total of “Risk Amount Exceeding Collateral” (positive value only) of the Clearing Participant and the other Clearing Participant. To cover such shortfall, JSCC will increase Margin requirement for the Clearing Participant and the other Clearing Participant. ▪ In this case, the amount of increase of each Clearing Participant’s Margin requirement shall be the sum total of the deposited amount of Margin related to House Account of each Clearing Participant and the portion of such shortfall prorated according to each Clearing Participant’s “Risk Amount Exceeding Collateral.” 	<ul style="list-style-type: none"> ▪ “Affiliate” means a subsidiary and affiliate of a company, and a parent of such company, subsidiary of such parent company and affiliate of such parent.
(4) Deposit Cutoff Time of Increased Margin Requirement	<ul style="list-style-type: none"> ▪ JSCC will make judgment of a need for Margin requirement increase related to each Clearing Participant based on position status at each account, both House and Client, fixed as at the end of each trading day, and notify the amount of increase and other necessary information to the Clearing Participants subject to the Margin requirement increase. 	<ul style="list-style-type: none"> ▪ The judgment of a need for Margin requirement increase is made at or after 5:40 a.m. on the next business day following the trading day.

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<p>2. Revision of Base PML Amount Associated with Revision of Clearing Services for Listed derivatives</p>	<ul style="list-style-type: none"> ▪ When there is a shortfall in the deposited Margin due to Margin requirement increase for the House account, the Clearing Participant shall make additional deposit in the amount at least equal to such shortfall by 2:00 p.m. on the date of receipt of the increase notification. ▪ In association with the revision of Clearing Services for the Listed derivatives^{*1}, JSCC will further refine and make other necessary revisions to the calculation method of the Base PML (Probable Maximum Loss) Amount used for Clearing Fund requirement calculation as outlined in (i) to (iii) below in light of the revision of the account management structure at CCP^{*2}: <ul style="list-style-type: none"> (i) The Base PML amount of the Clearing Participant shall be, for the JGB Futures Clearing Qualification and Index Futures Clearing Qualification, respectively, the sum of the amount (just positive values in respect of Client Accounts) obtained, for each account after “Revision of Account Management Structure at CCP,” by deducting the amount of Margin from the amount of loss arising from the unsettled contracts under stress scenarios (PFE: Potential Future Exposure). (ii) The amount of Margin to be deducted from the PFE in (i) shall be, for JGB Futures Clearing Qualification and Index Futures Clearing Qualification respectively, the Margin requirement for the day (excluding the amount of 	<ul style="list-style-type: none"> ▪ The notification will be given via e-mail and other methods. ▪ Under current procedures, it is determined by prorating deposited margin for the day

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<p>3. Temporary Utilization of Cash</p>	<p>increase as per 1. above).</p> <p>(iii) For allocation of the Period Largest Base PML Amount (total amount of Clearing Fund requirement) to each Clearing Participant, the average of the Margin requirement equivalent related to each of JGB Futures Clearing Qualification and Index Futures Clearing Qualification for the period of one month preceding the based date for the Clearing Fund requirement calculation shall be used.</p> <p>• Put in place required arrangements as outlined below to enable temporary utilization of</p>	<p>for House, or Margin requirement for the previous day for Client, according to the percentage of PML amount for each Clearing Qualification to the total stressed risk equivalent.</p> <ul style="list-style-type: none"> • Under current procedures, it is the one month average of the amount of Margin related to the Listed derivatives prorated according to PML amount for each Clearing Qualification. • “Margin requirement equivalent” means Margin requirement calculated by SPAN for unsettled contracts of the products under each Clearing Qualification. <p>• Similar arrangements are in place</p>

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<p>Portion of Clearing Fund to Cash Settlement</p> <p>(1) Introduction of Cash Requirement</p> <p>(2) Temporary Utilization of Cash Portion of Clearing Fund to Cash Settlement</p>	<p>cash portion of Clearing Fund (limited to Clearing Fund related to Securities and Similar Contracts Clearing Business; the same applies hereinafter) deposited with JSCC by non-defaulting Clearing Participants to cash settlement upon settlement failure by a Clearing Participant (referring to a person holding Clearing Qualification related to Securities and Similar Contracts Clearing Business; the same applies hereinafter).</p> <ul style="list-style-type: none"> ▪ A Clearing Participant must deposit with JSCC at least a predetermined portion (hereinafter “Cash Requirement”) of the Clearing Fund requirement in cash (Japanese yen only; the same applies hereinafter). ▪ The Cash Requirement shall be one half of the amount obtained by subtracting the amount prescribed by JSCC (it will be JPY1bil. for the time being) from the Clearing Fund requirement. ▪ When a Clearing Participant fails to perform its settlement obligations, and liquidity required for JSCC to perform its settlement obligations, etc. to other Participants is more than the total amount of the cash deposited by such defaulting Clearing Participant with JSCC and the cash of which JSCC suspended withdrawal, and the cash JSCC procured or expected to procure through other methods, JSCC may temporarily use and apply to cash settlement for Securities and Similar Contracts Clearing Business the Clearing Fund deposited in cash by the Clearing Participants other than the defaulting Clearing Participant (hereinafter “Non-defaulting Participant”) with JSCC. 	<p>at overseas CCPs.</p> <ul style="list-style-type: none"> ▪ Currently, the deposit in the form of securities collateral is allowed for the entire amount of the Clearing Fund requirement. ▪ The deposit cutoff time shall remain unchanged. ▪ Specifically, in addition to cash JSCC holds in hand and at banks (other than cash deposited by other persons), financial liquidity resources secured through liquidity supply agreement with banks, etc. (currently approx. JPY1.5 trillion) will be used as liquidity financial

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(3) Cap on Temporary Utilization	<ul style="list-style-type: none"> The cash portion of the Clearing Fund JSCC temporarily uses pursuant to (2) shall be capped at the total amount of the Cash Requirement applied to the Non-defaulting Participants as of the business day immediately preceding the date of settlement failure. 	<p>resources preferentially.</p> <ul style="list-style-type: none"> Allocation to each Non-defaulting Participant shall be made in pro-rata according to the Cash Requirement as of the date of the settlement failure.
(4) Suspension of Withdrawal of Cash Portion of Clearing Fund under Temporary Utilization	<ul style="list-style-type: none"> While the Clearing Fund is temporarily used pursuant to (2), JSCC may suspend withdrawal of the Clearing Fund (cash portion only) by the Non-defaulting Participant. 	
(5) Ending Temporary Utilization	<ul style="list-style-type: none"> After the completion of the settlement, etc. related to the settlement failure which caused the temporary utilization, JSCC will cease such temporary utilization without delay, and resume the custody status before such temporary utilization. 	
(6) Payment of Interest Equivalent	<ul style="list-style-type: none"> At the time JSCC ceases the temporary utilization as described in (5), JSCC will pay the amount equivalent to interest according to the market level of the interest rate and period of utilization to the Non-defaulting Participant deposited the cash portion of the Clearing Fund subject to the temporary utilization. 	<ul style="list-style-type: none"> When calculating interest equivalent, JSCC will refer to Uncollateralized Overnight Call Rate (average) published by the

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<p>4. Establishment of Liquidation Methods for Defaulter's Position, etc.</p> <p>(1) Liquidation through Auction</p> <p>(2) Incentive for Successful Auction</p>	<ul style="list-style-type: none"> ▪ To mitigate loss arising from a default of a Clearing Participant, the methods of liquidation of open interests and securities collateral of the Defaulting Participant (meaning a Clearing Participant with respect to which JSCC suspended entire clearing by a reason of insolvency, etc.; the same applies hereinafter) will be established as outlined below, such as options for liquidation method of open interests and securities collateral of the Defaulting Participant. ▪ JSCC shall start liquidation of Defaulter's Position (meaning the open interests of Defaulting Participant; the same applies hereinafter) through trading and transactions at the market. When such position cannot be promptly liquidated through such method and JSCC considers it necessary taking into consideration various factors, such as composition of issues and size of the remaining position and market conditions, JSCC may liquidate such Defaulter's Position through an auction. ▪ Matters required for auction, such as bid timing, shall be determined by JSCC at each occasion. ▪ When covering loss arising from liquidation of Defaulter's Position with Clearing Fund the Non-defaulting Participant deposited with JSCC, all or a part of the Clearing Fund of the Clearing Participant which became successful bidder in the auction under (1) shall be 	<p>Bank of Japan.</p> <ul style="list-style-type: none"> ▪ Similar arrangements are in place at overseas CCPs. ▪ Currently, having the Defaulting Participant or other Clearing Participants liquidate positions (trading and transactions at the market) is only expected. ▪ Arrangement for better bid price at auction.

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(3) Flexibilization of Liquidation of Securities Collateral	<p>used after using the Clearing Fund of the Clearing Participants other than such successful bidder (subordinated use).</p> <ul style="list-style-type: none"> When a Clearing Participant fails to perform, or JSCC considers that a Clearing Participant is threatened to fail to perform, its settlement obligations, JSCC may liquidate securities collateral (meaning the securities deposited as Clearing Fund and Clearing Margin or posted as other collateral, other than those for direct deposit of Clearing Margin by Client in principle; the same applies hereinafter) the Defaulting Participant posted with JSCC. JSCC shall determine the method and timing of such liquidation in light of various factors, such as the composition and size of the securities collateral posted by the Participant with JSCC and market condition. 	<ul style="list-style-type: none"> Currently, the securities collaterals are to be liquidated after the liquidation of the Defaulting Participant's Position. For example, when the issue of the securities scheduled to be delivered by the Defaulting Clearing Participant to JSCC is the same as the issue of the securities collateral posted by the Defaulting Participant with JSCC, such securities collateral will be applied to the settlement.
(4) Hedging Transaction	<ul style="list-style-type: none"> When JSCC considers it necessary to mitigate price fluctuation risk up to the liquidation of the Defaulting Participant's Position in light of various factors, such as composition and size of Defaulting Participant's Position (including securities collateral) and market condition, JSCC may have other Clearing Participants execute hedging transactions 	<ul style="list-style-type: none"> Similarly as in the case of cost of liquidation of the securities collateral, loss/costs related to the hedging transactions shall be

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	JSCC considers appropriate on the Defaulting Participant's book.	included in the loss arising from the participant default management.

*1: For the revision of Clearing Services for the Listed derivatives, please refer to “Outlines concerning Revision of Clearing Services for Listed Derivatives, etc.” published on March 31, 2017.

*2: There will be no change to the points that number of firms for default assumption (i.e., 1 Clearing Participant with the largest stressed risk equivalent and 5 Clearing Participants with the smallest net worth) related to Clearing Fund requirement calculation and the definition of the stressed risk equivalent which shall be the largest amount during the 6 month period preceding the base date for Clearing Fund requirement calculation.

III. Implementation Date

The implementation the above, except for II.3.and II.4, is scheduled at the same timing as the go live of Next Generation Derivatives Clearing System (scheduled around the first quarter of 2018), and the implementation of II.3 and II.4 is targeted around February 2018. The handling of these implementations will be determined as needed.

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