



# OSE Derivatives Market after J-GATE Launch

## **October 6, 2010**

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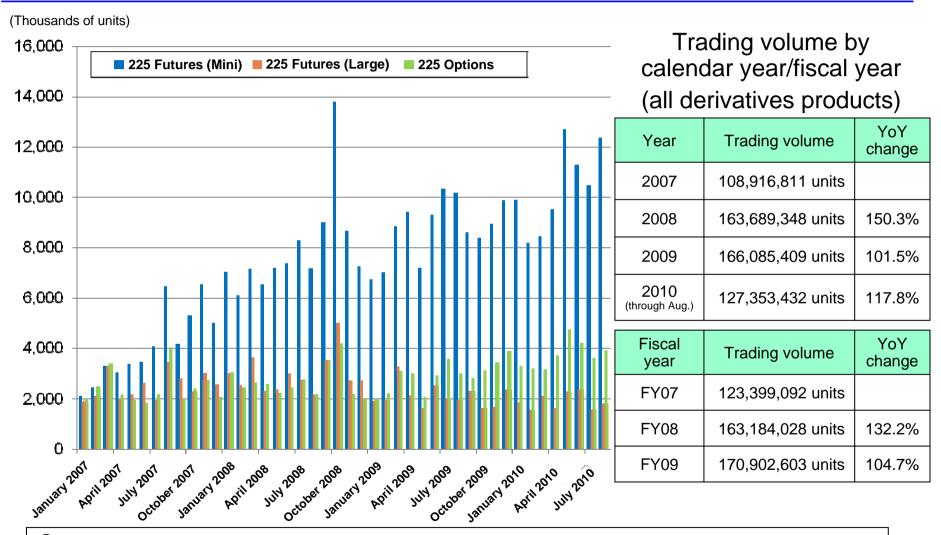
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## Current Conditions in OSE Derivatives Market (1)

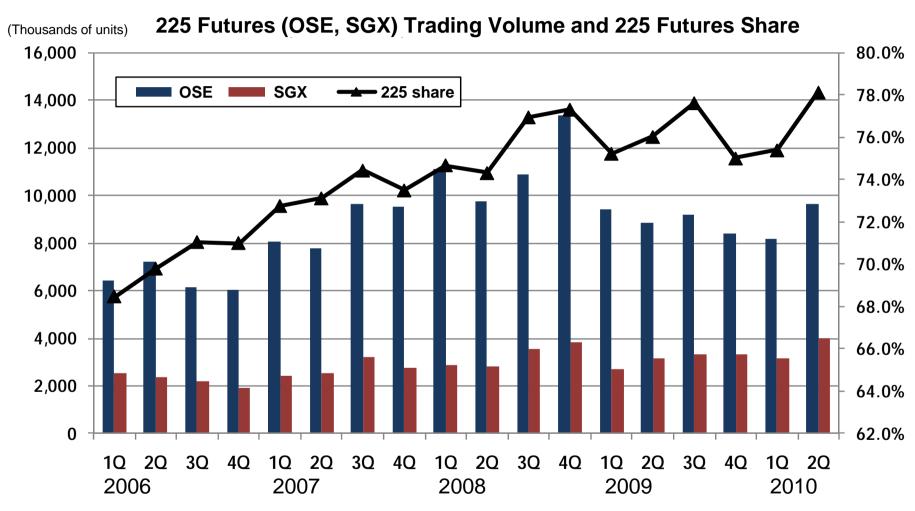




O Total trading volume this year exceeded 100 million units on July 8, the earliest the 100-million-unit milestone has ever been reached.

## 1. Current Conditions in OSE Derivatives Market (2)





Note: Mini and SGX trading volume is stated in terms of adjusted notional value.

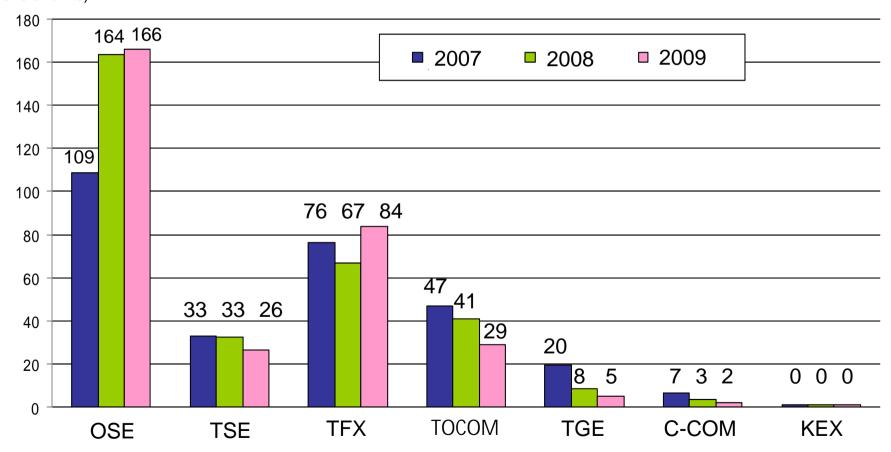
225 share = (OSE 225 Futures + OSE 225 Mini + SGX 225 Futures + SGX Mini Futures) / (OSE 225 Futures + OSE 225 Mini + SGX 225 Futures + SGX 225 Mini Futures + TSE TOPIX Futures) × 100

## 1. Current Conditions in OSE Derivatives Market (3)



O Comparison of Japanese Derivatives Trading Volume by Exchange

(Millions of units) Derivatives trading volume at domestic exchanges (calendar year base)



Source: Exchange websites and other materials

## Current Conditions in OSE Derivatives Market (4)





O Worldwide derivatives exchange rankings by trading volume (2009)

-	vatives exchanges worldwide		
Rank	Exchange	2009	YoY change
1	Korea Exchange	3,102,891,777	8.30%
2	Eurex (includes ISE)	2,647,406,849	-16.60%
3	CME Group (includes CBOT and Nymex)	2,589,551,487	-21.00%
4	NYSE Euronext (includes all EU and US markets)	1,729,965,293	3.20%
5	Chicago Board Options Exchange (includes CFE)	1,135,920,178	-4.90%
6	BM&FBovespa	920,377,678	24.10%
7	National Stock Exchange of India	918,507,122	52.70%
8	Nasdaq OMX Group (includes all EU and US markets)	814,639,771	12.80%
9	Russian Trading Systems Stock Exchange	474,440,043	99.20%
10	Shanghai Futures Exchange	434,864,068	210.00%
11	Dalian Commodity Exchange	416,782,261	30.60%
12	Multi Commodity Exchange of India (includes MCX-SX)	384,730,330	273.30%
13	Intercontinental Exchange (includes US, UK and Canada Markets)	257,118,644	9.70%
14	Zhengzhou Commodity Exchange	227,112,521	2.00%
15	JSE South Africa	166,592,373	-67.60%
16	Osaka Securities Exchange	166,085,409	1.50%
17	Boston Options Exchange	137,784,626	-22.90%
18	Taiwan Futures Exchange	135,125,695	-1.20%
19	London Metal Exchange	111,930,828	-1.10%
20	Hong Kong Exchanges & Clearing	98,538,258	-6.20%
22	Tokyo Financial Exchange	83,678,044	25.00%
26	Singapore Exchange	53,111,183	-14.10%
32	Tokyo Commodity Exchange	28,881,948	-29.60%
33	Tokyo Stock Exchange	26,201,383	-19.40%
42	Tokyo Grain Exchange	4,829,183	-42.70%
43	Kansas City Board of Trade	3,768,660	-5.00%
46	Central Japan Commodity Exchange	1,773,603	-45.80%
53	Kansai Commodities Exchange	69,900	-62.00%

Source: Compiled by the OSE based on statistics from the Futures Industry Association (FIA)

## 1. Current Conditions in OSE Derivatives Market (5)



O Top 20 equity index futures and options worldwide by trading volume (2009)

Top 20 equity index futures and options worldwide by trading volume (2009)			
Rank	Product	2009	YoY change
1	Kospi 200 Options, KRX	2,920,990,655	5.60%
2	E-mini S&P 500 Futures, CME	556,314,143	-12.20%
3	SPDR S&P 500 ETF Options*	347,697,659	8.20%
4	DJ Euro Stoxx 50 Futures, Eurex	333,407,299	-22.90%
5	S&P CNX Nifty Options, NSE India	321,265,217	112.90%
6	DJ Euro Stoxx 50 Options, Eurex	300,208,574	-25.10%
7	S&P CNX Nifty Futures, NSE India	195,759,414	-3.30%
8	S&P 500 Options, CBOE	154,869,646	-13.50%
9	RTS Index Futures, RTS	150,019,917	71.50%
10	Powershares QQQ ETF Options*	147,839,060	-33.30%
11	Nikkei 225 Mini Futures, OSE	104,738,309	9.70%
12	Dax Options, Eurex	95,926,938	-8.60%
13	Financial Select Sector SPDR ETF Options*	87,979,993	-26.50%
14	Kospi 200 Futures, KRX	83,117,030	28.20%
15	E-mini Nasdaq 100 Futures, CME	77,972,143	-28.30%
16	iShares Russell 2000 ETF Options*	73,375,256	-51.70%
17	Taiex Options, Taifex	72,082,548	-22.30%
18	ISE-30 Futures, Turkdex	65,393,094	62.10%
19	TA-25 Options, TASE	62,271,157	-23.60%
20	iShares MSCI Emerging Markets ETF Options*	43,624,689	25.70%
*Traded on multiple U.S. options exchanges.			

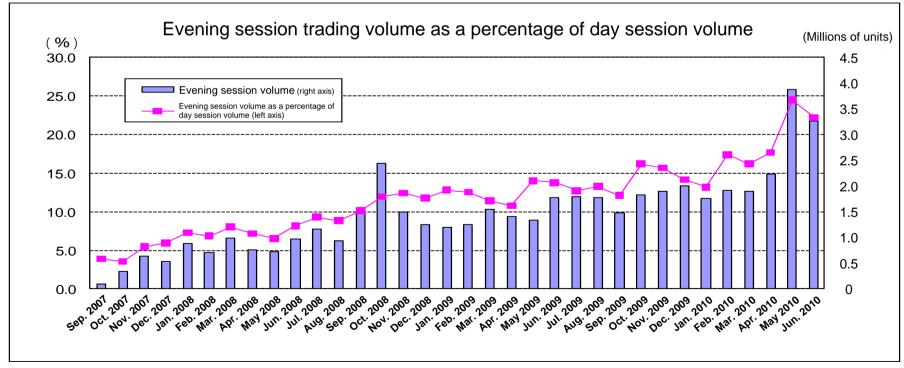
Source: Compiled by the OSE based on statistics from the Futures Industry Association (FIA)

<sup>©</sup> Osaka Securities Exchange Co., Ltd.

## 1. Current Conditions in OSE Derivatives Market (6)



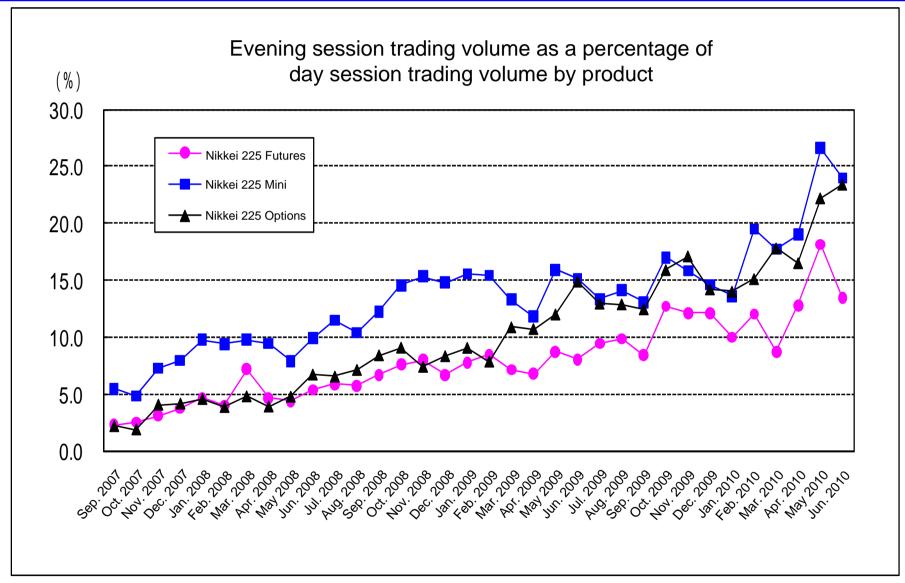
- O Extension of evening session hours
  - September 2007: OSE begins evening trading in stocks for the first time in Japan (4:30 pm to 7:00 pm).
  - October 2008: Trading hours are extended (by one hour, to 8:00 pm).
  - July 20, 2010: Trading hours are extended to 11:30 pm.
- O Elimination of the lunch break
  - OSE will eliminate the mid-day lunch break once J-GATE becomes operational (tentatively scheduled for February 14, 2011).



## 1. Current Conditions in OSE Derivatives Market (7)







## 2. J-GATE Overview (1)



○ Three objectives of implementing J-GATE

#### **Globalizing the Trading System**

By adopting standard systems, functions, and transaction structures that are employed in major markets overseas, we will be able to remove barriers to entry for new participants and support global practices.

#### **World-class performance**

Adopt a package with a proven track record at more than 20 overseas exchanges that implements high-speed order processing performance (the CLICK XT<sup>TM</sup> system).

#### Improvement of accessibility

Reduce the connection load on trading systems by providing an API as well as a FIX protocol interface.

## 2. J-GATE Overview (2)



OSE has elected to introduce a package system used by numerous overseas exchanges and review its trading system for futures and options transactions from the standpoint of improving investor convenience and international market competitiveness in light of the actions of competing exchanges both in Japan and overseas.

#### Issues with the current trading system **Major Trading Rule Revisions** (1) Revision of Matching Rules • Full adoption of the principles of price and time **♦**There remains a complex web of priority (elimination of the simultaneous bid/offer rule) rules based on a systemization of Alterations to trading methods employed at the close trading techniques that are largely of the trading day and itayose pricing (introduction of unchanged from the days of the a closing auction) trading floor. (2) Enhancement of Price Regulations • For example, unique Japanese rules • Temporary cessation of trading when orders are such as the special quote(Tokubetuplaced at prices that diverge from the last price by a Kehai) and simultaneous bid/offer certain margin (known as the immediately executable (Douji-Yobine)rules create barriers to price range) (elimination of the special quote rule) • Simplification of the circuit breaker rule entry for overseas investors. (3) Introduction of new order types and related measures **♦**System limitations prevent the (4) Introduction of strategy trades and related incorporation of certain measures measures conceived to promote trading. (5) Introduction of a fully-fledged market maker program

➤ This initiative goes beyond the mere elimination and simplification of existing systems. It encompasses a broad reassessment made after undertaking such measures as were deemed necessary in light of the purpose and status of existing systems.

## 2. J-GATE Overview (3)



#### ○ Changes to trading hours

The traditional morning and afternoon trading sessions (with a lunch break in between)
 will be eliminated for futures and options trading in favor of a single, all-day session.

#### Futures and options trading times following the launch of J-GATE

	Day session	Evening session	Overview
Opening	8:00-9:00	16:15-16:30	Only orders are accepted; matching is not performed.
auction	9:00	16:30	<ul> <li>Matching is made using the itayose system (unfulfilled orders proceed to the zaraba system).</li> </ul>
Zaraba (continuous	9:00 - <u>15:10</u>	16:30 – <u>23:25</u>	<ul> <li>In principle, transaction is made using Zaraba method as with current rules (if trading is paused or halted, it is later resumed using the itayose system).</li> </ul>
auction) Closing	<u>15:10 - 15:15</u>	23:25 - 23:30	Only orders are accepted; matching is not performed.
auction	<u>15:15</u>	<u>23:30</u>	<ul> <li>Matching is performed using the itayose system (unfulfilled orders are processed as under the current system).</li> </ul>

<sup>\*</sup>Security options transactions cannot be made during the evening session (as is the case under current rules).

## 2. J-GATE Overview (4)



- O Key changes to the current trading system
- J-GATE uses Nasdaq OMX's CLICK XT™ system.
  - ➤ CLICK XT<sup>TM</sup> delivers low processing latency, high throughput, and scalability.
  - ➤ Like the current system, it also ensures a high degree of stability. OSE will also build a backup center capable of assuring operational continuity in the event the main center were to be struck by a natural disaster.

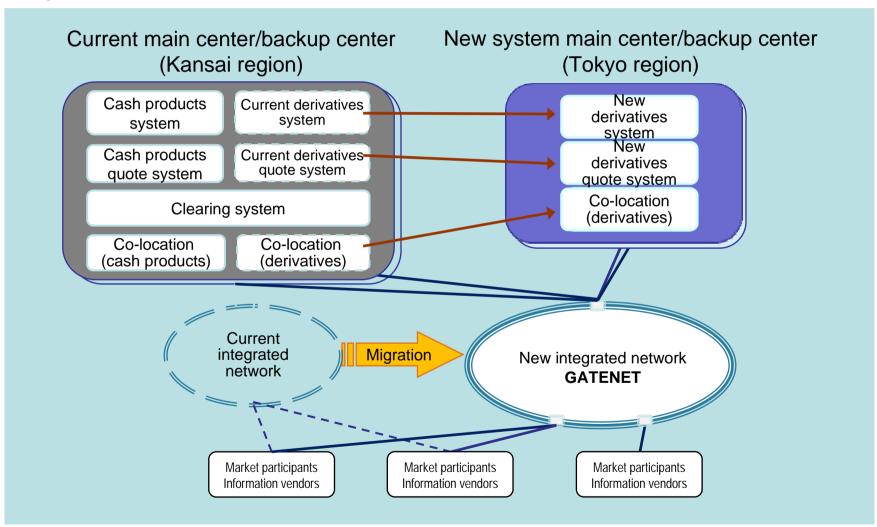
	J-GATE	Current Trading System (reference)
Order processing latency (average)	10 ms or less	100 ms
Order processing throughput (overall)	8,700 orders/second	800 orders/second
Total daily order volume	69 million orders	8 million orders

- Connection interface
  - ➤ The current proprietary interface will be replaced by access provided by the CLICK API and FIX protocol.
- Transition to a new integrated network (GATENET)
  - ➤ A new integrated network developed to accommodate J-GATE's high level of processing performance will deliver wider bandwidth and faster access. In addition to providing a high level of reliability thanks to carrier diversity and a double-ring architecture, GATENET will be able to access cash products and settlement systems.
  - > The current integrated network will be shut down once the migration to the new system is complete.
- Expanded connection environment for HFT including co-location and other services

## 2. J-GATE Overview (5)



#### ○ System overview



## 2. J-GATE Overview (6)



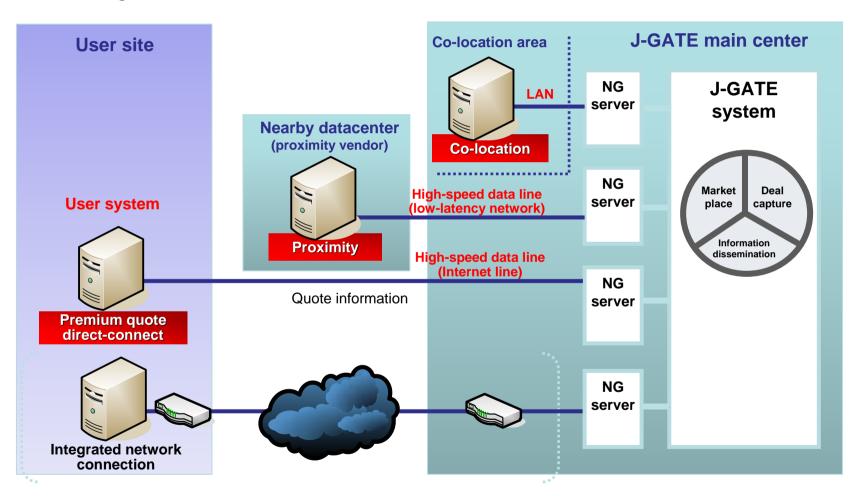
O In addition to connectivity provided by its integrated network, J-GATE will offer the following three high-speed connection environments designed specifically to better accommodate high-frequency trading:

Service	Target users	Overview and benefits
Co-location service	<ul><li>Participant</li><li>System companies</li><li>Market data subscribers</li></ul>	<ul> <li>Users will be able to install servers and other equipment inside the datacenter, where it will be connected to J-GATE via LAN cable.</li> <li>Low-latency access to J-GATE will allow high-frequency trading.</li> <li>In addition to significantly increasing the number of available racks compared to the current trading system's co-location service, the new system will offer an expanded menu of services as well as stronger security.</li> </ul>
Proximity service	<ul><li>Traders</li><li>System companies</li><li>Market data subscribers</li></ul>	<ul> <li>Users will be able to install servers and other equipment inside datacenters operated by OSE-designated proximity vendors, where it will be connected to J-GATE via high-speed data lines provided by OSE.</li> <li>In addition to the implementation of high-frequency trading in the same manner as co-location service, users will have access to superior services provided by proximity vendors in such areas as external connection environment and operational support.</li> </ul>
Premium quote direct-connect service	Market data subscribers	<ul> <li>J-GATE will install high-speed data lines for users' in-house systems and provide an environment that will allow them to receive frequently updated quote information.</li> <li>Current equipment can be used to acquire quote information provided by J-GATE, including comprehensive order data. (This service is limited to Tokyo's 23 wards.)</li> </ul>

## 2. J-GATE Overview (7)



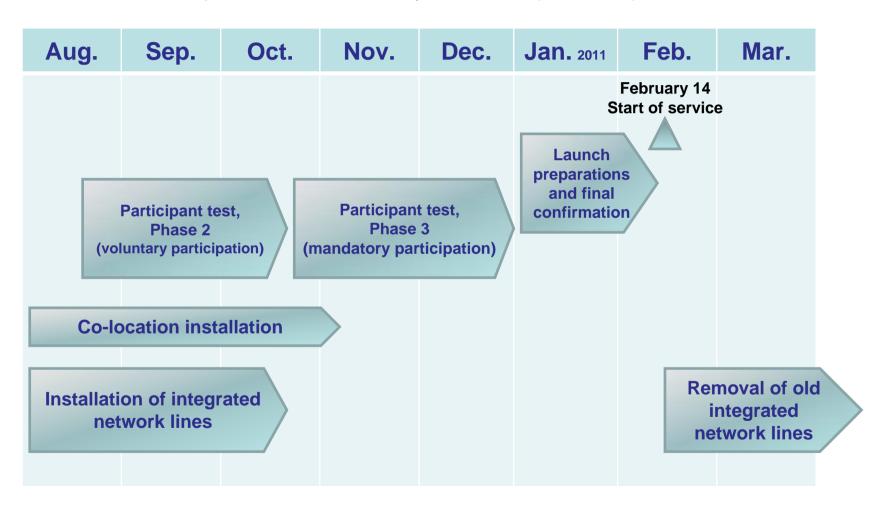
#### O Service diagram



#### 3. Schedule



○ J-GATE will start operation on February 14, 2011 (tentative).







"GATE" stands for "Global Access Trading Engine," reflecting the global scope of the system's role as a gateway from the world to Japan, and from Japan to the world. "GATE" also refers to the system's robust constitution.

The logo mark evokes the speed of change by expressing the "G" in "GATE" with two curved lines. The application of a gradation to the OSE's corporate color, blue, on the "G" expresses its expanding future potential.

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