

[TRANSLATION]

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Second Report of Technical Committee on Exchange Transactions (Abstract)

April 20, 2017

Technical Committee on Exchange Transactions

**1. Introduction**

**(1) Purpose of Resuming Discussions of the Technical Committee on Exchange Transactions**

- In September 2006, the Technical Committee on Exchange Transactions considered and discussed matters that were necessary for the construction of a framework to continue trading, clearing and settlement operations as far as possible in a contingency situation, as well as a framework to resume trading as soon as possible if it becomes temporarily difficult to continue operations and a framework to consolidate, disseminate, and generate information in such a situation. The content of the discussions were compiled and published as a report on September 29, 2006.
- In the ten years that have passed since then, the Great East Japan Earthquake had struck in March 2011 and the government has reviewed the damage estimates for wide-area disasters including the Tokyo Inland Earthquake. The market environment has also changed drastically alongside advancements in exchange trading technology and the changing shares of trading activity among the different trading participants. In light of these changes, the technical committee decided that it would be timely to resume discussions to conduct a review of the BCP for exchange markets.

**(2) Establishment of Sub-committee of the Technical Committee on Exchange Transactions**

- The technical committee established the "Sub-committee of the Technical Committee on Exchange Transactions" (hereafter "sub-committee") for the purpose of gathering a wide range of opinions.
- The membership of the sub-committee is comprised of exchanges and securities firms that are members of the technical committee as well as investors. The members discussed the BCP and contingency plans of the JPX group (meaning Tokyo Stock Exchange (hereafter "TSE") and Osaka Exchange (hereafter "OSE")) as the standard case and gathered opinions from listed companies. The content of the discussions are included in this report.

**(3) Content of Discussions**

The following two topics were discussed.

- ① Current state of exchange BCP and issues
- ② Addressing issues in exchange BCP

**2. Current State of Exchange BCP and Issues**

The government's Central Disaster Management Council released reports, respectively in December 2013 and March 2014, on the damage estimates in the event of the Tokyo Inland Earthquake and the

Nankai Trough Earthquake. The following concerns and issues regarding exchange BCP were raised in the reports from the perspective of the severity of disaster damage and the increased social role of infrastructure providers in contingency situations.

## **(1) Backup Plans of the JPX Group**

### ○Current Backup Plans

#### **(In the event of the Tokyo Inland Earthquake)**

- With regard to sites for market administration and operations, if the cash equity operations office in Tokyo (Kabutocho) is affected by disaster, designated personnel will make their way to the backup office in the Kanto region to conduct operations.
- With regard to system operations sites, if such sites in the Tokyo metropolitan area are affected by disaster, designated personnel will make their way to the backup operations site in the Kanto region to conduct operations.
- With regard to data centers, if the main data center in the Tokyo metropolitan area is affected, operations will switch to the backup data center in the Kanto region to continue the provision of system services.

#### **(In the event of the Nankai Trough Earthquake)**

- With regard to sites for market administration and operations, if the derivatives operations office in Osaka (Kitahama) is affected by disaster, designated personnel will make their way to the backup office in Osaka City to conduct operations.
- Even though the backup plan does not cover the unavailability of system operations sites in the Tokyo metropolitan area, in the event that such sites become unavailable, designated personnel will make their way to the backup operations site in the Kanto region to conduct operations.
- Even though the backup plan does not cover the unavailability of the main data center in the Tokyo metropolitan area, in the event that such data center becomes unavailable, operations will switch to the backup data center in the Kanto region to continue the provision of system services.

### ○Concerns regarding Backup Plans

#### **(In the event of the Tokyo Inland Earthquake)**

- The disaster might disrupt transport networks and/or services in the vicinity of the sites for market administration and operations as well as the backup office in the Kanto region. It might also be dangerous to travel on foot and other means. As such, it would be difficult for designated personnel to move from the Kabutocho office for cash equity operations to the backup office in the Kanto region.
- With regard to system operations sites, similar to the situation for sites for market administration and operations, if the system operations sites in the Tokyo metropolitan area are affected by disaster, it would be difficult for designated personnel to move to the backup operations site in the Kanto region.
- With regard to data centers, even though the backup plan does not cover a situation where the main data center in the Tokyo metropolitan area and the backup data center in the Kanto region

are both simultaneously physically damaged by the disaster, there might be power shortage due to the disaster affecting other social infrastructure providers.

**(In the event of the Nankai Trough Earthquake)**

- With regard to sites for market administration and operations, due to disaster affecting power and telecommunications grid operators and such other providers of social infrastructure, the Kitahama derivatives operations office and the backup office in Osaka City might both become unavailable.

○Issues to be Addressed regarding Current Backup Plans

**(In the event of the Tokyo Inland Earthquake)**

- With regard to sites for market administration and operations and system operations sites, establish a backup plan that removes the concerns about the movement of designated personnel in the event of the Tokyo Inland Earthquake.
- Establish a backup data center in a remote location that is subject to different risks from the main data center and will not be affected by insufficient power in the event of the Tokyo Inland Earthquake.

**(In the event of the Nankai Trough Earthquake)**

- With regard to sites for market administration and operations, establish a backup plan in which derivatives operations can continue even in the event of the Nankai Trough Earthquake.

**(2) Contingency Plan**

○Current Contingency Plan

Exchanges that operate cash equity markets formulate contingency plans from the perspective of balancing the provision of trading opportunities and price formation in the market. For the TSE market, in addition to cases where the past market share, based on trading value, of trading participants that are unable to participate in trading exceeds approximately 20%, in the event of a failure or other issue in the trading or market information distribution system, if the total market capitalization of all issues for which continued trading is difficult exceeds approximately 20% of the entire market, trading in all issues will be suspended.

○Concerns regarding Contingency Plan

The market environment has changed since the technical committee discussed contingency plans in 2006.

- First, the shares of trading activity among the different trading participants have changed. The share of trading has concentrated toward higher ranked trading participants such that, currently, the top two trading participants account for more than 20% of total trading value. As such, if both trading participants become simultaneously unable to participate in trading, then the situation will fall under the trigger criterion for a market-wide trading suspension.
- Second, there is increased attention on the social role of exchanges. Since the Great East Japan Earthquake, the government has indicated strong awareness of the significance of the BCP of social infrastructure in various deliberations and also touched upon the issue of the impact from a major disruption in the functions of securities markets and other financial services. This implies

the increasing significance of the business continuity in securities market operations.

In light of the above changes, the sub-committee recognizes that exchanges need to reconsider the following matters related to balancing the provision of trading opportunities and price formation in the market.

○Issues to be Addressed in Contingency Plan

- The exchange should consider how to approach the topic of balancing the provision of trading opportunities and price formation in the market, and also trading participants that are unable to participate in trading.
- For the TSE market, other than the current 20% criterion for trading participants, the exchange should reconsider the appropriateness of implementing a market-wide trading suspension, which affects all other tradable issues, based on the market capitalization criterion due to difficulty in trading issues that account for a combined market capitalization exceeding 20% of the entire market in the event of a failure or other issue in the trading or market information distribution system.
- Even though TSE's current contingency plan states "exceed approximately 20%" as the criterion for the shares of trading activity of trading participants that are unable to participate in trading, the exchange should address the flexibility of the criterion in the event of a disaster or system failure that could result in a situation in which trading should be suspended but does not fall under this criterion.

### **3. Addressing Issues in Exchange BCP**

At sub-committee meetings, JPX proposed its response to the above matters, and the sub-committee compiled these into the following measures in light of comments from members. The sub-committee also hoped that other exchanges would similarly review their situations and consider their response to such matters.

#### **(1) Strengthening Backup Offices and Other Aspects of the JPX Group**

- With regard to sites for market administration and operations, as a measure to strengthen the backup plan, JPX presented a plan to make the Kitahama office (Osaka) the backup office for the Kabutocho office (Tokyo) and vice versa in the event of a wide-area disaster. Based on feedback from sub-committee members, the sub-committee deemed it appropriate to coordinate with other securities infrastructure providers and arrange the details of operational procedures in the event of a wide-area disaster.
- With regard to sites for system operations, JPX presented a plan to establish a backup operations site in Kitahama (Osaka) to conduct operations remotely.
- With regard to backup data centers, JPX presented a plan to shift its backup data center to a location that is far from its main data center and not expected to be simultaneously affected by a wide-area

disaster (including damage to social infrastructure). Alongside this plan to shift the backup data center, JPX presented a plan to extend its network to this new backup data center and set up a new access point in its vicinity. In light of feedback from members, the sub-committee deemed that progress on these plans should be made with trading participants and other market users, such as information vendors, sufficiently understanding matters, including the requirements and construction schedules. In addition, in response to feedback that considerations should be made for trading participants that are unable to connect to the new remote access point, the sub-committee confirmed that JPX would be able to allow access to the backup data center via an existing access point, without connecting to the new access point.

## **(2) Review of Contingency Plan Trigger Criteria**

- Review of trigger criterion for and approach to trading suspension based on share of TSE trading value
  - With regard to a review of the criterion to suspend trading when the combined share of trading value of trading participants that are unable to participate in trading exceeds 20%, the sub-committee discussed matters from the perspective of balancing the provision of trading opportunities and price formation in the market.
  - Considering the current shares of trading activity among trading participants, there was feedback by sub-committee members that there would be significant adverse impact if trading was suspended due to the 20% criterion (as of Dec. 2016, combined actual shares of top two participants exceeded 20% and combined shares of top six participants exceeded 50%), and that, in the event of a disaster, it is important for Japan's main market to convey the message that the market still continues to function. As such, the sub-committee recommended the exchange to raise the current "20%" criterion for trading value share to "50%", which allows it to secure participation from the majority of market participants and continue trading as far as possible.
  - In addition to reviewing the above quantitative criterion, the sub-committee deemed it appropriate to state clearly in the exchange contingency plan to not suspend trading based strictly on whether the criterion had been breached, but to take "50%" as a guideline and conduct a comprehensive assessment of the situation from the perspective of securing trading opportunities and ensuring the balance of price discovery in light of the extent of disaster damage and the obligation of exchanges to fulfill their social roles.
- Review of trigger criterion for and approach to trading suspension based on share of TSE market capitalization
  - There was feedback from sub-committee members that if some issues become unavailable for trading, the situation might affect index-related fund management and arbitrage operations. However, implementing a market-wide trading suspension to avoid this impact would deprive even more investors of opportunities to trade, and is thus undesirable. In addition, some members

mentioned that continuing trading would also stand to have significant benefits for passive fund managers as well due to their operational needs, such as for converting into cash by selling issues held by the fund. There was also opinion that while it is important to swiftly disseminate to trading participants and investors that trading in some issues has been suspended, there is little need to implement a market-wide trading suspension.

However, sub-committee members also expressed concern that if the majority of issues in the TSE market became unavailable for trading, then investor demand for conversion into cash would concentrate, in the form of sell orders, on those issues that were still being traded, which might distort price formation, and that this matter requires attention.

- The sub-committee deemed that the criterion based on the share of market capitalization of issues that are unavailable for trading was not sufficient grounds for suspending trading in other issues that could still be traded. As such, in light of comments from members, the sub-committee deemed it appropriate to have exchanges adhere to the principle of continuing trading in issues that could still be traded, and abolishing the market capitalization criterion. The sub-committee also deemed it appropriate to swiftly disseminate information if trading actually becomes difficult for some issues.
- Review of trigger criterion for and approach to trading suspension based on trading share, etc. of OSE market
  - Based on the current OSE contingency plan, OSE will suspend trading with comprehensive consideration given to matters such as the past trading volume shares of trading participants that are unable to participate in trading (approximately over 20%), the number of participants unable to participate in trading, and the state of the system failure. The sub-committee discussed whether there was a need to review OSE's current contingency plan and its approach.
  - With regard to OSE derivatives markets, the sub-committee deemed it appropriate to place greater emphasis on securing trading opportunities while striking a balance with price formation and have OSE continue trading as far as possible. Based on this stance, the sub-committee recommended the exchange to raise the current "20%" criterion for trading share to "50%", in the same way as for TSE, and conduct comprehensive assessment for suspending trading that covers matters such as the extent of disaster damage or system failure, the number and attributes of affected trading participants and other market users that are unable to participate in the market, the characteristics of each product, and the state of the entire financial market at the time.

#### **4. Conclusion**

These recent deliberations of the technical committee and sub-committee centered on measures of the JPX group were made in an effort to review BCP. In light of the fact that the securities sector serves as the support at the foundations of the financial infrastructures, members recognize the need to improve resilience at all exchanges. Therefore, it is important for the exchange industry to consider the results of these deliberations in continuously reviewing its role and the impact of any operational disruption, and further improve BCPs and contingency plans.

Furthermore, it will be essential to continually discuss such matters with a mid-to-long term horizon

in light of reviews of damage estimates, changes in market environment, and exchanges' social roles, and implement appropriate measures accordingly.