Summary of Public Comments on "Introduction of Market Access Rule, etc." and Exchanges' Responses

April 10, 2020

Osaka Exchange, Inc.

Osaka Exchange, Inc. and Tokyo Stock Exchange, Inc. (hereafter respectively "OSE" and "TSE", and collectively "Exchanges") each published a draft outline "Introduction of Market Access Rule, etc." on January 30, 2020 and broadly sought comments from the public until February 29, 2020. The Exchanges received many comments and deeply appreciate the cooperation from market participants on deliberations on this issue.

The following are a summary of the comments received and responses from the Exchanges.

Item	Summary of Comments	Exchanges' Responses to the Comments
1	<Requirement for Direct and Exclusive Risk Management Control over Customer Order Restriction and Measures> - As indicated in "Order Management Guidelines (draft)", trading participants accepting orders for Low Latency Trading continue to be required to abide by the "Checklist for Trading Participants Accepting Low-Latency Trading Orders". However, OSE's risk check functions do not include functions for implementing the communications management required by the checklist. - With a view to preventing cases such as the arrowhead system glitch in October 2018, is it correct that the use of only OSE-provided risk check functions, i.e., sponsored access, is not permitted?	- The items that require "direct and exclusive risk management" under the Market Access Rule are restrictions and measures related to the order placement management prescribed in the Rules concerning Order Management Systems at Trading Participants (hereafter "Order Management Rules"). As such, they do not include the items regarding communications management required by the checklist submitted by securities companies accepting orders for Low Latency Trading.

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2	- TSE and OSE each provide risk check solutions for order management. Our company deems the functions of these solutions are insufficient on their own, and as such, these solutions should be used in combination with order management systems provided independently by trading participants. For example, the reasons for our view that the use of only the solutions provided by the Exchanges is insufficient for order management are as indicated below. ➢ The solutions provided by the Exchanges do not support the two-tiered order placement restrictions (i.e., soft limit and hard limit) required by the Order Management Rules. ➢ The link to each customer is not clear, so this forces us to take a uniform approach towards setting order limits, which results in insufficient order management. - For the purpose of ensuring that trading participants will implement fair and comprehensive order placement limits, we would like to propose that the Exchanges provide additional supplementary information, guidance, and opportunities for consultation. For example, the Market Access Rule stipulate "trading participants are required to immediately implement measures to prevent such irregular orders from being placed to the Exchanges" and "trading participants must appropriately handle, in their systems, orders that breach the order limits, etc. they specified" as requirements of trading participants. Thus, it seems to imply that the	- The type of risk management functions trading participants use should be determined in accordance with each trading participant's approach to risk management. Trading participants can use the risk management functions provided by the Exchanges if they determine that such use is sufficient for their risk management in light of aspects such as customer attributes and forms of trading. - In light of risks inherent in indirect order management, with respect to risk checks implemented independently by trading participants (including the items required by the above checklist) other than the items specified by the Order Management Rules, the Exchanges of course, expect trading participants to implement appropriate measures, such as order management using hardware located in a place physically separated from their customers.

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	solutions provided by the Exchanges alone are not enough to satisfy the above requirements and that the utilization of order management systems provided independently by trading participants would be absolutely needed. We would like the Exchanges to clarify this issue.	
3	< Requirement to Implement Order Placement Prevention Functions> - In the case where the logical ordering line is not occupied by each investor, the order placement prevention function provided by OSE will prevent not only erroneous orders but also other orders which are not directly related to the erroneous orders. Therefore, it is assumed that the function provided by OSE will be used only in the event of a large-scale system failure. Also, as we confirm in advance that our clients do not conduct automated order placement on futures & options trading, it is assumed that operation for order placement prevention will be taken manually after visual recognition. - Assuming above, how much specific time allowance is allowed in relation to the description of " the trading participant must immediately implement measures to prevent the placement of new orders to OSE." ? Is it necessary to establish in house order management system for each investor separately, depending on the time allowance?	- OSE does not determine the specific time allowance from the detection of erroneous order., etc. to the measurement for the orders. - It is deemed that trading participants are required to establish appropriate practical order management methods in accordance with aspects such as customer attributes and forms of trading and appropriate action should be taken based on the pre-determined method.
4	<Others> **1. JPX should require participants to submit their Logic to JPX for approval.**	- Introduction of the Market Access Rule, etc. are aimed at further improving the reliability and safety of the market and improving order

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	− In our experience with rules such as MiFID 2 in Europe, rules are sometimes subject to interpretation. Given the incentives described above, it is in the interest of market stability for JPX to have a veto over the Logic that each Participant deploys. (As a reminder, by "Logic" we refer to risk-management rules that are expressed in a form consumable by a non-technical business person, rather than code.) **2. JPX should require each Participant to validate that its Implementations faithfully implement the Logic that JPX has approved.** − A general rule of computing is that what is expressed on paper does not always get translated correctly into technology. This can be due to bugs, misinterpretations, or deliberate attempts to cut corners. The only way to ascertain what logic a given Participant is actually applying to customer orders is to subject the Participant's system to all the conditions that the Logic is supposed to handle and to observe the results. **3. JPX should require each Participant to follow industry standards for the latency measurements that they disclose to customers.** − This is the best way to ensure that shifting the burden of risk checks onto Participants does not lead to confusion among customers	management systems at trading participants. - Trading participants will be required to establish effective order management systems in accordance with the revised Order Management Rules and Guidelines. - The status of establishing such order management systems will be checked by JPX-R in its regular inspections. - Note that trading participants accepting orders for Low Latency Trading are required to submit to the Exchanges the "Checklist for Trading Participants Accepting Low-Latency Trading Orders" with respect to the development status of their order management system and communications management system. - The Exchanges will consider these points when deeming that a trading participant has made arrangements to a certain degree with regard to ensuring the effectiveness of the development of order management systems.

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	regarding latencies. (Important point: Testing the latency of execution while risk checks are in force requires validating that the checks are actually in force—that is, sending orders that trigger the various risk conditions that need to be handled. Therefore, latency testing subsumes the validation testing of recommendation #2.) **4. JPX should require participants to obtain independent validation.** − While recommendations #2 and #3 above could operate on an honesty basis (self-validation), we believe that requiring independent validation by a third party on a periodic basis (e.g., once per year or following a major Implementation upgrade) would be more effective. Many honest mistakes can happen in testing. A Participant will have a "confirmation bias"—an incentive to accept erroneous results if they are favorable. By contrast, the only incentive of a third party that trades on its reputation will be to obtain accurate results. **5. JPX should require that latency disclosures are public.** − Public disclosure would ensure that third-party reports have not been tampered with. It would also provide retail and institutional investors with a powerful new source of information to use in selecting brokers. As brokers respond to the competitive pressures this introduces, it should narrow the retail/institutional gap and increase public perceptions of fairness.	

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14	<Others> **<u>1. Market Access Rules</u>** − We note that the proposed Market Access Rules close the gap in regulations and rules which currently exist between Japan and markets in the United States, Australia, Hong Kong, United Kingdom, and Germany, among others. − The clarity provided by the formal adoption of the proposed Market Access Rules will establish a clear and predictable operating environment thereby achieving a consistent and level playing field that will foster confidence among all types of market participants. **<u>2. Enforcement of Rules</u>** − We encourage JPX-R, as the self-regulatory arm of JPX, to take an active role as the first line in monitoring and supervision to ensure full compliance with all applicable rules and regulations. − We encourage JPX-R to study, maintain awareness of, and manage a validation and certification process for, the specific Risk Management Tools and methods offered for use on the exchanges, whether provided by trading participants or by third parties (including OSE and TSE). **<u>3. Risk Management Functions and Adherence to Rules</u>** − Implementing Risk Management Functions under the Direct and Exclusive Control of trading participants can take a number of forms.	- We appreciate your valuable comment. - Trading participants can use risk management functions provided by the Exchanges or third-party vendors if the trading participants determine the use to be appropriate in light of their approach to the risk management that they set forth in consideration of customer attributes and forms of trading. - Due to a contract with Nasdaq Technology AB, the development vendor of J-GATE, details of the internal protocol of OM API are not

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	The most advanced Risk Management Tools operate by examining the network transmission between the customer and the exchange ("Packet Inspection Risk Management Tools") to identify and validate the components of an order.This method introduces minimal latency while allowing high transmission capacity and has been common practice in Japan since mid-2010 and in other jurisdictions around the world since late 2010.This method is possible with the TSE's Arrowhead Protocol and OSE's OUCH Protocol. – To date, in addition to OUCH, OSE has permitted use of an Application Programming Interface ("API"), known as the OM API (or sometimes OMnet API), which is implemented within the trading servers of customers.In this case, when an order is transmitted, the order components are represented in a form defined by the OM API.OSE, and the provider of the OSE J-Gate system, NASDAQ, have not made details of the OM API available to providers of Risk Management Tools, whether trading participants or third parties (excluding OSE). – Given the nature of the OM API, it is not possible for any Risk Management Tool other than the OSE's TradeGuard to conduct any Risk Management Functions when the OM API is used. – Among a number of options to address the above issue, we believe	disclosed. - Although OUCH has not been supported in the current J-GATE, OUCH will be supported in the next trading system (scheduled for operation in the third quarter of FY 2021). - Regarding to the comment on the functions of TradeGuard, we will continue to consider enhancing and/or improving the functions based on the comments from trading participants.

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	appropriate solutions include a) making the details of the OM API internal protocol available for the purpose of providing Risk Management Functions; and b) enhancing the functions of TradeGuard. Either, or both, of the above will ensure: a) proper adherence to exchange rules and Japanese regulations; b) the highest-performance capability to be utilized by customers; c) the avoidance of customers having to change their systems; and d) the avoidance of potential negative impact on trading activity on the exchange. − The alternative - disallowing use of the OM API - is, we believe, counter to the goals of investors, trading participants, and the exchange. **4. Risk Management Functions and Adherence to Rules** − Given the criticality of risk management functions to ensure a safe and stable exchange environment, we believe that comprehensive Risk Management Functions that fulfill the TSE and OSE rules and Japanese law should be required and enforced. − We believe providers of Risk Management Tools, whether a trading participant or a third-party, (including the TSE or OSE), must provide written disclosure detailing the specific rules and regulations which are enforced as well as the methodology used to achieve such enforcement. − Such disclosure will ensure complete transparency to all capital	

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	markets participants in Japan and thereby foster confidence that a level playing field exists for all participants. − Further, we believe that JPX-R must implement a certification framework to review and validate the above-mentioned disclosures in order to provide independent oversight. − Such activity is consistent with the JPX's role as a self-regulatory organization.	

Comments No.1 from Goldman Sachs Japan Co., Ltd.; No. 2 from Morgan Stanley MUFG Securities Co., Ltd.; No. 3 from Daiwa Securities Co. Ltd.; No. 4 from STAC （the Securities Technology Analysis Center, LLC） ; No. 5 from Shiroyama Consulting Co., Ltd.