

Outline for Three-month TONA futures option contracts

March 20, 2023
Revised January 4 2024
Tokyo Financial Exchange Inc.

Item	Description	Remarks
I. Trading 1. Definitions	<ul style="list-style-type: none"> • “Three-month TONA futures option contract” means a market derivatives transaction wherein one party agrees to grant the other party an option on Three-month TONA futures and the other party agrees to pay the value of the option therefor. • Three-month TONA futures option contract traded on the Exchange Market consists of (1) an option on Three-month TONA futures to enable their grantee thereof to execute one trading unit of a sale contract for the underlying futures contract with its traded figure equal to the exercise price (hereinafter called a “put option on Three-month TONA futures”), and (2) an option on Three-month TONA futures to enable their grantee thereof to execute one trading unit of a purchase contract for the underlying futures contract with its traded figure equal to the exercise price (hereinafter called a “call option on Three-month TONA futures”). 	<ul style="list-style-type: none"> • A “market derivatives transaction” as prescribed under Article 2(21) (iii)(b) of the Act. • An “underlying futures contract” means a Three-month TONA futures contract with a specified contract month to be executed as a result of an option exercise.
2. Contract month (1) Listed Contract Months	<ul style="list-style-type: none"> • 5 contract months the last trading days of which shall correspond to those of their respective underlying futures contracts. 	<ul style="list-style-type: none"> • The last trading days of their respective underlying futures contracts are the trading days, the day session of which occurs on the third Wednesday (if such day falls on a Japanese bank holiday, the day immediately following such day which is a Japanese banking day) of March, June, September or December.
(2) Period	<ul style="list-style-type: none"> • The period of 15 months shall be applied to the contract months. 	

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(3) First Trading Day	<ul style="list-style-type: none"> The first trading day for each contract month is the trading day immediately following the last trading day for the then first expiring contract month, and such new contract month shall become available for trading from the opening of its first trading day's day session. 	<ul style="list-style-type: none"> A "trading day" shall be a period commencing on the opening of the evening session that starts after the day session on the business day immediately preceding a specific business day and ending on the close of the day session that starts on such specific business day.
(4) Last Trading Day	<ul style="list-style-type: none"> The last trading day shall correspond to that of its respective underlying futures contract. 	<ul style="list-style-type: none"> Please refer to the attached examples in Referential Document.
3. Setting Exercise Price (1) Setting new exercise prices (2) Setting additional exercise prices	<ul style="list-style-type: none"> On the business day on which the day session of the first trading day for each contract month falls, TFX shall calculate the figure equal to an integral multiple of 0.125, the nearest to the Official Closing Price for the respective contract month of the underlying futures contract calculated on the previous business day ("option criterion price") and set the next 6 upper figures above the price and the next 6 lower figures below the price at intervals of 0.125 respectively, resulting in total 13 figures set as the exercise price. TFX shall calculate each business day's option criterion price for each contract month, in accordance with the conditions described (1) above, resulting in total 13 figures. If these 13 figures include any figure that has not yet been listed, such figure shall be additionally listed as the exercise price. 	<ul style="list-style-type: none"> The Official Closing Price is a price that TFX shall calculate and inform after the close of the evening session of each business day. In principle, exercise price shall not be abolished. TFX may additionally list new exercise prices when the Exchange deems necessary to do so.
4. Matching Algorithm	<ul style="list-style-type: none"> The matching of the trades is based on the auction method. 	<ul style="list-style-type: none"> The auction method means the trade shall be

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5. Trading Hours	<ul style="list-style-type: none"> • Day session: 8:45-15:30 (no trade matching between 11:30-12:30 on each trading day), save that the last trading day's Day session is 8:45-9:30. • Evening session: 15:30-20:00 (no trade matching on the last trading day of the contract month which reaches the last trading day.) 	<ul style="list-style-type: none"> executed on an individual auction basis. • There is a pre-open session (session only for quote acceptance; no matching), which is 15 minutes prior to market open of the day session. • TFX may change trading hours on a temporary basis when it finds necessary.
6. Trading Unit, etc.	<ul style="list-style-type: none"> • One Trading Unit for Three-month TONA futures. 	<ul style="list-style-type: none"> • During the Pre-open period, a Market order shall always be submitted with "On-Open" modifier. • TFX may reject any bid or offer when TFX finds such reject necessary to ensure a fair market and the trading system's stable operation. • Maximum order volume Trading Member can submit in a single order is 99,999 lots.
(1) Trading Unit	<ul style="list-style-type: none"> • Order types are Limit Order and Market Order. 	
(2) Bid/Offer	<ul style="list-style-type: none"> • Bid/Offer is quoted to the third decimal place (indicated by an integral multiple of 1/1000). • Minimum price fluctuation of bids and offers is 0.001 (0.001 = 250 yen). 	
7. Trading Member	<ul style="list-style-type: none"> • An Entity that intends to trade Three-month TONA futures option contracts shall obtain the "Japanese Yen Interest Rate Trading Membership" or "Japanese Yen Interest Rate Remote Trading Membership" as the case may be. 	
II. Clearing		
1. Margin	<ul style="list-style-type: none"> • The amount of margin requirement for customer trades and member's proprietary trade are calculated using SPAN®. • The margin for Three-month TONA futures option contracts using SPAN® may be reduced 	<ul style="list-style-type: none"> • SPAN® used herein is a registered trademark of Chicago Mercantile Exchange Inc. and used herein under license. Chicago

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<p>2. Payments and receipts of option premiums</p> <p>(1) Payment and receipts of option premiums between Trading Member and Exchange</p> <p>(2) Payment and receipts of option premiums between Trading Member and Customer</p>	<p>by netting of risk arising from other Interest Rate contracts on TFX.</p> <ul style="list-style-type: none"> • Daily settlement prices for option contracts shall be theoretical prices calculated by the formula in Appendix. • The amount which each Clearing Member shall pay to or receive from the Exchange shall be the net difference between the respective aggregate amounts which such Clearing Member is to pay and those which it is to receive as the option premiums which are payable or receivable with respect to such Clearing Member. • While Each Clearing Member who is liable to pay the said amount shall pay it by 11:00 a.m. on the business day immediately following the business day on which there occurs the day session of the trading day on which the sale or purchase contract is executed, each Clearing Member who has right to receive the said amount shall receive it after 2:00 p.m. on the business day immediately following the business day on which there occurs the day session of the trading day on which the sale or purchase contract is executed. • The provision of the payment of option premium between Clearing Member and Exchange above shall apply mutatis mutandis with respect to the payment of option premiums between a Non-Clearing Member and its Designated Clearing Member. • When a purchase contract is executed based on Customer's order, the Customer shall pay the option premium therefore to the concerned Trading Member by the time and date designated by the Trading Member, which date shall be on or before the second business day following the business day on which there occurs the day session of the trading day on which the offsetting transaction is effected. • When a sale contract is executed based on a Customer's order, the concerned Trading Member shall pay the option premium therefore to the Customer in the manner prescribed by 	<p>Mercantile Exchange Inc. assumes no liability in connection with the use of SPAN® by any person or entity.</p> <ul style="list-style-type: none"> • Option premium is the consideration for the acquisition of an option on Three-month TONA futures.

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<p>3. Open Interest and Settlement</p> <p>(1) Open Interest</p> <p>(2) Offset Trades</p> <p>4. Exercise</p> <p>(1) Option Exercise Period</p> <p>(2) Notification of Option Exercise</p>	<p>the Trading Member.</p> <ul style="list-style-type: none"> • Unsettled positions by the execution of orders are recognized as open interest. • When a Trading Member makes a purchase contract (hereinafter called “Repurchase”) in order to close out a short position or makes a sale contract (hereinafter called “Resale”) in order to close out a long position, that Member is to notify TFX of the classification of Resale or Repurchase and its volume by 5:00 p.m.(by 2:45 p.m. with respect to any contract month on its last trading day) on the business day on which there occurs the day session of the trading day on which the buy in or sell out order is executed. TFX will reduce the notified quantity from the Member’s open interest (in the case of a Non-Clearing Member, the open interest of its designated Clearing Member) for settlement. • On any business day which falls during the period from and including the business day on which the day session of the first trading day of each contract month occurs to and including the business day on which the day session of the last trading day of the same contract month occurs. • In order to exercise options on Three-month TONA futures, Trading Member shall notify the Exchange until 5:00 p.m. of the option exercise date. (2:45 p.m. with respect to any series of option on the last day of its option exercise period) • In order to exercise options on Three-month TONA futures, customer shall notify the Exchange until 4:30 p.m. of the option exercise date. (2:30 p.m. with respect to any series of option on the last day of its option exercise period) 	<ul style="list-style-type: none"> • There are 2 way to notify offset trades: <ul style="list-style-type: none"> (1) Individual notification (make separate notifications for each trade) (2) Bulk notification (make collective notifications by contract month and proprietary/customer account) • Exercise style: American Type

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<p>(3) Automatic Option Exercise</p>	<ul style="list-style-type: none"> • A Trading member shall be deemed to have notified the Exchange of exercising option on Three-month TONA futures of which is In The Money even when such member did not notify the Exchange of exercising such option expiration date, except where the member notifies the Exchange of not exercising such option by 2:45 p.m. • The Customer shall be deemed to have notified the Trading Member of exercising option on Three-month TONA futures of which is In The Money even when such customer did not notify the Trading Member of exercising such option expiration date, except where the customer notifies the Trading member of not exercising such option by 2:30 p.m. 	
<p>(4) Assignment</p>	<ul style="list-style-type: none"> • Upon making an assignment, the Exchange shall select the short positions and notify the relevant member of the details of such assignment without delay, specifying whether the assignment is for its own account or for the accounts other than the Trading member's house account. • If a reassignment is made to its Customers in accordance, the Trading Member shall immediately notify such Customers of the detail of such reassignment relevant to the reassignment. 	<ul style="list-style-type: none"> • The manner of reassignment shall be any one of the following methods. <ol style="list-style-type: none"> (1) Assignment in the order of execution of the Three-month TONA futures option contract. (2) Assignment in a random drawing. (3) Assignment pro rata in accordance with the Customer's volume of positions. (4) Assignment in any other equitable manner without arbitrariness.
<p>(5) Decrease in position resulting from Option Exercise</p> <p>① Decrease in position resulting from Option Exercise by Trading</p>	<ul style="list-style-type: none"> • When a Trading Member notifies the Exchange of the exercise of options on any business day, the Exchange shall decrease the long positions held by such Clearing Member at 5:00 p.m. (or shall be 2:45 p.m. in the case of the last day of the option exercise period) 	

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<p>Member</p> <p>② Decrease in Position resulting from Assignment</p> <p>(6) Three-month TONA Futures Contracts resulting from option Exercise and Assignment</p> <p>① Exercise of a put option</p> <p>② Exercise of a call option</p> <p>5. Clearing Member</p>	<ul style="list-style-type: none"> • When the Exchange makes assignment to a Clearing Member, the Exchange shall decrease the short positions held by such Clearing Member at 5:00 p.m. (or shall be 2:45 p.m. in the case of the last day of the option exercise period) • In the event that a Clearing Member notifies the Exchange of the exercise of a put option on Three-month TONA futures, the Clearing Member shall be deemed to have executed with the Exchange a sale contract of the underlying futures or the Assigned Clearing Member shall be deemed to have executed with the Exchange a purchase contract of the underlying futures, with the contract figure equal to the relevant strike price, as at 5:00 p.m.(or shall be 2:45 p.m. in the case of the last day of the option exercise period) • In the event that a Clearing Member notifies the Exchange of the exercise of a call option on Three-month TONA futures, the Clearing Member shall be deemed to have executed with the Exchange a purchase contract of the underlying futures or the Assigned Clearing Member shall be deemed to have executed with the Exchange a sale contract of the underlying futures, with the contract figure equal to the relevant strike price, as at 5:00 p.m.(or shall be 2:45 p.m. in the case of the last day of the option exercise period) • An entity that intends to act as a counterparty in the financial futures obligation assumption business for Three-month TONA futures option contracts shall obtain Interest Rate Futures Clearing Membership. 	

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III. Fees 1. Per-contract Exchange fee 2. Brokerage Commission IV. Others 1. Block Trades 2. Give-up Trades 3. Market Maker Program	<ul style="list-style-type: none"> • Per-contract Exchange Fee is 50 yen in principle. • The amount and method of payment of brokerage commission charged to a customer by a Trading Member shall be negotiated and agreed beforehand between such customer and such Member. • Block trades are available. • Trading Members who intend to execute a block trade shall make an application to TFX during trading hours excluding the last 15 minutes of each session (i.e. prior to the close of the day session and the close of the evening session) and the period between 11:30-12:30. • Minimum volume for an application of a block trade is 1 contract. • Give-up trades are available. • Three-month TONA futures option contracts will be included as the designated products under the Market-Making program. 	<ul style="list-style-type: none"> • Consumption tax, etc. is charged in addition. • Block trades are, with prior application to TFX, having buy and sell orders of the same contract month simultaneously executed outside competitive auction. • Give-up means that Executing Member (Trading Member who has executed a trade of Three-month TONA futures options contracts) have another Trading Member clear such trade. • Take-up means that Trading Member undertake clearing of Three-month TONA futures options contracts.

- The originals of this outline of rules have been prepared in the Japanese language only and the Japanese language texts shall govern for all purposes and in all respects. Accordingly, all questions that may arise within or without courts of law in regard to the meaning of the words, provisions and stipulations of the rules, regulations and agreements shall be decided in accordance with the Japanese language texts. Whilst reasonable care has been taken to ensure that these translations are accurate and free from errors, no liability is accepted by TFX in any circumstances.

Theoretical Option Price Formula

The theoretical call option price (hereinafter shown as “C”) and the theoretical put option price (hereinafter shown as “P”) shall be calculated by reference to the following formulae:

$$C = e^{-rt} [FN(d) - KN(d - \sigma\sqrt{t})]$$

$$P = C - e^{-rt} (F - K)$$

As used in the above formula, “d” shall be calculated by reference to the following formula:

$$d = [\ln(F/K) + \sigma^2 t / 2] / \sigma\sqrt{t}$$

Where:

F : daily settlement price of the underlying futures contract

e : Napier's number

t : number of days elapsed up until the option exercise date / 365

K : strike price

Σ : implied volatility calculated for each series of options in the manner prescribed by the Exchange / 100

r : Three-month Japanese Yen TIBOR as published by General Incorporated Association JBA TIBOR Administration (JBATA) on the relevant date divided by 100 and rounded to the nearest 2nd decimal point

N(x) : cumulative density function of the standard normal distribution where the value is x

ln : Napierian logarithm

Examples of the Last Trading Days for option contracts and underlying futures contracts

Option Contracts			Underlying Futures Contracts		
Product	Contract Month	Last Trading Day	Underlying Futures Contract	Contract Month	Last Trading Day
Three-month TONA futures option contracts	June 2023	September 20, 2023 (Wed) , available for trading until 9:30 a.m.	Three-month TONA futures	June 2023	September 20, 2023 (Wed) , available for trading until 9:30 a.m.
【For Reference】 Three-month Euroyen futures option contracts	June 2023	June 19, 2023 (Mon) , available for trading until 11:00 a.m.	Three-month Euroyen futures	June 2023	June 19, 2023 (Mon) , available for trading until 11:00 a.m.