

Method of Determining Settlement Prices for Futures and Options

As of August 3, 2026

Items	Descriptions	Remarks
I Purpose	<ul style="list-style-type: none"> • The purpose of this document is to describe JSCC’s procedures of futures and options contracts traded on Osaka Exchange (hereinafter referred to as “OSE”), Tokyo Commodity Exchange (hereinafter referred to as “TOCOM”) and Osaka Dojima Exchange (hereinafter referred to as “ODEX”) for setting settlement prices (the prices determined by JSCC, hereinafter referred to as “Settlement Prices”) 	
II Overview		
1. Procedures for setting Settlement Prices for futures and options contracts listed on OSE		
(1) Settlement Prices for JGB Futures, etc.	<ul style="list-style-type: none"> • Settlement Prices for each contract month of JGB Futures, etc. shall be set every trading day as follows: 	
a. Settlement Prices for	<ul style="list-style-type: none"> A) Settlement Price of: the Leading Contract Month, a contract month which expires earlier than the 	When Intraday Settlement Prices or

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10-year JGB Futures	<p>Leading Contract Month and the second nearest contract month on the Last Trading Day of the nearest contract month. shall be set every trading day according to the following order:</p> <p>(a) Contract price at the close of the Afternoon Session by the Closing Auction (Itayose) method;</p> <p>(b) Last contract price in the ordinary auction trading sessions of a given trading day, excluding Strategy Trade contracts and including the contracts concluded in the Night Session; and</p> <p>(c) Theoretical price calculated by the formula specified by JSCC (fractions less than the increment of a quote shall be rounded off to the nearest quote, or rounded up if there are two nearest quotes).</p> <p>B) Settlement prices of the contract months other than A) shall be set every trading day by adding/subtracting the latest Contract Spread Price* in the auction trading session, including the contracts concluded in the Night Session, on the relevant trading day from the Settlement Price of the Leading Contract Month.</p> <p>* If no Contract Spread Price exists, Contract Spread Price used to calculate Settlement Price on the immediately preceding trading day or the theoretical spread price shall be used as an alternative to the Contract Spread Price.</p> <p>C) Notwithstanding the provisions of A) and B), if JSCC deems it inappropriate to set Settlement Price(s) as prescribed in A) or B) taking into consideration the condition of contract prices and theoretical prices, JSCC shall set Settlement Price(s) as appropriate considering circumstances such</p>	<p>Emergency Settlement Prices are set, the following order applies for each contract for each trading day:</p> <p>a) Last contract price in the ordinary auction trading sessions (excluding the contracts concluded in the Night Session) at 11:02 am (in the case of Emergency Settlement Price calculation, at 1:00 pm) of the given contract (excluding Strategy Trade contracts);</p> <p>b) Price set by JSCC as appropriate considering circumstances such as conditions of quotes placed in auction trading on that day; or</p> <p>c) Settlement Price for the relevant contract month on the immediately preceding trading day.</p> <p>Contract Spread Price refers to a contract price of a Calendar Spread</p>

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<p>b. Settlement Prices for 5-year JGB Futures and 20-year JGB Futures</p>	<p>as conditions of quotes placed in auction trading on that day.</p> <p>A) Settlement Price of:</p> <ul style="list-style-type: none"> - the Leading Contract Month; - a contract month which expires earlier than the Leading Contract Month; and - the second nearest contract month on the Last Trading Day of the nearest contract month <p>shall be set every trading day according to the following order:</p> <ul style="list-style-type: none"> (a) Contract price at the close of the Afternoon Session by the Closing Auction (Itayose) method; (b) Mid price of the best quotes (best bid and best ask; the same applies, hereinafter) placed immediately before close of the continuous auction (Zaraba) of the afternoon session; (c) Last contract price in the auction trading session on and after 2:50 p.m. on a given trading day (excluding Strategy Trade contracts); or (d) Price determined by JSCC by referring i) last contract price in the ordinary auction trading sessions (excluding the Night Session) of a given trading day (excluding Strategy Trade contracts), ii) price calculated by JSCC based on the underlying JGB price of a given trading day designated by JSCC and iii) theoretical price. <p>B) Settlement prices of the contract months other than A) shall be set every trading day by adding / subtracting the latest Contract Spread Price* in the auction trading session, including the contracts</p>	<p>Trade, which is defined by OSE as a kind of Strategy Trades.</p> <p>Settlement Price on Last Trading Day of each contract month shall be determined in the same manner prescribed in (1) a.</p> <p>When Intraday Settlement Prices or Emergency Settlement Prices are set, the same manner prescribed in “Remarks” column for (1) a applies. However, the phrase, “including the contracts concluded in the Night Session” shall be replaced with “excluding the contracts concluded in the Night Session.”</p>

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<p>c. Settlement Prices for mini-10 year JGB Futures</p> <p>d. Settlement Prices for 3-month TONA Futures</p>	<p>concluded in the Night Session, on the relevant trading day from the Settlement Price of the Leading Contract Month.</p> <p>* If no Contract Spread Price exists, Contract Spread Price used to determine the Settlement Price on the previous trading day or the theoretical spread price shall be used as an alternative to the Contract Spread Price.</p> <p>C) Notwithstanding the provisions of A) and B), if JSCC deems it inappropriate to set Settlement Price(s) as prescribed in A) or B) taking into consideration the condition of contract prices and theoretical prices, JSCC shall set Settlement Price(s) as appropriate considering circumstances such as conditions of quotes placed in auction trading on that day.</p> <p>• Settlement Price shall be the same as that of the Large-sized contract with the same contract month. However, if JSCC deems it inappropriate to set the Settlement Price in such a manner, JSCC shall set the Settlement Price in each case considering market conditions and other factors.</p> <p>A) In cases where a contract, excluding Strategy Trade contracts, is concluded in the afternoon session or the bid and ask quotes are placed in the auction trading immediately before the close of the continuous trading session (Zaraba), Settlement Price shall be determined according to the following order:</p> <p>(a) Contract price at the close of the afternoon session by the Closing Auction (Itayose) method;</p>	<p>When Intraday Settlement Prices or Emergency Settlement Prices are set the same manner prescribed in “Remarks” column for (1) a applies.</p> <p>Intraday Settlement Price is set as the contract price(s) excluding Strategy Trade contracts, at 11:02 a.m. on a given trading day and Emergency Settlement Prices is set as such price</p>

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<p>(2) Settlement Prices for Index Futures</p> <p>a. Settlement Prices for Nikkei 225 Futures, TOPIX Futures and JPX-Nikkei Index 400 Futures</p>	<p>(b) Mid price of the best quotes placed immediately before close of the continuous auction (Zaraba) of the afternoon session; or</p> <p>(c) Last contract price of the contract month contract in the afternoon auction trading session (excluding Strategy Trade contracts)</p> <p>B) In cases other than A) or if JSCC deems it inappropriate to set the price(s) prescribed in A) as Settlement Price(s), the Settlement Price shall be the theoretical price calculated by the formula specified by JSCC (fractions less than the increment of a quote shall be rounded off to the nearest quote, or rounded up if there are two nearest quotes), or JSCC shall set Settlement Price(s) as appropriate considering circumstances such as conditions of quotes placed at the close of the Afternoon Session on that day.</p> <p>• Settlement Prices for each contract month of Index Futures shall be set every trading day as follows:</p> <p>A) In cases where a contract, excluding Strategy Trade contracts, is concluded in the auction trading session between 3:30 p.m. and the close of a regular daytime auction trading session, Settlement Price shall be the last contract price of the relevant contract month contract, excluding Strategy Trade contracts, in the auction trading session; or</p>	<p>at 1:00 p.m.; provided, however, that if these prices do not exist, Settlement Price shall be determined by JSCC, taking into account of status of bid/ask price at the closing of the Morning Session on the trading day.</p> <p>When Intraday Settlement Prices are set, the phrase, “between 3:30 p.m. and the close of a regular daytime auction trading session,” shall be replaced with “from 10:45 a.m. to 11:00 a.m.” and</p>

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	<p>B) In cases other than A) or if JSCC deems it inappropriate to set the contract price(s) prescribed in A) as Settlement Price(s), the Settlement Price shall be the theoretical price calculated by the formula specified by JSCC (fractions less than the increment of a quote shall be rounded off to the nearest quote, or rounded up if there are two nearest quotes), or JSCC shall set Settlement Price(s) as appropriate considering circumstances such as conditions of quotes placed at the close of the auction trading session on that day.</p>	<p>when Emergency Settlement Prices are set the phrase, “between 3:30 p.m. and the close of a regular daytime auction trading session,” shall be replaced with “from 0:45 p.m. to 1:00 p.m.” As to the Settlement Price for the 2nd and subsequent contract month contracts, the method described under A) on the left shall not apply, and Settlement Price will be determined according to the method described under B) on the left. (This shall not apply to Intra-day Settlement Price and Emergency Settlement Price)</p> <p>Notwithstanding the calculation methods described on the left in A) and B), in principal, the Settlement Prices on the last business day of March, June, September or December shall be the theoretical price calculated by the</p>

Items	Descriptions	Remarks
<p>b. Settlement Prices for Nikkei 225 mini and mini-TOPIX Futures</p>	<p>A) For contract month of March, June, September and December, Settlement Prices shall be the Settlement Price of Large-sized contract month with the same Last Trading Day. However, if JSCC deems it inappropriate to set Settlement Prices in such a manner, JSCC shall set Settlement Prices in each case considering market conditions and other factors.</p> <p>B) For contract months other than A) above, Settlement Prices shall be determined in a same manner as (2) a.</p>	<p>formula specified by JSCC (fractions less than the increment of a quote shall be rounded off to the nearest quote, or rounded up if there are two nearest quotes). (Excluding cases where Intra-day Settlement Prices or Emergency Settlement Prices are set. The same shall apply to (2) b.)</p> <p>For all subsequent contract month contracts following contract month contract same as the second contract month contracts for Nikkei 225 Futures, the Settlement Price will be the value determined by (2)a B) not adopting (2)a A).</p>
<p>c. Settlement Prices for Nikkei 225 micro Futures</p>	<p>Settlement Prices shall be the Settlement Price of Mini-sized contract month with the same Last Trading Day. However, if JSCC deems it inappropriate to set Settlement Prices in such a manner, JSCC shall set Settlement Prices in each case considering market conditions and other factors.</p>	

Items	Descriptions	Remarks
d. Settlement Prices for TOPIX Core 30 Futures, TOPIX Banks Index Futures, TSE REIT Index Futures, RN Prime Index Futures, TSE Growth Market 250 Index Futures, Nikkei 225 Total Return Index Futures, S&P/JPX 500 ESG Score Tilted Index (0.5) Futures, FTSE JPX Net Zero 500 Index Futures Nikkei 225 Climate Index Futures and JPX Prime 150 Index Futures.	<ul style="list-style-type: none"> Settlement Price shall be the theoretical price calculated by the formula specified by JSCC (fractions less than the increment of a quote shall be rounded off to the nearest quote, or rounded up if there are two nearest quotes). 	

Items	Descriptions	Remarks
<p>e. Settlement Prices for Nikkei Stock Average Volatility Index Futures, Dow Jones Industrial Average Futures, TAIEX Futures, FTSE China 50 Index Futures Nikkei 225 Dividend Index Futures and FX Futures</p>	<p>A) In cases where a contract, excluding Strategy Trade contracts, is concluded in the auction trading session between the commencement of the night session and the close of a regular daytime auction trading session, or where bid and ask quotes are placed in the auction trading immediately before the close of the continuous trading session (Zaraba), Settlement Price shall be determined according to the following order.</p> <p>(a) Contract price at the close of a regular daytime auction trading session by the Closing Auction (Itayose) method;</p> <p>(b) Mid price of the best quotes placed immediately before close of the continuous auction (Zaraba) of a regular daytime auction trading session; or</p> <p>(c) Last contract price of the contract month contract in the auction session (excluding Strategy Trade contracts)</p> <p>B) In cases other than A) or if JSCC deems it inappropriate to set Settlement Price(s) as prescribed in A), JSCC shall set Settlement Price(s) as appropriate considering circumstances such as conditions of quotes placed in auction trading on that day.</p>	<p>Notwithstanding the calculation methods described on the left in A) and B), when Intraday Settlement Prices or Emergency Settlement Prices are set, Settlement Price shall be the latest mid price of the best quotes placed on a given trading day or contract price; provided however, if these prices do not exist, Settlement Price shall be the Settlement Price on the immediately preceding trading day.</p>
<p>(3) Settlement Prices for Commodity Futures</p>	<ul style="list-style-type: none"> • Settlement Prices for each contract month of Commodity Futures shall be set every trading day as follows: 	

Items	Descriptions	Remarks
<p>a. Settlement Prices for Physical Settlement Futures Contracts</p>	<p>A) In cases where a contract, excluding Strategy Trade contracts, is concluded in the auction trading during the period from the commencement of the night session to the end of the day session, Settlement Price shall be the last contract price, excluding Strategy Trade contracts, in the auction trading session; or</p> <p>B) In cases other than A) or if JSCC deems it inappropriate to set Settlement Price(s) as prescribed in A), JSCC shall set Settlement Price(s) as appropriate considering circumstances such as conditions of quotes placed in auction trading on that day.</p>	<p>Notwithstanding the calculation methods described on the left in A), only the current contract month on the last trading day, Settlement Price shall be the weighted average price, referring to the price obtained through the weighted average in a manner of multiplying the contract price by the contract quantity, excluding Strategy Trade contracts, and then dividing the resultant value by the aggregate contract quantity, of the Physical Settlement Futures Contracts during the day session on the last trading day; provided, however, that in the event that no such contract price exists, the Settlement Price shall be the last contract price in the same clearing period, and in the event that no contract</p>

Items	Descriptions	Remarks
		<p>price exists during the relevant clearing period, it shall be the Settlement Price for the immediately preceding clearing period.</p> <p>When Intraday Settlement Prices are set, the phrase, “from the commencement of the night session to the end of the day session,” shall be replaced with “from the commencement of the day session to the time immediately prior to the time of calculation of the Intraday Settlement Price” and when Emergency Settlement Prices are set, the phrase, “from the commencement of the night session to the end of the day session,” shall be replaced with “from the commencement of the day session to the time immediately prior to the time of calculation of the Emergency</p>

Items	Descriptions	Remarks
<p>b. Settlement Prices for Cash Settlement Futures Contracts excluding the following c.</p>	<p>A) In cases where the contract month contract of the Physical Settlement Futures Contracts of which the last trading day belongs in the same month exists (limited to those with the same underlying financial instrument), the same Settlement Price as the Settlement Price for the relevant contract month contract of the Physical Settlement Futures Contract.</p> <p>B) In cases where no such contract month contract of the Physical Settlement Futures Contract exists, the Settlement Price shall be the last contract price, excluding Strategy Trade contracts, in the auction trading session during the period from the commencement of the night session to the end of the day session, and if there is no such contract price, the Settlement Price shall be the Settlement Price of the immediately preceding trading day</p> <ul style="list-style-type: none"> Notwithstanding the provisions of above A) and B), if JSCC deems it necessary, JSCC may change Settlement Price which is deemed appropriate. 	<p>Settlement Price.”</p> <p>When Intraday Settlement Prices are set, the phrase, “from the commencement of the night session to the end of the day session,” shall be replaced with “from the commencement of the day session to the time immediately prior to the time of calculation of the Intraday Settlement Price” and when Emergency Settlement Prices are set, the phrase, “from the commencement of the night session to the end of the day session,” shall be replaced with “from the commencement of the day session to the time immediately prior to the time of calculation of the Emergency Settlement Price.”</p>

Items	Descriptions	Remarks
<p>c. Settlement Prices for Shanghai Natural Rubber Futures Contracts and Commodity Index Futures Contracts</p>	<p>A) In cases where a contract, excluding Strategy Trade contracts, is concluded in the auction trading session between the commencement of the night session and the close of a regular daytime auction trading session, or where bid and ask quotes are placed in the auction trading immediately before the close of the continuous trading session (Zaraba), Settlement Price shall be determined according to the following order:</p> <ul style="list-style-type: none"> (a) Contract price at the close of the afternoon session by the closing auction (Itayose) method; (b) Mid price of the best quotes placed immediately before close of the continuous auction (Zaraba) of the afternoon session; or (c) Last contract price of the contract month contract in the afternoon auction trading session (excluding Strategy Trade contracts) <p>B) In cases other than A), if JSCC deems it inappropriate to set Settlement Price(s) as prescribed in A) JSCC shall set Settlement Price(s) as appropriate considering circumstances such as conditions of quotes placed in auction trading on that day.</p>	<p>Notwithstanding the calculation methods described on the left in A) and B), when Intra-day Settlement Prices or Emergency Settlement Prices are set, Settlement Price shall be the latest mid price of the best quotes placed on a given trading day or contract price; provided however, if these prices do not exist, Settlement Price shall be the Settlement Price on the immediately preceding trading day.</p>

Items	Descriptions	Remarks
d. Settlement Prices for Cash-settled Rolling-Spot Futures Contracts	<ul style="list-style-type: none"> Settlement Prices shall be the theoretical cash price specified by OSE. 	<p>When Intraday Settlement Prices are set, the Intraday Settlement Price shall be the last contract price in the exchange trade during the period from the commencement of the day session to the time immediately prior to the time of calculation of the Intraday Settlement Price; provided, however, that in the event that no such contract price exists during said period, it shall be the Settlement Price for the immediately preceding Trading Day</p> <p>When Emergency Settlement Prices are set, the phrase, “from the commencement of the day session to the time immediately prior to the time of calculation of the Intraday Settlement Price,” shall be replaced with “from the commencement of the day session to the time immediately prior to the time</p>

Items	Descriptions	Remarks
		of calculation of the Emergency Settlement Price.”
<p>(4) Settlement Prices for Options contracts</p> <p>a. Settlement Prices for Nikkei 225 Options</p>	<ul style="list-style-type: none"> • Settlement Price of each contract month of Options contracts shall be set every trading day (every business day for Options on Individual Securities) as follows: <ul style="list-style-type: none"> A) In cases where a contract, excluding Strategy Trade contracts, is concluded in the auction trading session between 3:30 p.m. and the close of a regular daytime auction trading session, Settlement Price shall be the last contract price, excluding Strategy Trade contracts, in the auction trading session; or B) In cases other than A), Settlement Price shall be the theoretical price calculated by the formula specified by JSCC (fractions less than the increment of a quote shall be rounded up to the nearest 	<p>When Intraday Settlement Prices are set, the phrase, “between 3:30 p.m. and the close of a regular daytime auction trading session,” shall be replaced with “between 10:45 a.m. and the time immediately prior to the time of calculation of the Intraday Settlement</p>

Items	Descriptions	Remarks
<p>b. Nikkei 225 mini Options Contracts</p>	<p>quote).</p> <ul style="list-style-type: none"> • Notwithstanding the provisions of the above A) and B), if JSCC deems it necessary, JSCC may change Settlement Price which is deemed appropriate. <p>A) In cases where Nikkei 225 Options with the same exercise date and same exercise price exist, Settlement Price shall be the Settlement Price of each Nikkei 225 Options.</p> <p>B) In cases other than A), Settlement Price shall be determined according to the same manner as (4) a.</p>	<p>Price” and when Emergency Settlement Prices are set, the phrase, “between 3:30 p.m. and the close of a regular daytime auction trading session,” shall be replaced with “between 0:45 p.m. and the time immediately prior to the time of calculation of the Emergency Settlement Price.”</p> <p>For all subsequent contract month contracts following contract month contract same as the second contract month contracts for Nikkei 225 Futures, the Settlement Price will be the value determined by B) not adopting A).</p> <p>Notwithstanding the provisions of the left in A) and B), Settlement Price s on the last business day of March, June,</p>

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<p>c. Settlement Prices for Options on Individual Securities, Options on JGB Futures, TOPIX Options, JPX-Nikkei Index 400 Options, TOPIX Banks Index Options, TSE REIT Index Options and Option Contract on Gold Futures.</p> <p>2. Procedures for setting Settlement Prices for futures and options</p>	<ul style="list-style-type: none"> • Settlement Price shall be the theoretical price calculated by the formula specified by JSCC (fractions less than the increment of a quote shall be rounded up to the nearest quote.) 	<p>September or December shall be the theoretical price calculated by the formula specified by JSCC (fractions less than the increment of a quote shall be rounded up to the nearest quote).</p>

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<p>contracts listed on TOCOM</p> <p>(1) Settlement Prices for Commodity Futures</p> <p>a. Settlement Prices for Physical Settlement Futures Contracts</p>	<ul style="list-style-type: none"> • Settlement Prices for each contract month of Commodity Futures shall be set every trading day as follows: <ul style="list-style-type: none"> A) In cases where a contract, excluding Strategy Trade contracts, is concluded in the auction trading during the period from the commencement of the night session to the end of the day session, Settlement Price shall be the last contract price, excluding Strategy Trade contracts, in the auction trading session; or B) In cases other than above A) or if JSCC deems it inappropriate to set price(s) as prescribed in A) JSCC shall set Settlement Price(s) as appropriate considering circumstances such as conditions of quotes placed in auction trading on that day. 	<p>Notwithstanding the calculation methods described on the left in A), only the current contract month on the last trading day, Settlement Price shall be the weighted average price, referring to the price obtained through the weighted average in a manner of multiplying the contract price by the contract quantity, excluding Strategy Trade contracts, and then dividing the resultant value by the aggregate contract quantity, of the Physical Settlement Futures Contracts during the day session on the last trading day; provided, however, that in the event that</p>

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		<p>no such contract price exists, the Settlement Price shall be the last contract price in the same clearing period, and in the event that no contract price exists during the relevant clearing period, it shall be the Settlement Price for the immediately preceding clearing period.</p> <p>When Intraday Settlement Prices are set, the phrase, “from the commencement of the night session to the end of the day session,” shall be replaced with “from the commencement of the day session to the time immediately prior to the time of calculation of the Intraday Settlement Price” and when Emergency Settlement Prices are set, the phrase, “from the commencement of the night session to the end of the day session,” shall be</p>

Items	Descriptions	Remarks
<p>b. Settlement Prices for Cash Settlement Futures Contracts</p>	<p>A) In cases where a contract, excluding Strategy Trade contracts, is concluded in the auction trading during the period from the commencement of the night session to the end of the day session, Settlement Price shall be the last contract price, excluding Strategy Trade contracts, in the auction trading session; or</p> <p>B) In cases other than above A) or if JSCC deems it inappropriate to set price(s) as prescribed in A) JSCC shall set Settlement Price(s) as appropriate considering circumstances such as conditions of quotes placed in auction trading on that day.</p>	<p>replaced with “from the commencement of the day session to the time immediately prior to the time of calculation of the Emergency Settlement Price.”</p> <p>When Intraday Settlement Prices are set, the phrase, “from the commencement of the night session to the end of the day session,” shall be replaced with “from the commencement of the day session to the time immediately prior to the time of calculation of the Intraday Settlement Price” and when Emergency Settlement Prices are set, the phrase, “from the commencement of the night session to the end of the day session,” shall be replaced with “from the commencement of the day session to</p>

Items	Descriptions	Remarks
3. Procedures for setting Settlement Prices for futures contracts listed on ODEX		<p>the time immediately prior to the time of calculation of the Emergency Settlement Price.”</p> <p>For Electricity Futures, if data which could be referenced as actual value is obtained from market participants, Settlement Price shall be calculated using such data after processing, as a general rule.</p>

Items	Descriptions	Remarks
<p>(1) Settlement Prices for Commodity Futures</p> <p>a. Settlement Prices for Physical Settlement Futures</p>	<ul style="list-style-type: none"> • Settlement Prices for each contract month of Commodity Futures shall be set every trading day as follows: <ul style="list-style-type: none"> A) In cases where a contract, excluding Strategy Trade contracts, is concluded in the auction trading during the period from 1:45 P.M. through 3:45 P.M. through Individual Auction; The weighted average price, referring to the price obtained through weighted average of the contract price and contract quantity concluded through Individual Auction, during the period from 1:45 P.M. through 3:45 P.M. of a clearing period B) In cases where no contract price exists during the relevant period of time in A) above, Settlement Price shall be the last contract price during the same clearing period, or C) In cases where no contract price exists during the same clearing period, Settlement Price shall be the price determined according to the following order set as (a) or (b), depending on type of contract month, : <ul style="list-style-type: none"> (a) For the contract month where no Settlement Price exists for the immediately preceding clearing period Settlement Price shall be the Settlement Price related to the latest contract month (b) For contract month other than a) above, Settlement Price shall be determined as follows; Settlement Price shall be the Settlement Price for the immediately preceding clearing period 	<p>on the last trading day, from 8:45 A.M. through 3:45 P.M.</p> <p>When Intraday Settlement Prices are set, the Intraday Settlement Price shall be the last contract price in the exchange trade immediately prior to the time of calculation of the Intraday Settlement Price; provided, however, that in the event that no such contract price exists, it shall be the Settlement Price for the immediately preceding Trading Day</p> <p>When Emergency Settlement Prices are set, the phrase, “immediately prior to the time of calculation of the Intraday Settlement Price,” shall be replaced</p>

Items	Descriptions	Remarks
b. Settlement Prices for Cash-settled Rolling-Spot Futures Contracts	<ul style="list-style-type: none"> • Notwithstanding the provisions of the above A), B) and C), if JSCC deems it necessary, JSCC may change Settlement Price which is deemed appropriate. • Settlement Prices shall be the theoretical cash price specified by ODEX. 	<p>with “immediately prior to the time of calculation of the Emergency Settlement Price.”</p> <p>When Intraday Settlement Prices are set, the Intraday Settlement Price shall be the last contract price in the exchange trade immediately prior to the time of calculation of the Intraday Settlement Price; provided, however, that in the event that no such contract price exists, it shall be the Settlement Price for the immediately preceding Trading Day</p> <p>When Emergency Settlement Prices are set, the phrase, “immediately prior to the time of calculation of the Intraday Settlement Price,” shall be replaced with “immediately prior to the time of calculation of the Emergency</p>

Items	Descriptions	Remarks
c. Settlement Prices for Index Futures	<p>A) In cases where a contract, excluding Strategy Trade contracts, is concluded in the auction trading during the period from 1:45 p.m. through 3:45 p.m. through Individual Auction; The weighted average price, referring to the price obtained through weighted average of the contract price and contract quantity concluded through Individual Auction, during the period from 1:45 p.m. through 3:45 p.m. of a clearing period</p> <p>B) In cases where no contract price exists during the relevant period of time in A) above, Settlement Price shall be the last contract price during the same clearing period, or</p> <p>C) In cases where no contract price exists during the same clearing period, Settlement Price shall be the price determined according to the following order set as (a) or (b), depending on type of contract month, :</p> <p>(a) For the contract month where no Settlement Price exists for the immediately preceding clearing period Settlement Price shall be the Settlement Price related to the latest contract month</p> <p>(b) For contract month other than a) above, Settlement Price shall be determined as follows; Settlement Price shall be the Settlement Price for the immediately preceding clearing period</p> <p>• Notwithstanding the provisions of the above A), B) and C), if JSCC deems it necessary, JSCC may</p>	<p>Settlement Price.”</p> <p>On the last trading day, from 8:45 a.m. through 3:45 p.m.</p> <p>When Intraday Settlement Prices are set, the Intraday Settlement Price shall be the last contract price in the exchange trade immediately prior to the time of calculation of the Intraday Settlement Price; provided, however, that in the event that no such contract price exists, it shall be the Settlement Price for the immediately preceding Trading Day</p> <p>When Emergency Settlement Prices are calculated, the phrase, “immediately prior to the time of calculation of the Intraday Settlement Price,” shall be replaced with “immediately prior to the time of calculation of the Emergency</p>

Items	Descriptions	Remarks
<p>4. Formulas for calculating theoretical prices of Futures and Options</p> <p>(1) Formulas for calculating theoretical prices of JGB Futures</p>	<p>change Settlement Price which is deemed appropriate.</p> <ul style="list-style-type: none"> • For all deliverable bonds of JGB Futures, theoretical prices shall be calculated using the following formulas: <ul style="list-style-type: none"> ➤ Theoretical price = (Deliverable bond price — Cost of carry) / Conversion factor ➤ Cost of carry = $\left[\text{Coupon rate} - \frac{\text{Short-term interest rate} \times (\text{Deliverable bond price} + \text{Accrued interest})}{100} \right] \times t_1 / 365$ ➤ Accrued interest = Face value (JPY100) × Coupon rate (%) / 100 × $t_2 / 365$ <p>The symbols used in the above equations shall be defined as follows:</p> <p>t_1: the number of days between the delivery date for the cash bond transaction and the physical settlement date for the Futures contract (either the start date or end date shall be included);</p> <p>t_2: the number of days between the previous interest payment date and the delivery date for the cash bond transaction (either the start date or end date shall be included);</p> <p>Short term interest rate: the 3-month Tokyo Repo Rate released by the Bank of Japan on one</p>	<p>Settlement Price.”</p> <p>Among the theoretical prices of all deliverable bonds for each contract month of JGB Futures, the cheapest theoretical price shall be adopted as the theoretical price of the relevant contract month.</p>

Items	Descriptions	Remarks
<p>(2) Formulas for calculating theoretical prices of 3-month TONA Futures</p>	<p>business day before the date of theoretical price calculation;</p> <p>Deliverable bond price: the average price of reference statistical prices for over-the-counter bond transactions, published by Japan Securities Dealers Association on the date of theoretical price calculation; and</p> <p>(Rounding of fractions) : The theoretical prices of the Futures contract shall be rounded off to two decimal places.</p> <ul style="list-style-type: none"> • Theoretical spread prices for JGB Futures shall be calculated using the following formula: <ul style="list-style-type: none"> ➤ Theoretical spread price = Theoretical price of a near contract month - Theoretical price of a more distant contract month • Theoretical spread prices for 3-month TONA Futures shall be calculated using the following theoretical price formula: <ul style="list-style-type: none"> ➤ Theoretical spread price of 3-month TONA Futures (nearest contract month) = $100 - 100 \times \{ \Pi_d (1 + \text{TONA}_d \times \delta_d) \times e^{r_j \times T_j} - 1 \} / T$ ➤ Theoretical spread price of 3-month TONA Futures (other than nearest contract month) = $100 - 100 \times \{ e^{(r_j \times T_j - r_i \times T_i)} - 1 \} / T$ <p>The symbols used in the above equation shall be defined as follows:</p>	<p>The theoretical spread price shall be calculated every trading day and used for calculating Settlement Prices on the following trading day.</p>

Items	Descriptions	Remarks
<p>(3) Formula for calculating theoretical prices of Index Futures</p>	<p>e; the base of a natural logarithm;</p> <p>T; the number of days in Interest Rate Reference Period /365;</p> <p>T_i; the number of days from a given day to the start day of Interest Rate Reference Period / 365;</p> <p>T_j; the number of days from a given day to the last day of Interest Rate Reference Period / 365;</p> <p>r_i; interest rate corresponding to period T_i;</p> <p>r_j; interest rate corresponding to period T_j;</p> <p>Π_d; product;</p> <p>d; each day in the period from the start day of Interest Rate Reference Period to the immediately preceding business day;</p> <p>TONA_d; TONA (Final results) of each day d; and</p> <p>δ_d; the number of days to which TONA_d is applied/365.</p> <ul style="list-style-type: none"> • Theoretical prices of each contract month of Index Futures shall be calculated using the following formula: <ul style="list-style-type: none"> ➤ Theoretical price = $Se^{(r-\delta)T}$ <p>The symbols used in the above equation shall be defined as follows:</p> <p>S: the price specified by JSCC among the prices related to the underlying index.</p> <p>e: the base of a natural logarithm;</p>	<p>Interest rate will be determined by JSCC, with reference to Japanese Yen OIS (Overnight Index Swap) at the close of Morning Session on a given trading day.</p>

Items	Descriptions	Remarks
<p>(4) Formulas for calculating theoretical prices of Options on Individual Securities</p>	<p>r: interest rate;</p> <p>δ: the expected dividend yield specified by JSCC among the expected dividend yields or the expected distribution yields related to the underlying index; and</p> <p>T: the number of days between the following day and the business day following the Last Trading Day of the Futures contract / 365.</p> <p>Theoretical prices of each contract month of Options on Individual Securities shall be calculated using the following formulas:</p> <p>The theoretical price of a put option $= -S'N(-d_1) + Ke^{-RT}N(-d_2)$</p> <p>The theoretical price of a call option $= S'N(d_1) - Ke^{-RT}N(d_2)$</p> <p>where, $S' = S - \sum_{i=1}^n D_i e^{-r_i t_i}$</p> $d_1 = \frac{\{\ln(S'/K) + (R + \sigma^2/2)T\}}{\sigma\sqrt{T}}$ $d_2 = d_1 - \sigma\sqrt{T}$	<p>If data which could be referenced as actual value is obtained from market participants, the expected dividend yield or the expected distribution yields shall be calculated using such data after processing, as a general rule.</p>

Items	Descriptions	Remarks
	<p>The symbols used in the above equations shall be defined as follows:</p> <p>S: the latest contract price of the underlying security traded on the Financial Instruments Exchange designated by OSE (when calculating Settlement Price, the last contract price of the underlying security traded on the Exchange on the day);</p> <p>e: the base of a natural logarithm;</p> <p>D_i: the expected dividends for the i-th period for the underlying security;</p> <p>T: the number of days between the following day and the exercise day / 365;</p> <p>t_i: the number of days between the following day and the ex-dividend day for D_i / 365;</p> <p>R: interest rate for the term considering the number of days until the exercise day; r_i: interest rate for the term considering the number of days until the ex-dividend day;</p> <p>N(.): cumulative distribution function of standard normal distribution;</p> <p>K: exercise price;</p> <p>Ln: natural logarithm; and</p> <p>σ: volatility.</p>	<p>Expected dividends shall be based on the summary of financial statements and other documents disclosed by the issuer of the underlying security.</p> <p>Volatility shall be the implied volatility of the issue (i.e. the value calculated backwards based on the theoretical price calculation formulas) immediately before calculation, referring the latest mid price of the best quotes placed in the auction trading the same shall apply to (5) and (7).</p> <p>If data which could be referenced as actual value is obtained from market</p>

Items	Descriptions	Remarks
<p>(5) Formulas for calculating theoretical prices of Options on JGB Futures</p>	<ul style="list-style-type: none"> • Theoretical prices of each contract month of Options on JGB Futures shall be calculated using the following formulas: <ul style="list-style-type: none"> ➤ The theoretical price of a put Option on JGB Futures $= e^{-rT} [KN(-d_2) - FN(-d_1)]$ ➤ The theoretical price of a call Option on JGB Futures $= e^{-rT} [FN(d_1) - KN(d_2)]$ <p>where, $d_1 = \{ \ln(F/K) / (\sigma^2/2) T \} / \sigma \sqrt{T}$ $d_2 = d_1 - \sigma \sqrt{T}$</p> <p>The symbols used in the above equations shall be defined as follows:</p> <ul style="list-style-type: none"> e: the base of a natural logarithm; r: interest rate; T: the number of days between the following day and the option expiration date / 365; 	<p>participants, for instruments with no quotes in auction trading at time immediately before calculating volatility or those set by JSCC, volatility shall be the value calculated, using such data after processing, as a general rule.</p>

Items	Descriptions	Remarks
<p>(6) Formula for calculating theoretical prices of Index Options</p>	<p>K: exercise price; N(.): cumulative distribution function of standard normal distribution; F: the settlement price of the underlying contract month contract on a given trading day; ln : natural logarithm; and σ : volatility.</p> <p>• Theoretical prices of each contract month of Index Options shall be calculated using the following formulas:</p> <p>➤ The theoretical price of an index put option $= -Se^{-\delta T}N(-d_1) + Ke^{-r T}N(-d_2)$</p> <p>➤ The theoretical price of an index call option $= Se^{-\delta T}N(d_1) - Ke^{-r T}N(d_2)$</p> <p>where, $d_1 = \{\ln(S/K) + (r - \delta + \sigma^2/2)T\} / \sigma\sqrt{T}$ $d_2 = d_1 - \sigma\sqrt{T}$</p> <p>The symbols used in the above equations shall be defined as follows:</p> <p>S: the value specified by JSCC among the value related to the underlying index; e: the base of a natural logarithm; δ: the expected dividend yield specified by JSCC among the expected dividend yields or the expected distribution yields related to the underlying index,;</p>	<p>The expected dividend yield shall be the same as that mentioned in (2).</p>

Items	Descriptions	Remarks
<p>(7) Formulas for calculating theoretical prices of Option Contract on Gold Futures.</p>	<p>T: the number of days between the following day and the exercise day / 365; r: interest rate; N(.): cumulative distribution function of standard normal distribution; K: exercise price; ln: natural logarithm; and σ: volatility.</p> <p>• Theoretical prices of each contract month of Option Contract on Gold Futures shall be calculated using the following formulas:</p> <p>➤ The theoretical price of a put Option on Gold Futures $= e^{-rT} [KN(-d_2) - FN(-d_1)]$</p> <p>➤ The theoretical price of a call Option on Gold Futures $= e^{-rT} [FN(d_1) - KN(d_2)]$</p>	<p>If data which could be referenced as actual value is obtained from market participants, for instruments with no quotes in auction trading at time immediately before calculating volatility or those set by JSCC, volatility shall be the value calculated, using such data after processing, as a general rule.</p>

Items	Descriptions	Remarks
	<p>where, $d_1 = \{\ln(F/K) / (\sigma^2/2)T\} / \sigma \sqrt{T}$ $d_2 = d_1 - \sigma \sqrt{T}$</p> <p>The symbols used in the above equations shall be defined as follows:</p> <p>e: the base of a natural logarithm; r: interest rate; T: the number of days between the following day and the option expiration date / 365; K: exercise price; N(.): cumulative distribution function in standard normal distribution; F: the settlement price of the underlying contract month contract on a given trading day; ln : natural logarithm; and σ : volatility.</p>	

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