Handling of Specifics Concerning VaR Method

Application scheduled to start from November 2023

Japan Securities Clearing Corporation

Item	Description	Remarks
I Outlines	 This document sets out the specifics concerning calculation method for the Amount Required for Margin related to Futures and Option Contracts (VaR Method) pursuant to the provisions of "Handling of Rules on Margins, etc. for Futures and Option Contracts" and "Handling of Rules on Margin for Business of Assuming Commodity Transaction Debts". 	 Unless otherwise separately stated, the rules mentioned in left column shall be collectively referred to as "Handling of Rules on Margins, etc"
II Historical Simulation Method (HS-VaR Method)		
1.Historical Scenario		Handling of Rules on Margins, etc. Appendix 1 (note 2)
(1) The number of fluctuation days for market data	• The number of fluctuation days in generating historical scenario is 2.	 Market data means settlement price for futures contracts and the underlying asset price, implied volatility and interest rate for option contracts.
(2) Type of fluctuations related to market data	 Type of fluctuation related to market data used to generate historical scenario is logarithm fluctuation rate. However, for Settlement Price related to Electricity Futures Contracts and interest rate, it is fluctuation width. 	

(3) Adjustment method of Historical Scenario	 The adjustment method of Historical scenario is the one using weighted average of (a) and (b) by a certain weight (1-w: w). (a) Historical Scenario adjusted by EWMA (Exponentially Weighted Moving Average) method (decay factor λ). (b) Historical Scenario without EWMA adjustment Parameters related to historical scenario adjustment are shown below. 			ed ng
	Products	λ	W	
	Products covered by Index Futures Clearing Qualification	0.940	0.5	
	Other products	0.985	0.0	
2.Stress Scenario3.Specifics on calculation	 Stress Scenario shall be generated ba 2008 and hypothetical data as in extrem 	ased on historic e but plausible r	al data in and af narket condition.	 Handling of Rules on Margins, etc. Appendix 1b Handling of Rules on Margins, etc.
method of Expected Loss Amount (1) Calculation method of Expected Profit/Loss 99% Coverage Amount	 The amount equivalent to 99%, when ordered in descending order ("Exp Amount") shall be calculated by ave amount based on historical scenario (1) 	n fluctuation am bected Profit/Lo raging the botto 250) and stress	ount (Profit/Loss) ss 99% Covera om 2.5% fluctuati scenario (2).	 Appendix 1t, main text As for reference period of historical scenario, if 1250 days which are equivalent to 5 years are acknowledged as inappropriate, JSCC shall separately prescribe the period.
(2) Policy on risk offset	· As a general rule, Expected Profit/Los	s 99% Covera	ge Amount shall	 The top two smallest fluctuation amounts among fluctuation amount calculated based on stress scenario shall be used for Expected Profit/Loss 99% Coverage Amount calculation. No risk offset shall be set between

restriction	 calculated deeming all transactions under the same Clearing Qualification as one portfolio, provided, however, in case of ii below, to set a certain level restriction on the risk offset amount (risk offset restriction), aggregation group shall be set under Clearing Qualification layer (the most upper layer aggregation group) and Expected Profit/Loss 99% Coverage Amount shall be calculated pursuant to the formula i. i. Calculation formula for offset restriction M a x [X, Y - a (Y - X), b Y] X: The amount calculated by upper-level aggregation group Y: Total sum of the amount calculated for each aggregation group a, b : Parameters for offset restriction 	 commodities applying HS-VaR Method and those applying AS-VaR Method. Aggregation group can be set as multiple layers under the Clearing Qualification. Starting from the aggregation group in the lowest layer, the formula i in left column shall be calculated and the amount obtained by deeming X as the amount for the most upper aggregation group unit shall be the Expected Profit/Loss 99% Coverage Amount for the portfolio related to the corresponding Clearing Qualification.
	ii. Combination subject to offset restriction and parameter value Combination a b	
III Alternative Simulation Method (AS- VaR Method)1.Covered commodities	Electricity Futures / LNG Futures 0.8 0.2 • Commodities subject to Alternative Simulation Method are shown below. i. Dividend Index Futures Contracts ii. Commodity Futures/Option Contracts (excluding Electricity Futures Contracts and LNG Futures Contracts)	 Handling of Rules on Margins, etc. Appendix 1, proviso
2.Calculation Method and others	 Calculation method and parameter setting method for Alternative Simulation Method shall be prescribed in Annex "Outlines of AS-VaR Method calculation." 	

Outlines of AS-VaR Method Calculation

Item	Description	Remark
I Objectives	 These outlines set out the calculation method of Alternative Simulation Method (AS-VaR Method) and the parameters and alike necessary for calculation by the relevant method (hereinafter referred to as "AS-VaR Parameters") among margin calculation of Futures/Options Contracts. 	
II Calculation method 1.Calculation of Scenario Profit/Loss	 Each Combined Commodity (referred to the group comprised of Futures/Options instruments with the same underlying asset; the same applies hereinafter), 30 scenarios (see Annex 1) which are combinations of fluctuation width and direction of each parameter prescribed in III are generated to calculate Profit/Loss for each scenario. 	 Assumption for fluctuation of parameters and fluctuation direction for each scenario shall not be reviewed regularly, however, if JSCC acknowledges as necessary, JSCC shall revise a part or all of them.
2.Calculation of Expected Profit/Loss 99% coverage amount	 The smallest value among the value adding intercommodity spread risk to each scenario's profit/loss shall be Expected Profit/Loss 99% Coverage Amount. 	
3.Calculation of margin amount	 By aggregating Expected Profit/Loss 99% Coverage Amount within the same Clearing Qualification category and deducting credit related to intercommodity risk offset, calculate margin amount for the relevant Clearing Qualification category. 	 When JSCC acknowledges as necessary, JSCC may set restriction on intercommodity risk offset.
III Regularly-reviewed AS-VaR Parameter	 JSCC, as a general rule, shall set AS-VaR Parameters for each Combined Commodities subject to AS-VaR Method, review AS-VaR Parameters on the last business day of every week and post them on JSCC's site within the day. If a revision is acknowledged as necessary, a part or all of parameters shall be revised on the following business day of the posting date. 	 No AS-VaR Parameters shall be set for contracts currently suspended.

Item	Description	Remark
	 However, if JSCC acknowledges as it is necessary in special, for example, when market condition suddenly changes, JSCC shall revise a part or all of AS-VaR Parameters. 	
1.Price fluctuation risk	Price fluctuation risk shall be set as below.	
	 i. GOLD Group, SILVER Group, PLATINUM Group, PALLADIUM Group, RUBBER Rss3 Group, RUBBER TSR20 Group, Barge Gasoline Group, Barge Gas Oil Group, Kerosene Group, Chukyo Lorry Gasoline Group and Chukyo Lorry Gas Oil Group Calculate the product of the smallest value of price fluctuation rate of Settlement Price for each contract month contract in the relevant Combined Commodity to cover 99% (class value basis; hereinafter the same applies) of the value for all trading days and all contract month contract) and the largest value of all Settlement Prices in the relevant Combined Commodity on the reference date for each of period a and period b prescribed below. Price fluctuation risk shall be the value calculated by multiplying the larger value of two by X prescribed below. 	 Price fluctuation rate means the value obtained by dividing the absolute value of the difference between Settlement Price of the day and that of the immediately preceding day (if such date is a holiday, the immediately preceding day; the same applies hereinafter).
	 a 4 weeks up to the reference date b 54 weeks up to the reference date ii. OSE GOLD SPOT Group, OSE PLATINUM SPOT Group, ODEX GOLD ROLLING-SPOT Group, ODEX SILVER ROLLING-SPOT Group and ODEX PLATINUM ROLLING-SPOT Group 	 Price fluctuation rate of Settlement Price and closing price related to ROLLING-SPOT contracts means the value obtained by dividing the absolute value of the difference
	 Calculate the product of the smallest value of price fluctuation rate of Settlement Price and closing price in the relevant ROLLING-SPOT contracts in the relevant Combined Commodity to 	and Settlement Price of the preceding day by the Settlement

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	cover 99% of the value for all trading days and Settlement Price of ROLLING-SPOT contracts in the relevant Combined Commodity on the reference date, for each of period a and period b prescribed below. Price fluctuation risk shall be the value calculated by multiplying the larger value of two by X prescribed below. a 4 weeks up to the reference date b 54 weeks up to the reference date	 Price of the immediately preceding day. Price fluctuation rate means the value obtained by dividing the absolute value of the difference between Settlement Price of the day and that of the immediately preceding day.
	 Platts Dubai Crude Group and CME Petroleum Index Group For the relevant Combined Commodity, calculate the product of the average value of price fluctuation rate of Settlement Price for each trading day in 5 years up to the reference date (excluding those related to the nearest contract month contract) and price fluctuation rate of Settlement Price for each contract month contract (excluding those related to the nearest contract month contract) on the stress day to cover more than 97.5% of the value for all trading days and the largest value of all Settlement Prices in the relevant Combined Commodity on the reference date (excluding those related to the nearest contract). Price fluctuation risk shall be the value calculated by multiplying the obtained value by X prescribed below. 	 "Price fluctuation rate of Settlement Price for each contract month contract in each trading day in 5 years up to the reference date" means the value reflecting the recent market condition using volatility prescribed by JSCC based on EWMA method (hereinafter referred to as Exponentially Weighted Moving Average Method; the same applies hereinafter) with decay factor of 0.985. Stress day means the day on which the price fluctuation rate of the sixth nearest contract month contract marked the largest and the second largest value in each trading day in and after 2001 for Platts Dubai Crude Oil Group and the day on which the price fluctuation rate of the sixth contract month contract (for period before listing of CME Group Petroleum Index Group, the original

Item	Description	Remark
	 iv. Combined Commodity other than exhibited in i. through iii. For the relevant Combined Commodity, calculate product of the largest value of Settlement Price related to each contract month contract (excluding those related to the first contract month contract in the relevant Combined Commodity on the reference date and Y%. Price fluctuation risk shall be the value calculated by multiplying the obtained value by X prescribed below. If the price fluctuation risk for each Combined Commodity calculated pursuant to the manner prescribed above i through iv is acknowledged as inappropriate in light of the market condition and alike, JSCC shall set the value for each time. 	 index) marked the largest and the second largest value for each trading day in and after 2008 for CME Group Petroleum Index Group. As for Nikkei 225/Dividend Index Group, the value obtained by multiplying Y% of Settlement Price for the leading contract month contract on the reference date by X prescribed below. Assuming the case where the level of price fluctuation risk is apparently low against the fluctuation of the underlying asset.
	X and Y mentioned above are the value shown below.	
	Listed Combined Commodity X Y Exchange	
	Osaka Nikkei 225/Dividend Index Group 1,000 5 Exchange, Inc.	
	Osaka GOLD Group 1,000 Exchange, Inc.	

Item		Description			Remark
	Osaka Exchange, Inc.	OSE GOLD SPOT Group	100		
	Osaka Exchange, Inc.	SILVER Group	30,000		
	Osaka Exchange, Inc.	PLATINUM Group	500		
	Osaka Exchange, Inc.	OSE PLATINUM SPOT Group	100		
	Osaka Exchange, Inc.	PALLADIUM Group	3,000		
	Osaka Exchange, Inc.	RUBBER RSS3 Group	5,000		
	Osaka Exchange, Inc.	RUBBER TSR20 Group	5,000		
	Osaka Exchange, Inc.	Corn Group	50	4	
	Osaka Exchange, Inc.	Soybean Group	25	7	
	Osaka Exchange, Inc.	Azuki Beans Group	80	4	
	Tokyo Commodity Exchange	CME Group Petroleum Index Group	10,000		
	Tokyo Commodity Exchange, Inc.	Barge Gasoline Group	50		
	Tokyo Commodity Exchange, Inc.	Barge Gas Oil Group	50		
	Tokyo Commodity Exchange, Inc.	Platts Dubai Crude Oil Group	50		
	Tokyo Commodity	Barge Kerosene Group	50		

ltem		Description			Remark
	Exchange, Inc. Tokyo Commodity Exchange Inc.	Chukyo Lorry Gasoline Group	10		
	Tokyo Commodity Exchange, Inc.	Chukyo Lorry Gas Oil Group	10		
	Osaka Dojima Exchange, Inc.	Yellow Corn50 Group	50	3	
	Osaka Dojima Exchange, Inc.	US Soybeans Group	10	5	
	Osaka Dojima Exchange,Inc.	Azuki Beans group	40	4	
	Osaka Dojima Exchange, Inc.	Niigata Koshihikari EXW Group	50	3	
	Osaka Dojima Exchange, Inc.	ODEX GOLD ROLLING-SPOT	10		
	Osaka Dojima Exchange, Inc.	ODEX SILVER ROLLING-SPOT	1,000		
	Osaka Dojima Exchange, Inc.	ODEX PLATINUM ROLLING-SPOT Group	10		
2.Volatility fluctuation risk	 Calculate the minim the daily base volative volatility of the day Group in all trading Volatility fluctuation a 4 weeks up b 54 weeks up However, if such verative market condition and a 	um value to cover 99% value of daily atility (absolute value of the different or and that of the immediately prece days in each of period a and period risk shall be the larger of two values. to the reference date to the reference date or to the reference date value is acknowledged as inapprop alike, JSCC shall set the value for eac	r fluctuation ence betwee ding day) o b prescribe prescribe	width of en base of GOLD d below. nt of the	

Item	Description	Remark
	(Note) Base volatility used to calculate volatility fluctuation risk is historical volatility. However, if JSCC acknowledges that using historical volatility is inappropriate, JSCC shall set the value for each time.	
3.Interest rate fluctuation risk	Set as 0%.	
4.Spread fluctuation risk	 Spread fluctuation risk shall be set as below. 	
	i. Nikkei 225/Dividend Index group	
	As for the price spread of Futures Contracts between contract month contracts in the relevant Combined Commodity on each trading day, obtain the larger of (1) absolute value of the smallest value of price spread of Settlement Price for each contract month contract to cover 99% of the value for all trading days from bottom side or (2) absolute value of the largest value of price spread of Settlement Price for each contract month contract to cover 99% of the value for each of price spread of Settlement Price for each contract month contract to cover 99% of the value for each of period a, period b and period c prescribed below. Spread fluctuation risk shall be the largest value calculated by multiplying the obtained value by X prescribed below.	
	 Combined Commodity other than i Obtain the minimum value of daily price spread of Futures Contracts between contract month contracts in the relevant Combined Commodity to cover 99% value for all trading days in period a and period b prescribed below. Spread fluctuation risk shall be the value calculated by multiplying the larger value of two by X. 	

Item	Description	Remark
	a 4 weeks up to the reference date b 54 weeks up to the reference date	 Fluctuation width of Settlement Price means the difference between
	However, if such amount is acknowledged as inappropriate in light of the market condition and alike or when new commodity is listed, JSCC shall set the value for each time.	Settlement Price of the day and that of the second preceding day for Nikkei 225/ Dividend Index Group and the difference between Settlement Price of the day and that of the preceding day.
	(Note) Price spread between contract month contracts for Futures Contracts means the absolute value of spread between "fluctuation width of Settlement Price for the nearest contract month contract" and "that for the second nearest contract month contract" for Nikkei 225/Dividend Index group, spread between "fluctuation width of Settlement Price for the fifth nearest contract month contract" and "that for the sixth nearest contract month contract" for RUBBER RSS3 Group, RUBBER TSR20 Group and Platts Dubai Crude Oil Group and "fluctuation width of Settlement Price for the farthest contract month contract" and that for "the second farthest contract month contract" for other Combined Commodities.	

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5.Inter-commodity Adjustment Multiplier	 For commodities for which inter-commodity risk offset is approved by JSCC, JSCC shall calculate Adjustment Multiplier for each Combined Commodities subject to risk offset, setting issues which shall become the base for risk offset. Adjustment Multiplier= Beta value× Notional Amount Adjustment Ratio × Contract Size Adjustment Ratio 	 Combined Commodities subject to risk offset are exhibited in Annex 1. Adjustment Multiplier for Barge Gas Oil Group shall be zero for the time being.
	 i. Beta value is the value calculated by JSCC based on the correlation between Conversion Base Combined Commodity and Combined Commodity. ii. Notional Amount Adjustment Ratio means the value obtained by dividing Settlement Price related to base issue of Combined Commodity on the reference date by Settlement Price related to base issue of Conversion Base Combined Commodity on the reference date. iii. Contract Size Adjustment Ratio means the value obtained by dividing Transaction Multiplier for each Combined Commodity in Annex 2 by Transaction Multiplied for each Conversion Base Combined Commodity. However, if such value is acknowledged as inappropriate in light of the market condition and alike or new commodity is listed, JSCC shall set the value for each time. 	 In case of "GOLD Group: SILVER Group", the value obtained by "30,000/1,000 = 30" shall be Contract Size Adjustment Ratio
IV Ad-hoc revision of AS-VaR Parameters	 JSCC shall, as a general rule, on the day when the value for each Combined Commodity prescribed below exceeds 90% of the price fluctuation risk base value (price fluctuation risk divided by X of the relevant Combined Commodity) for each Combined Commodity (hereinafter referred to as "Judgment Day"), recalculate AS-VaR Parameters for the Combined Commodity which has triggered the threshold, setting such day as the reference date and if revision is acknowledged as necessary, revise a part or all of parameters on the immediately following business day of the 	 When ad-hoc revision is made, Clearing Participants shall be notified in advance. Margin calculated based on the revised parameters shall be deposited on the day 3 business days following the Judgment Date.

Item	Description	Remark
	Judgment Day. i. Nikkei 225/Dividend Index group Daily change in Settlement Price (absolute value of the difference between Settlement Price of the day and that of the immediately preceding day) of the leading contract month for Futures Contracts which belong to Nikkei 225/Dividend Index Group.	 Ad-hoc revision shall not be made on the last business day of a week.
	 GOLD Group Daily change in Settlement Price of the leading contract month contract of GOLD Futures (absolute value of the Settlement Price of the day and the immediately preceding day). 	 If the condition is met for GOLD Group, AS-VaR Parameters related to relevant Combined Commodity, OSE GOLD SPOT Group and ODEX GOLD POLLING-SPOT
	iii. Platts Dubai Crude Oil Group Daily change in Settlement Price of the leading contract month contract of Platts Dubai Crude Oil Futures (absolute value of the Settlement Price of the day and that of the immediately preceding day).	 ODEX GOLD ROLLING-SPOT Group shall be revised. If the condition is met for Platts Dubai Crude Oil Group, AS-VaR Parameters related to relevant Combined Commodity, Barge Gas Oil Group and Barge Gasoline Group shall be revised.
1.Price fluctuation risk after ad-hoc revision	 Calculated according to the same manner as for the periodic review. However, for any of above Combined Commodities, if the revised value is smaller than the value without ad-hoc revision, no revision shall be made. However, if the relevant value is acknowledged as inappropriate in light of the market condition and alike, price fluctuation risk shall be the value set by JSCC for each time. 	
2.Volatility fluctuation risk after ad-hoc revision	 Calculate according to the same manner as for the periodic review. However, if the revised value is smaller than the value without ad-hoc 	

Item	Item Description		
3.Spread fluctuation risk after ad-hoc revision	 revision, no revision shall be made. However, if the relevant value is acknowledged as inappropriate in light of the market condition and alike, volatility fluctuation risk shall be the value set by JSCC for each time. Calculate according to the same manner as for the periodic review. However, for any of above Combined Commodity, if the revised add-on charge is smaller than the value without ad-hoc revision, no revision shall be made. However, if the relevant add-on charge is acknowledged as inappropriate in light of the market condition and alike, spread fluctuation risk shall be the amount acknowledged as appropriate by JSCC. 		
V Others Publication of parameter revision	 JSCC shall, when revising a part or all of parameters, publicize the content in advance. 	 Revision of parameters shall be publicized via posting to JSCC's site. 	

The List of Scenarios for AS-VaR Method

#	Price fluctuation risk	Volatility fluctuation risk	Interest rate fluctuation risk
1	2/2 Rise	Rise	Rise
2	2/2 Rise	Rise	Fall
3	2/2 Rise	Unchanged	Rise
4	2/2 Rise	Unchanged	Fall
5	2/2 Rise	Fall	Rise
6	2/2 Rise	Fall	Fall
7	1/2 Rise	Rise	Rise
8	1/2 Rise	Rise	Fall
9	1/2 Rise	Unchanged	Rise
10	1/2 Rise	Unchanged	Fall
11	1/2 Rise	Fall	Rise
12	1/2 Rise	Fall	Fall
13	Unchanged	Rise	Rise
14	Unchanged	Rise	Fall
15	Unchanged	Unchanged	Rise

#	Price fluctuation risk	Volatility fluctuation risk	Interest rate fluctuation risk
16	Unchanged	Unchanged	Fall
17	Unchanged	Fall	Rise
18	Unchanged	Fall	Fall
19	1/2 Fall	Rise	Rise
20	1/2 Fall	Rise	Fall
21	1/2 Fall	Unchanged	Rise
22	1/2 Fall	Unchanged	Fall
23	1/2 Fall	Fall	Rise
24	1/2 Fall	Fall	Fall
25	2/2 Fall	Rise	Rise
26	2/2 Fall	Rise	Fall
27	2/2 fall	Unchanged	Rise
28	2/2 fall	Unchanged	Fall
29	2/2 fall	Fall	Rise
30	2/2 fall	Fall	Fall

The List of Commodities subject to Intercommodity Risk Offset

#	Conversion Base Combined Commodity	Combined Commodity
1	GOLD Group	GOLD SPOT Group
2		SILVER Group
3		PLATINUM Group
4		PLATINUM SPOT Group
5		PALLADIUM Group

* Base issue is set as the leading contract month contract of GOLD Standard Futures Contracts.

RUBBER G	oups	
#	Conversion Base Combined Commodity	Combined Commodity
1	RUBBER RSS3 Group	RUBBER TSR20 Group

* Base issue is set as the leading contract month contract of RUBBER RSS3 Futures Contracts.

Tokyo Commodity Exchange, Inc.

Energy Group	S	
#	Conversion Base Commodity Group	Combined Commodity
1	Platts Dubai Crude Oil Group	Barge Gasoline Group
2		Barge Gas Oil Group
3		Barge Kerosene Group
4		Chukyo Lorry Gasoline Group
5		Chukyo Lorry Gas Oil Group

* Base issue is set as the leading contract month contract of Platts Dubai Crude Oil Futures Contracts.

Osaka Dojima Exchange, Inc.

ODEX Precious Metal Group		
#	Conversion Base Combined Commodity	Combined Commodity
1	ODEX GOLD ROLLING-SPOT Group	ODEX SILVER ROLLING-SPOT Group
2		ODEX PLATINUM ROLLING-SPOT Group

* Base issue is set as GOLD ROLLING-SPOT Futures Contract at Osaka Dojima Exchange.