

Handling of Operations Relating to Optimization of Tick Sizes for ETFs, ETNs, and Leveraged Products

1. Handling of tick sizes applied to ETFs, ETNs, and leveraged products whose trading unit is 1

(1) Method for determining tick sizes

For ETFs, ETNs, and leveraged products, TSE currently applies tick sizes other than those applied to TOPIX 100 constituents (hereinafter, the "non-TOPIX 100 tick size table"). To improve convenience by lowering execution costs for trading incurred by investors, we have decided to apply the tick sizes applied to TOPIX 100 constituents (hereinafter, the "TOPIX 100 tick size table"), in principle, to all ETFs, ETNs, and leveraged products.

However, depending on price ranges, the TOPIX 100 tick size table includes values less than JPY 1. Therefore, to prevent prices per trading unit from including fractions less than JPY 1, if an ETF, ETN, or leveraged product has a trading unit of 1 unit and its closing price, etc.¹ falls to JPY 5,000 or less, the non-TOPIX tick size table will be applied, in principle², from the second business day afterwards. If the closing price, etc. later increases to JPY 7,000 or more, the TOPIX 100 tick size table will be re-applied from the second business day after this³.

(2) Notification method when tick sizes are changed

If tick sizes are to be changed for any issues, this information will be announced, as a general rule, at around 4 p.m. (JST) on the day when the closing prices, etc. of said issues fall to JPY 5,000 or less or increase to JPY 7,000 or more (two business days before the change), via Target and the JPX website (Market News).

Concerning the query function from trading participants and issue information for Market Information System users, post-change data will also be available on the business day prior to the change as information for the next day and on the day of the change as information for the same day, in the same way as changes to TOPIX 100 constituents are disseminated at the time of a review.

(3) Handling of Expansion of Lower Daily Price Limits

For ETFs, ETNs, and leveraged products excluding multiply-listed foreign issues, if the auction

¹ As a general rule, last execution prices (if the auction closes with special quotes, etc., prices of said quotes) are used. If neither is available, base prices for the day are used. In cases of a stock split or reverse stock split, etc., if the base price on the ex-rights date calculated based on the closing price, etc. on the second business day before said date, is JPY 5,000 or less, the non-TOPIX 100 tick size table is used. If said price is JPY 7,000 or more, the TOPIX 100 tick size table is applied.

² For ETFs, ETNs, and leveraged products which are multiply-listed foreign issues, base prices may be set according to the prices on their home market, so base prices for issues whose trading unit is 1 may be determined based on the base price calculated according to the prices on their home market. In this case, tick sizes may change on the following business day. For details, please see "Base Price" in the link below.
<https://www.jpx.co.jp/english/equities/products/foreign/trading/index.html>

³ For actual examples, please refer to "Reference: Examples of Changes in Tick Size Table Application" later in this document.

closes at an upper (lower) limit price, the upper (lower) daily price limit will be expanded by four times from the following business day. However, for ETFs, ETNs, and leveraged products whose trading unit is 1 and to which tick sizes applied to the TOPIX 100 constituents are applied, if the lower price limits are expanded, prices per trading unit may include fractions less than JPY 1. Therefore, for an ETF, ETN, or leveraged product whose trading unit is 1 and to which tick sizes applied to the TOPIX 100 constituents are applied, the lower price limits will, as a general rule, not be expanded⁴.

2. Handling of newly listed issues

For newly listed issues, the TOPIX 100 tick size table will be applied as a general rule. However, for issues to be listed whose trading unit is 1, TSE will determine the table to be applied and announce this via Target and on the JPX website (Market News) at least two business days prior to the initial listing date.

3. Transition to the revised rules

These revisions will be implemented on November 29, 2021. Tick sizes applied on the day will be announced on November 25, 2021 via Target and on the JPX website (Market News).

⁴ However, if there is a possibility that the price will remain at the lower limit for consecutive days and TSE deems it necessary to ensure smooth price formation, TSE will change base prices or tick sizes from the following business day. Such changes will be notified in advance via Target and on the JPX website.

Reference: Examples of Changes in Tick Size Table Application

Examples of application of the non-TOPIX tick size table to ETFs, ETNs, or leveraged products whose trading unit is 1 unit

Trading date	T+0	T+1	T+2
Applied tick size table	TOPIX 100	TOPIX 100	<u>Non-TOPIX 100</u>
Base price for the day	JPY 5,500	JPY 5,000	JPY 4,000
Closing price for the day	<u>JPY 5,000</u>	JPY 4,000	JPY 3,300

If the closing price falls to JPY 5,000 or less on T+0, even if it then increases to more than JPY 5,000 on T+1, the non-TOPIX 100 tick size table will still be applied from the second business day.

Trading date	T+0	T+1	T+2
Applied tick size table	TOPIX 100	TOPIX 100	<u>Non-TOPIX 100</u>
Base price for the day	JPY 5,500	JPY 5,000	JPY 5,500
Closing price for the day	<u>JPY 5,000</u>	JPY 5,500	JPY 6,000

Examples of re-application of TOPIX 100 tick size table

Trading date	T+0	T+1	T+2
Applied tick size table	Non-TOPIX 100	Non-TOPIX 100	<u>TOPIX 100</u>
Base price for the day	JPY 6,500	JPY 7,000	JPY 7,500
Closing price for the day	<u>JPY 7,000</u>	JPY 7,500	JPY 7,800

If the closing price increases to JPY 7,000 or more on T+0, even if it then falls to less than JPY 7,000 on T+1, the TOPIX 100 tick size table will still be applied from the second business day.

Trading date	T+0	T+1	T+2
Applied tick size table	Non-TOPIX 100	Non-TOPIX 100	<u>TOPIX 100</u>
Base price for the day	JPY 6,500	JPY 7,000	JPY 6,500
Closing price for the day	<u>JPY 7,000</u>	JPY 6,500	JPY 6,000

Examples of application of the non-TOPIX 100 tick size table to ETFs, ETNs, and leveraged products whose trading unit is 1 unit and whose home market prices are used

In addition to the determination based on the closing price for the day, if the base price for the next day based on home market prices falls to JPY 5,000 or less, the non-TOPIX tick size table will be applied from the second business day.

Trading date	T+0	T+1	T+2
Applied tick size table	TOPIX 100	TOPIX 100	<u>Non-TOPIX 100</u>
Base price for the day	JPY 5,500	JPY 5,000	JPY 4,000
Closing price for the day	JPY 5,100	JPY 4,100	JPY 3,400
Base price for the next day	<u>JPY 5,000</u>	JPY 4,000	JPY 3,300

If the base price for the next day based on home market prices falls to JPY 3,700 or less, tick sizes to be applied will be changed to "Non-TOPIX 100" from the next business day as a special case.

Trading date	T+0	T+1	T+2
Applied tick size table	TOPIX 100	<u>Non-TOPIX 100</u>	/
Base price for the day	JPY 4,500	JPY 3,650	
Closing price for the day	JPY 3,800	JPY 3,500	
Base price for the next day	<u>JPY 3,650</u>	JPY 3,550	

Example of application of the non-TOPIX 100 tick size table to multiply-listed foreign ETFs, ETNs, and leveraged products whose trading unit is 1 unit

If the base price is changed to the home market price that was referred to prior to the opening of the trading session for the day, and consequently falls to JPY 5,000 or less, tick sizes to be applied will be changed to "Non-TOPIX 100" from the next business day as a special case.

Trading date	T-1	T+0	T+1
Applied tick size table	TOPIX 100	TOPIX 100	<u>Non-TOPIX 100</u>
Base price for the day	JPY 5,500	<u>From JPY 5,300 to</u> <u>JPY 4,200</u> (Changed on the morning of the day)	JPY 3,500
Closing price for the day	JPY 5,300	JPY 3,500	JPY 2,800
Base price for the next day	JPY 5,300	JPY 3,500	JPY 2,800