Report From the Working Group on Trading Rules

Tokyo Stock Exchange, Inc.

April 22, 2026

INDEX

JPX
JAPAN EXCHANGE GROUP

Introduction

Introduction

- Tokyo Stock Exchange (TSE) has been working to improve its trading rules in order to enhance the convenience and transparency of the cash market, including the introduction of a closing auction session, the extension of trading hours, and optimization of tick sizes.
- With a certain amount of time having passed since the introduction of these rules, TSE established a Working Group (WG) composed of a variety of market stakeholders.[1] This group discussed the following topics based on evaluations of the rules' effectiveness since introduction, feedback from market stakeholders, and other information.

Improvements to the Closing Auction Session

- The closing auction session was introduced in November 2024, in conjunction with the upgrade of the cash trading system.
- While we initially adopted a simple system for the sake of clarity and other considerations, the WG reviewed the necessity of additional measures to improve the rules based on post-implementation trading conditions (such as whether there is gaming behavior and how closing prices are being formed).[2]

Further Optimization of Tick Sizes

- In January 2014, TSE introduced a framework whereby tick sizes are determined according to index classifications (TOPIX 100) with a view to reducing execution costs for investors. Then, based on recommendations from the Working Group on Capital Market Regulations of the Financial System Council,[3] tick sizes for medium-liquidity stocks (TOPIX Mid400 constituents) were further optimized in May 2023.[4]
- Market stakeholders have pointed out the issues with using index classifications as an indicator of liquidity, including that tick sizes remain too large or too small for certain issues even now. Given this, the WG considered how to establish more appropriate tick sizes tailored to the liquidity of each issue.

[1] Fourteen firms, consisting of trading participants (domestic securities firms, foreign securities firms, and online brokers) and institutional investors (domestic and overseas).
[2] "Revisions to Trading Rules for Strengthening Functions of Cash Equity Market in Connection with Launch of Next Generation Trading System," published on May 11, 2023, stated that "We will also continue to consider the need to introduce additional frameworks to prevent inappropriate transactions."
[3] The second interim report from the Working Group on Capital Market Regulations of the Financial System Council, published on December 21, 2022, stated that "tick sizes must be set appropriately to ensure fair price formation and smooth execution, taking into account the status of trading participants and liquidity, among other things."
[4] We have also optimized tick sizes for ETFs and other products to reduce execution costs for investors and curb sharp increases in execution costs that result from when rising stock prices cause changes in tick size.

Improving the Closing Auction Session

Policy for Improving the Closing Auction Session (Overview)

Evaluation of Current Situation

- At present, we have not identified any malicious gaming activities that could undermine the transparency of closing price formation, i.e., order modifications/cancellations just before closing. (Some members did argue that additional anti-gaming measures are necessary from a prevention perspective.)
- To enhance the transparency and reliability of closing price formation, which is why the closing auction session was introduced, **further improvements are needed, such as bringing forward the timing of order placement (including new orders) for earlier closing price formation and mitigating sharp price fluctuations (volatility) in indicative prices during the pre-closing period.**

Discussion at the WG

- The WG debated the advantages and disadvantages of the below measures based around **whether they will contribute to further improvements in transparency and reliability of closing price formation**, taking into account the views of market stakeholders, the impact of introducing additional measures on liquidity and convenience at the afternoon close Itayose, and the burden on market stakeholders.

Random Closing [1]

- Prior research in overseas markets suggests that **this can reduce volatility and increase liquidity through earlier closing price formation and prevention of gaming.**
- However, there are concerns about the impact on liquidity resulting from arbitrage trading being less convenient (although no such effects have been observed in overseas markets that have already adopted similar systems)**.**

Non-Cancel Period (NCP)[2]

- This would help domestic institutional investors, who worry about exceeding thresholds set by internal rules, to trade with peace of mind by increasing the predictability of the closing price participation rate.
- **However, in addition to concerns about reduced convenience due to constraints on order placement, the impact on the timing of closing price formation and curbing volatility, which are the most pressing issues, would be limited**

Action Plan

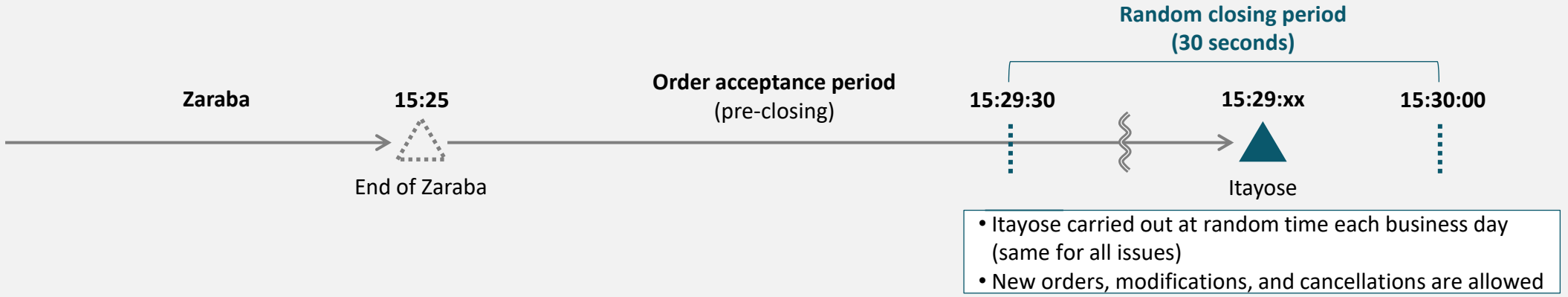
- **In light of the goal of further enhancing transparency and reliability of closing price formation and based on comprehensive consideration of prior research from overseas markets and feedback from market stakeholders both in Japan and abroad, TSE has decided to introduce random closing** and will now proceed with designing the rule framework for this.
- Given the concerns raised about reduced convenience for arbitrage trading, the random closing period will last 30 seconds.
- Also, when introducing new rules, we will communicate carefully to ensure adequate awareness among individual investors and other market stakeholders.

Note 1: Random closing is a system where the time of the afternoon close Itayose is randomly determined within a certain period on each business day.
Note 2: A non-cancel period is a system that prohibits the cancellation or modification of orders during a specified period immediately before the afternoon close Itayose.

Proposal to Improve the Closing Auction Session (Introduction of Random Closing)

How random closing will work

Item	Overview
Random Closing Period	• A 30-second period between 15:29:30 and 15:30:00
Timing of the Itayose	• The afternoon close Itayose is carried out at a random time within the random closing period (the above 30 seconds) on each business day • **The Itayose time is the same for all issues** for which a closing auction session is carried out.
Restrictions Based on Order Type	• There are no restrictions based on order type, and new orders, modifications of order price and volume, and cancellations are allowed up to the time of the afternoon close Itayose.[1]
Dissemination of Indicative Equilibrium Prices, etc.	• We will disseminate Indicative Equilibrium Prices (IEPs) and Indicative Equilibrium Volumes (IEVs) to improve transparency at pre-closing.[2]



[1] We will also continue to consider handling of the "Guidelines Concerning Focused Monitoring of Order Changes in Closing Auction" (hereinafter referred to as the "Monitoring Guidelines)

[2] The same information is also scheduled to be disseminated during a designated period prior to the opening auctions of both the morning and afternoon sessions.

WG Discussions (1): Feedback from Market Stakeholders (Evaluation of Current Rules)

- Among primarily institutional investors, the introduction of the closing auction session has been praised for improving convenience by increasing the proportion of value traded at the afternoon close Itayose and decreasing the number of issues for which trades are not executed beyond Zaraba.
- While no malicious gaming activity has occurred to date, **some pointed out that there is room for improvement in enhancing the transparency of closing price formation, such as bringing forward order placement times**, given the sharp fluctuations in quote prices caused by a surge in new orders just before the afternoon close Itayose.

Discussion Point	Overview of Opinions Given
Improving liquidity at the afternoon close Itayose	• We are happy that the market has become more conducive to institutional investor participation, thanks to the increase in value traded at the afternoon close Itayose and the decrease in issues for which trades are not executed beyond Zaraba. • Liquidity at the afternoon close Itayose is crucial for ensuring execution at that time, but the level is still inadequate.
Bringing forward closing price formation	• There are issues with transparency, such as instances where, regardless of an issue's liquidity, quote prices move significantly when pre-closing begins, only to return close to the last price of Zaraba just before the afternoon close Itayose due to a large volume of new orders. • There are concerns about sharp fluctuations in quote prices or system overload caused by a large volume of new orders being placed just before the afternoon close Itayose.
Gaming activities (order modifications, cancellations, etc. just before closing)	• Operations based on the Monitoring Guidelines have some positive impact, despite the costs incurred by both securities companies and the exchange. • We have received no significant concerns from customers about order cancellations that could manipulate the indicative equilibrium price during pre-closing. • For a company that has domestic institutional investors as clients, forecasting trading volume (participation rate) at the afternoon close Itayose is a key factor.
Pre-closing	• Allowing sufficient time is also a key consideration for the closing auction session, and a five-minute period would be appropriate for spreading out order placement times. • The current pre-closing session is too long. Shortening it and extending Zaraba would help increase execution opportunities before the afternoon close Itayose. • We would like to see dissemination of IEPs/IEVs to improve transparency.
Deviation between the last price of the Zaraba session and the closing price	• Trading is centered on active management, so we see no big issues regarding deviation between the last price of Zaraba and the closing price. • While I understand that the introduction of a pre-closing period between Zaraba and the afternoon close Itayose may cause a certain degree of divergence, to ensure price continuity, it is best to minimize deviation between the last price of Zaraba and the closing price as much as possible.

WG Discussions (2): Background for Consideration of Additional Measures

- When evaluating the situation after the introduction of the closing auction session, we received feedback, primarily from domestic and overseas institutional investors[1], that further improvements are needed, such as bringing forward the timing of order placement (including new orders) to speed up closing price formation and reducing volatility during the pre-closing period.

- While some argued that further action was not needed given the lack of malicious gaming activity identified at present, solving the above issues is a priority in light of the original objectives of the closing auction session; additionally, there would be meaning in taking additional measures from a prevention perspective.

- During the discussions, members stressed the need to ensure that additional action does not compromise liquidity or convenience in trading at the afternoon close Itayose, as well as making the rules easy to understand for individual investors and others.

- Based on these points, the WG considered each potential action from the below perspectives, taking into account prior research in overseas markets and giving due consideration to liquidity in the afternoon close Itayose as well as convenience and operational burden for market stakeholders.
    1. Further improvement of transparency in closing price formation (bringing forward closing price formation)
    2. Further improvement of reliability of closing price formation (prevention of gaming and reducing volatility)

[1] We also received feedback that, improvements to the quality of closing prices such as enhanced transparency and reliability in the price formation process would also benefit individual investors.

WG Discussions (3): Feedback From Market Stakeholders (Random Closing)

- Based on prior research in overseas markets, random closing could **not only accelerate closing price formation but also help prevent gaming**, by bringing forward the timing of order placement, including new orders.
- While there were some concerns about the negative impact on liquidity resulting from arbitrage trading being less convenient, there was also feedback from stakeholders who also trade on overseas exchanges that have already introduced random closing that there is no notable impact.

Discussion Point	Overview of Opinions Given
Bringing forward closing price formation	• If IEPs/IEVs get close to their afternoon closing levels at an earlier stage, it will contribute to transparency and reliability by increasing the predictability of closing prices. • Earlier closing price formation would be an effective way to address the concentration of placement of new orders just before the afternoon close Itayose.
Track record in other countries	• It is important that, in overseas markets where random closing has been introduced, tangible effects have in fact been observed, such as earlier formation of closing prices, enhanced predictability of closing prices, and reduced volatility. • We can recommend this approach because, having been adopted overseas, the rules are very familiar to us and the algorithm has a proven track record.
Prevention of gaming	• Random closing is preferable from a fairness perspective as it helps prevent price manipulation just before the afternoon close Itayose (compared to the NCP system which only prevents order modifications and cancellations).
Arbitrage trading	• If random closing leads to a drop in convenience for arbitrage trading and reduced flow, there is a chance it would not contribute to suppressing volatility. • Related parties from Europe, the U.S., and Hong Kong report no notable impact on arbitrage trading (actually, they are seeing improved liquidity and reduced volatility). • Even in markets such as Australia, where program trading is prevalent and there is a high proportion of trading at the session close, random closing is functioning stably and we have not heard any particular concerns from local investors or brokers about impact of arbitrage trading on liquidity.
Random closing period	• The shorter the period is, the less price fluctuation risk is taken on by market makers, so if you are taking the impact on arbitrage trading into account, a shorter period would be better. • A period of around 30 seconds would have a limited effect on arbitrage trading and system load.

WG Discussions (4): Feedback From Market Stakeholders (NCP)

- Mostly from the perspective of institutional investors participating in trading at the afternoon close Itayose, **an NCP would provide peace of mind that cancellations and modifications will not occur just before the Itayose**.
- However, in addition to concerns about reduced convenience due to constraints on order placement, the **impact on the most pressing issues of bringing forward closing price formation and reducing volatility would be limited**.
- There were also concerns raised about the high system implementation and operational costs of a rule-based NCP, as well as its effectiveness as a deterrent.

Discussion Point	Overview of Opinions Given
Bringing forward closing price formation	• Since the timing of new order placement is expected to remain unchanged, the impact on bringing forward closing price formation would be limited. • Since the order flow from quants investors, who often place speculative orders just before the afternoon close Itayose, would not change, an NCP would not be able to stem the rise in volatility just before the Itayose.
Participation of institutional investors in the afternoon close Itayose	• From the perspective of ensuring that domestic institutional investors can participate in trading with confidence, the predictability of participation rates (ensured by the absence of cancellations) is crucial.
Arbitrage trading	• The impact of an NCP on arbitrage transactions would not be zero, but it would be smaller than that of random closing.
Unavoidable modifications and cancellations	• In a mature market like Japan, an NCP is undesirable as it would only restrict freedom. • To make modifications and cancellations impossible, even for erroneous orders, is an extreme measure that carries significant risk. • Some customers wish to adjust their participation rate based on market signals right up to the close, so restrictions through an NCP would hinder effective execution.
NCP (rule-based restrictions)	• Domestic institutional investors place importance on knowing that there will be no cancellations or modifications, so a system that allowed exceptions would be considered to lack reliability. • This would be a lackluster approach, as there is a risk it would support gaming through allowing cancellations or modifications for various reasons. • Trading participants would need to control customers' modifications and cancellations on their side, putting a large strain on systems.
Length of NCP	• The NCP should be as short as possible to minimize the risk of erroneous orders.

WG Discussions (5): Comparison of Each Potential Measure[1]

- To further improve the transparency and reliability of closing price formation, which were the key focus of discussions, we have decided to introduce random closing.

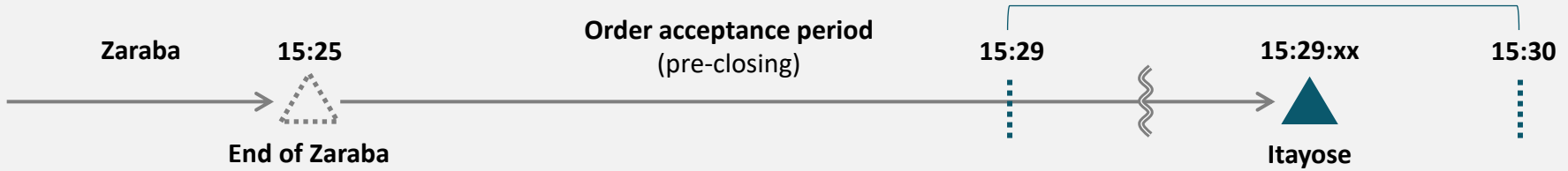
(Discussion point)		(Transparency/reliability of closing price formation)		(Liquidity of the afternoon close Itayose)		(Convenience for market stakeholders)		
#	Measure	Bringing forward closing price formation (curbing volatility in the pre-closing session)	Effectiveness at preventing gaming (cancellations, etc. just before the afternoon close Itayose)	Less convenience for arbitrage trading[2]	Less convenience for market making	Availability of order modifications/cancellations in the pre-closing session	Inst. investor participation in afternoon close Itayose (concerns about involvement in closing price)	Burden on market stakeholders (understanding of rules, systems, operations)
A	Random closing (RC)	**IEPs/IEVs formed before start of RC period**	Gaming difficult as time of Itayose is unpredictable	**Order placement must be made before start of RC period (price fluctuation risk after RC)**	Quote prices can be changed up to just before Itayose	Modifications/cancellations can be made until just before Itayose	Participation rates could rise due to other participants' cancellations	Careful information provision about rules is necessary System already used overseas (synergy with systems/algorithms)
B	NCP (system control)	**Possibility that new orders converge to after start of NCP**	Gaming difficult as modifications/cancellations are unavailable	Modifications/ cancellations unavailable after start of NCP	Spread widens after start of NCP	Unavailable in all cases after start of NCP	**(Maximum) participation rate is predictable after start of NCP**	Careful information provision about rules is necessary
C	NCP (regulation only)	Possibility that new orders converge to after start of NCP	Gaming difficult as modifications/cancellations are unavailable (cancellations available for erroneous orders only)	Modifications/ cancellations unavailable after start of NCP	Spread widens after start of NCP	**Cancellations available for erroneous orders only after start of NCP**	Participation rates could rise due to other participants' cancellations	Careful information provision about rules is necessary **Heavy load on systems/operations**
Ref[3]	Random closing + NCP	IEPs/IEVs formed before start of RC period	**Gaming extremely difficult as time of Itayose is unpredictable and modifications/cancellations are unavailable**	Order placement must be made before start of RC period (price fluctuation risk after RC)	Spread widens after start of NCP	Unavailable in all cases after start of NCP	(Maximum) participation rate is predictable after start of NCP	**Particularly careful information provision is needed as rules are complicated**

Note 1: Advantages that were often pointed out in the WG are shown in blue; disadvantages in red.
Note 2: Regarding the potential decline in convenience for arbitrage trading, no such adverse effects have been observed in overseas markets that have already implemented random closing, and some results have shown liquidity actually increasing.
Note 3: The proposal to introduce both random closing and NCP was excluded from the scope of consideration as this would significantly increase the complexity of the rules.

(Ref.) Potential Schedule for Each Measure

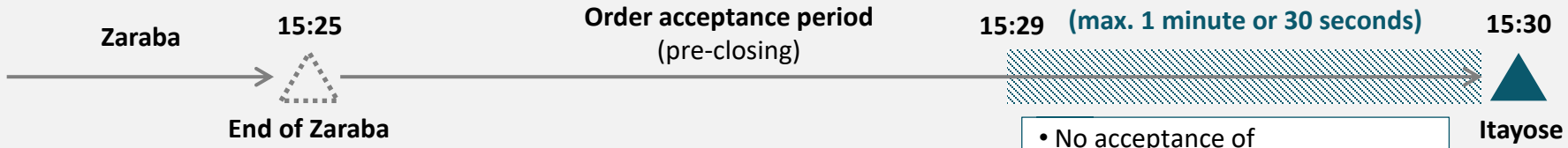
(Made for the purpose of discussions by the WG)

A. Random Closing



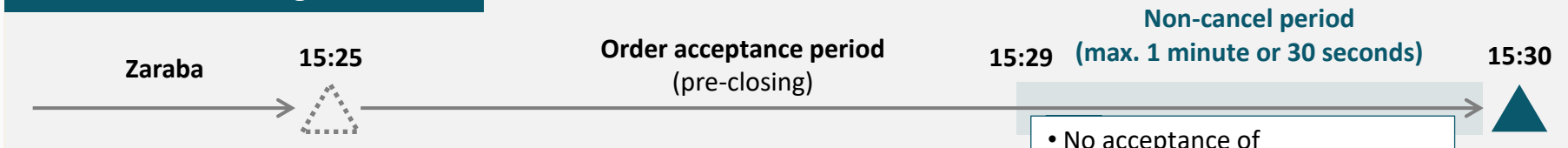
- Itayose at random time each business day (same for all issues)
- No restrictions on order type

B. NCP – System Control



- No acceptance of modification/cancellation orders (all cancellations unavailable including for erroneous orders)
- Only new orders accepted

C. NCP – TSE Regulation



- No acceptance of modification/cancellation orders in principle (cancellations of erroneous orders available)
- Only new orders accepted

Further Optimization of Tick Sizes

Policy for Further Optimizing Tick Sizes (Overview)

- TSE has previously optimized tick sizes based on liquidity, using metrics such as the STR (Spread to Tick Ratio)[1] as a reference.
- To ensure clarity, the applicable tables are determined based on index classifications. However, given that market stakeholders have pointed out the below issues, the WG has agreed that we should revise our policy with a view to setting appropriate tick sizes based on the liquidity of each issue.

Issue 1

- Liquidity varies by issue even within the same index category, and there are drawbacks that come from tick sizes not necessarily being set appropriately for the liquidity level.
  - ➢ When tick sizes are too small for the liquidity level and the orderbook is sparse, there are risks that prices will fluctuate or trading intentions will be revealed through executions being fragmented.
  - ➢ When tick sizes are large despite high liquidity and the minimum spread is restricted, opportunities for improving prices are lost.

Issue 2

- Since the ratio of tick size to stock price (tick weight) varies greatly depending on the stock price, execution costs rise sharply at price thresholds where the tick size changes.

Plan of action

- **Since the TSE market is accessible to all types of investors, it is important to set tick sizes appropriate for liquidity levels in order to further improve the convenience of Japan's capital markets.** For this reason, we will continue with further optimization **while taking into account the burden on market participants and the clarity of the rules.**
- Specifically, in order to solve the below issues, we will set tick sizes based on the liquidity of each issue over a certain period, rather than index categories.

Response to Issue 1

- For issues for which the tick size is too small for the liquidity level (the orderbook is sparse), we will **curb volatility and signaling** by increasing the tick size.
- For issues for which the tick size is too big for the liquidity level (the orderbook is crowded), we will **reduce investors' execution costs** by reducing the tick size.

Response to Issue 2

- By revising the tick size tables for certain price ranges, we will **control sharp rises in execution costs that result from price fluctuations**.

[1] This indicates how many ticks make up the BBO spread by dividing the nominal spread (best ask price minus best bid price) by the tick size. Under MiFID II in the EU, tick sizes are set with reference to the STR.

Proposal for Further Optimization of Tick Sizes (1) (Overview of Rules)

- Based on the recommendations of the Working Group on Capital Market Regulations and feedback from market stakeholders, we will apply tick sizes based on the liquidity of each issue while continuing to pay attention to ease of understanding (the number of tick size tables).
- Considering the burden on market participants, we expect to revise the applications of tick size tables around once a year, which is the same as in the current rules (at the periodic review of TOPIX constituents).

Point	Overview	Notes
Issues to Which New Rules Apply	• All stocks listed on TSE • The below tick size tables will be applied based on the Spread to Tick Ratio (STR) over a certain period. 1. Tick Size Table A ("Active," ultra-high liquidity table) 2. Tick Size Table B ("Basic," high liquidity table) 3. Tick Size Table C ("Calm," medium liquidity table) • For ETFs and ETNs, Table A will apply as a rule regardless of the STR given their product characteristics and other factors. • For issues whose trading unit is one share, Table O will apply as a rule*. 4. Tick Size Table O ("One Unit," table for issues whose trading unit is one share)	*E.g., ETFs, ETNs, REITs, infrastructure funds, preferred equity investment securities. For issues such as these whose trading unit is one share, a dedicated table will be applied to prevent executions of less than JPY 1.
Periodic Review	• We will revise the tables to be applied every August, based on STRs over the evaluation period. • The evaluation period will be the nine months from August to April, and the evaluation will be based on the median STR during that period. • **[STR＜1.5]** Transition one table down (2. to 1. or 3. to 2.) **[1.5≦STR≦5.0]** No change **[5.0＜STR]** Transition one table up (1. to 2. or 2. to 3.) • We plan to announce issues whose table has been revised two months before the change date. • We plan to publish the tick size tables applied to each issue on the TSE website, as well as through FLEX (next-day issue information) on the evening of the previous business day, as is currently the case.	The tick size tables applied at the time of transition to the new rules will be decided, as a rule, based on STR over a certain period based on the current tables.[1]
Other	• We are also considering publishing each issue's STR on a regular basis to ensure predictability for market stakeholders. • For issues that have carried out new direct listings, we plan to apply Tick Size Table C as a rule.	

[1] We will work carefully to make sure that market participants have enough preparation time, for example by publishing the list of issues at an early stage.

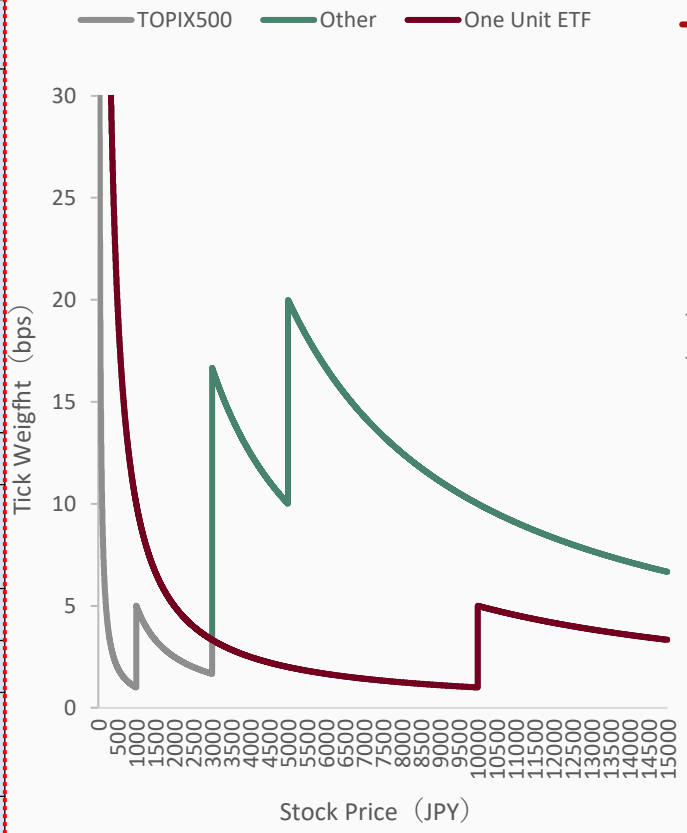
Proposal for Further Optimization of Tick Sizes (1) (New Tables)

- Adjustments will be made across each tick size table with a view to leveling tick weights overall, so as to mitigate sharp increases in execution costs resulting from price movements.

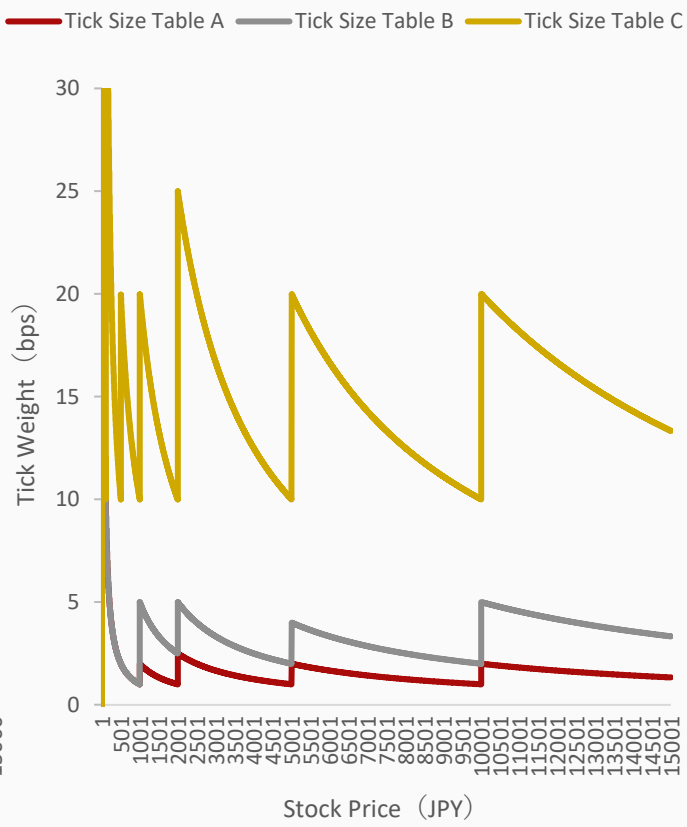
New Tick Size Tables (Proposal)

Stock Price	Current			Post-revisions			
	TOPIX 500 constituents	Other index constituents	ETFs/ETNs with trading unit of 1 share	Tick Size Table A	Tick Size Table B	Tick Size Table C	Tick Size Table O
1 to less than 100	0.1	1	1	0.1	0.1	0.1	1
100 to less than 500						0.5	
500 to less than 1,000						1	
1,000 to less than 2,000	0.5			0.2	0.5	2	
2,000 to less than 3,000				0.5	1	5	
3,000 to less than 5,000	1	5					
5,000 to less than 10,000		10		1	2	10	
10,000 to less than 20,000	5		5	2	5	20	2
20,000 to less than 30,000				5	10	50	5
30,000 to less than 50,000	10	50	10				
50,000 to less than 100,000		100		10	20	100	10
100,000 to less than 200,000	50		50	20	50	200	20
200,000 to less than 300,000				50	100	500	50
300,000 to less than 500,000	100	500	100				
500,000 to less than 1,000,000		1,000		100	200	1,000	100
1,000,000 to or more	[Omitted]			[Omitted]			

Tick Weights (Current)



Tick Weights (Post-revision)



Tick weight: tick size ÷ stock price

Feedback From Market Stakeholders (Current Situation and Planned Revisions)

- Many members were in favor of the proposed revision, which sets tick sizes appropriate to the liquidity of each issue, saying that it was a reasonable approach.
- However, it was pointed out that when proceeding with rule revisions, consideration must be given to the burden on market stakeholders in terms of systems and operations, and careful outreach to investors is necessary, particularly individual investors.

Discussion point	Overview of opinions given
Current tick size levels	• Based on the current STR distribution, there are issues whose tick sizes are too small, meaning that the orderbook is sparse, and those whose tick sizes are too big, meaning that the orderbook is crowded. Improvements are needed. • For issues whose liquidity is low for their tick size, with a sparse orderbook, there are concerns that fragmented executions can increase volatility and lead to signaling. • We have received requests from customers that there are issues whose tick sizes are too large, and that for further optimization, TSE should 1) reduce the tick size for stocks in the TOPIX Mid400 Index, and 2) apply the same tick sizes used for the Mid400 to stocks in the TOPIX Small Index.
Setting tick sizes based on liquidity	• We agree that tick sizes must be set appropriately for the liquidity, given that the current approach based on index classifications is already complicated to some extent. • Setting tick sizes based on STR is reasonable as it does not just make tick sizes smaller; there are also issues for which they will get bigger. • Since it will result in bigger tick sizes for low-liquidity issues, we hope that it will improve market depth.
Burden on market stakeholders	• Given the burden on participants, such as system-related costs, I do not think there is much need to make this change. • If the number of tick size tables rises sharply, or the number of issues subject to revisions is too high, the burden for responding to this will grow significantly, so due consideration is needed. • If the tick size tables are frequently changed, the burden will be high. If they are revised once a year like they are now, it would be fine.
Differences in tick sizes between markets	• There are investors that use SOR to execute trades on PTSs and dark pools with small tick sizes, so the benefits of reducing tick sizes on TSE would be small. • Differences in tick sizes across execution venues are contributing to market complexity and increased costs, so they should be standardized like in overseas markets.
Breadth of stock price range	• We consider the fundamental problem to be that the range of stock prices in Japan is too wide. • We hope that TSE will continue to encourage share splits and other measures to address the issue of the range of stock prices being too wide.
Outreach to individual investors	• Since tick sizes affect individual investors as well, it is essential to ensure that any rule changes are thoroughly communicated.

Feedback From Market Stakeholders (Adoption of Liquidity Indicator)

- Given our history of optimizing tick sizes with reference to STR, as well as the many comments received that considered adjusting the applicable tick size tables based on STR measurements appropriate from the perspective of the indicator's suitability and stability, **we will adopt STR as the liquidity indicator.**
- Some issues remain from the perspectives of STR's ease of understanding as an indicator and verifiability by market participants.

◎=very positive ○=positive △=neutral ×= negative

Discussion point	Number of executions	Trading volume	STR
Suitability of indicator[1] (connection to STR)	○ Already used in Europe and functions as an indicator (also has a certain connection to STR)	△ Weak connection to STR	◎ Consistent with the objective of keeping the spread within a reasonable range (although this depends on the tick size)
Stability of indicator[1] (day-to-day volatility)	○ Has certain amount of stability but is impacted by corporate actions such as share splits	△ Least stable of the three indicators (high number of issues subject to change at periodic review increases burden)	◎ Most stable of the three indicators (limits number of issues subject to change at time of periodic review)
Ease of understanding of indicator (clarity of rules)	△ Direct and easy to understand, even if not familiar on a daily basis	○ Widely published and familiar also to individual investors	× Unfamiliar as indicator, especially to domestic investors, despite concept being used in Europe
Verifiability of indicator (ease of data collection)	△ Data collection is relatively easy	○ Data collection is easy due to wide publication	× Difficult to calculate/obtain on the market participant side

[1] For detailed analysis of the strength of the connection between each indicator and the STR, as well as day-to-day volatility, please refer to the "Working Group on Trading Rules (Reference Materials)"

Feedback From Market Stakeholders (3) (Individual Discussion Points)

- From the perspective of clarity, it is important to clearly define STR and publish information linking STR to issues (such as a list of issues), as well as to name the tick size tables and other elements carefully.
- TSE will proceed with discussions on the details of the rules while continuing to give consideration to reducing the burden on market stakeholders.

Consideration given to individual investors	• As STR is an indicator that is unfamiliar to individual investors, we would like thorough communication in addition to careful naming of tables and other elements to make it easier for investors to intuitively understand which table is applied to each issue. • As a securities firm that focuses on face-to-face consulting, we are concerned that situations where issues with similar stock price levels have different tick sizes may lead to investor misunderstanding and unnecessary solicitation-related problems. • We would like for the rules for setting tick sizes and STR-related information to be aggregated and published on TSE's website. • Many individual investors trade using SOR [1] and therefore have little interest in which tick size table is applied; rather, what matters to them is whether an appropriate tick size is set.	• We are considering tick size group names that take into account ease of understanding. • We are looking at enhancing information on the website and providing ongoing communication to facilitate a smooth transition to the new rules.
Definition of STR	• If STR is adopted as an indicator, we would like TSE to clearly specify the definition it uses for the calculation of STR, as well as what data market stakeholders should use when estimating and verifying issues subject to periodic review.	• We will publish a detailed definition of STR. • We will consider periodic publication of STR figures for each issue.
Review period Publication period	• We would like for these to not occur during securities firms' busy periods (major events such as index rebalancing, beginning and end of the fiscal year, etc.) or periods where there would be a significant impact in the event of technical issues. • In order to ensure sufficient time for algorithm adjustments and system implementation, we would like issues subject to periodic review to be announced at an early stage.	• We will adopt the following policy, with the final decision being made based on feedback from market stakeholders. ➢ Reviews conducted annually in August ➢ Applicable issues announced no later than two months prior to the date of the change

[1] SOR（Smart Order Routing）：A system that searches across multiple trading venues to identify the venue offering the best available price and executes orders accordingly.

Feedback From Market Stakeholders (4) (Individual Discussion Points)

- In transitioning to the new rules, we will ensure sufficient preparation time for market stakeholders while providing various types of estimated figures and other information.
- With respect to ETFs, although there are differences in STR levels among individual issues depending on market making conditions (including issues with sparse orderbooks), our policy is to adopt the Tick Size Table A for all ETFs in light of their product characteristics and aspects that can be addressed through the market making scheme.

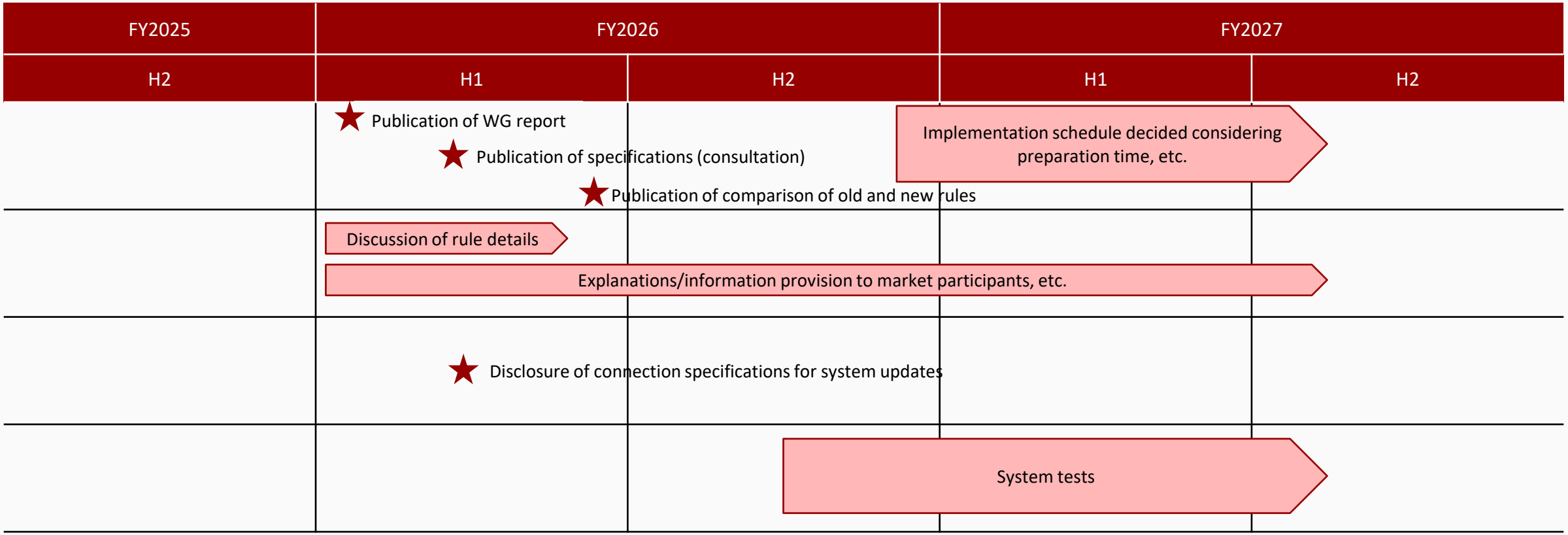
System load	• Algorithms at each firm are continuously optimized based on issue-specific liquidity and past execution records, and changes to the tick size table require a certain amount of time and costs for re-learning. • If system development is required as a result of the rule change, securing resources would impose a burden, and it is also necessary to ensure that disparities do not arise whereby some securities firms are unable to respond in time. • As issues for which tick sizes become bigger or smaller will coexist, we would like to understand the impact on the number of applicable issues as well as on the volume of orders and executions.	• We will ensure sufficient preparation time. • We will estimate the number of applicable issues for each table. • Market-wide estimates indicate a 20%–40% increase in order volume and an 8%–16% increase in execution volume.[1]
ETFs	• As ETFs have product characteristics that differ from those of stocks, there is a certain degree of rationale in treating ETFs differently from stocks. • If STR is adopted, it may also be possible to set tables for ETFs using STR.	• If STR is adopted for ETFs as well, the number of tables will increase,[2] so the Tick Size Table A will be adopted from the perspective of product characteristics and ease of understanding.
Equalization of stock price distribution	• With respect to tick weights, a fundamental issue in Japan is that the range of stock prices is too wide. • In addition to the current optimization of tick sizes, we would like efforts to continue toward reducing investment units in order to address the issue of the range of stock prices being too wide. • It may also be possible, as in the United States, to keep stock prices within a certain range and standardize tick sizes into around two types.	• We will continue to encourage share splits to advance the reduction of investment units.

[1] Estimates are calculated based on historical data, using certain assumptions.
[2] If we have tables split by liquidity (ultra-high, high, medium) and trading unit (one share, other), a total of six tables would be required.

Schedule

Schedule for Rule Revisions[1]

- TSE plans to now proceed with detailed discussions on the rule changes.
- We will decide the implementation schedule taking into consideration market participants' preparation time and other factors.



[1] With respect to the publication of specifications (consultation) and comparison of old and new rules, the earliest possible timing is indicated

The description in this document is intended solely for the purpose of providing information for discussion purposes. While every effort is taken to ensure the accuracy of the information contained in this document, Japan Exchange Group (JPX) does not guarantee, nor assume responsibility for any damages caused by any errors, misunderstanding or omissions.
JPX reserves the right to change the contents of this publications without notice. Without consent of JPX, this document is available only for internal usage.
These materials are prepared solely for the purpose of providing information regarding Japan Exchange Group Inc., and as such, they are not intended as any offer or sale of securities or other similar action whether inside or outside Japan. Our securities have not been and will not be registered under the United States Securities Act of 1933, as amended (the “Securities Act”), and may not be offered or sold in the United States absent registration or an applicable exemption from registration requirements.
These materials contain forward-looking statements. These statements are based on our assumptions and beliefs in light of the information currently available to us and are subject to risks and uncertainties. Should one or more of these risks or uncertainties materialize, or should underlying assumptions prove incorrect, our actual results may vary materially from those we currently anticipate. Given these risks and uncertainties, you are cautioned not to place undue reliance on forward-looking statements, which speak only as of the date of these materials. We disclaim any obligation to update any of the forward-looking statements contained in these materials to reflect future actual events or developments.

JPX
JAPAN EXCHANGE GROUP