Overview of JPX and Securities Market in Japan
Today’s Topics

1. Corporate Overview

2. Cash Equity Market Structure

3. Efforts to Enhance Corporate Value/SME Market Development

4. Self-Regulation

5. Other Products
Corporate Structure of Japan Exchange Group

Japan Exchange Group

Established in Jan. 2013

Business/Operation Integration Timeline

- Jul. 2013
  - Tokyo Stock Exchange
    - Cash Markets
  - Osaka Exchange
    - Derivative Markets
  - Japan Exchange Regulation
    - Self-Regulation
- Jul. 2013
  - Japan Securities Clearing Corporation
    - Clearing
### Staffing Situation at Group Companies and Other Affiliates

<table>
<thead>
<tr>
<th>Companies</th>
<th>No. of Employees</th>
<th>As of Mar. 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>JPX</td>
<td>219</td>
<td></td>
</tr>
<tr>
<td>TSE</td>
<td>429</td>
<td></td>
</tr>
<tr>
<td>OSE</td>
<td>138</td>
<td></td>
</tr>
<tr>
<td>JPX-R</td>
<td>195</td>
<td></td>
</tr>
<tr>
<td>Other subsidiaries</td>
<td>150</td>
<td></td>
</tr>
</tbody>
</table>

### Other Affiliate Companies

<table>
<thead>
<tr>
<th>Companies</th>
<th>Holding Ratio</th>
<th>Business</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tosho System Service</td>
<td>100% (indirect)</td>
<td>System development, maintenance</td>
</tr>
<tr>
<td>ICJ</td>
<td>50% (indirect)</td>
<td>Electronic voting platform</td>
</tr>
<tr>
<td>Tosho Computer Systems</td>
<td>35% (indirect)</td>
<td>Information processing</td>
</tr>
<tr>
<td>Japan Securities Depository Center</td>
<td>24.4% (indirect)</td>
<td>CSD business</td>
</tr>
</tbody>
</table>
Corporate Governance System at Japan Exchange Group, Inc.

General Shareholders' Meeting

Nomination Committee
- Comprised of 4 directors, including 3 outside directors
- Decides on proposals regarding the election and removal of directors to be submitted at general shareholders’ meetings

Compensation Committee
- Comprised of 4 directors, including 3 outside directors
- Determines the compensation, etc. of each individual director and executive officer

Audit Committee
- Comprised of 4 directors, including 3 outside directors
- Conducts audit on the execution of director and executive officer duties, prepares audit reports, and decides on proposals regarding the election and dismissal of the accounting auditor, as well as the disengagement of the accounting auditor

Audit Committee Office
- Comprises dedicated staff to support members of the Audit Committee and perform work related to the committee

CEO

Board of Executive Officers
- Discusses important matters regarding aspects including business strategy, management, and finances concerning the corporate group

COO

Internal Auditing Office
- Reports directly to CEO and COO and conducts internal audit

* The post of COO is vacant as of Jun. 16, 2015.
"Financial Instruments Exchange Holding Company" defined under the Financial Instruments and Exchange Act (FIEA) and licensed as such by the Prime Minister

Business scope shall be limited to business administration of financial instruments exchanges and other related business.

When applying for listing, it needs to obtain approval of the Prime Minister.

No one can hold 20% or more voting rights, in principle. Holders of more than 5% of voting rights need to report its purpose to the Prime Minister.

The Prime Minister may implement the following actions, if necessary.
- Dismiss an officer who has violated the law
- Require submission of report, and inspect its business and records
- Revoke license and/or issue other orders as appropriate
Major Achievements during 1st Medium-Term Management Plan

1. Creation of a new Japanese stock market
   • Introduced Corporate Governance Code
   • Launched JPX-Nikkei 400 index
   • Promoted IPOs and expanded ETF market

2. Expansion of the derivatives market
   • Launched JPX-Nikkei 400 futures
   • Developed Next J-Gate derivatives trading system
   • Concluded system provision agreement with TOCOM

3. Expansion of exchange business fields
   • Expanded OTC derivatives clearing business
   • Merged JSCC and JGBCC

4. Early realization of integration benefits
   • Achieved JPY 8.5 bil. in cost synergies (excluding additional cost due to changes in business environment)
   • Completed integration of major organizational functions, regulations, and IT infrastructure

5. Growing our presence in Asia
   • Provided support for establishing stock exchange in Myanmar
   • Cross-listed ETF and futures with exchanges in Taiwan
   • Achieved interconnectivity with SGX co-location facility

<table>
<thead>
<tr>
<th>Cash equity daily trading value (JPY tril.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY2012</td>
</tr>
<tr>
<td>1.6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Derivatives annual trading volume (mil. contracts)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY2012</td>
</tr>
<tr>
<td>260</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>IRS average daily notional cleared value (JPY tril.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY2012</td>
</tr>
<tr>
<td>1.5</td>
</tr>
</tbody>
</table>
# Global Position of Cash Equity Markets (2015)

<table>
<thead>
<tr>
<th>Rank</th>
<th>Exchange</th>
<th>No. of Companies</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>BSE India Limited</td>
<td>5,836</td>
</tr>
<tr>
<td>2</td>
<td>BME Spanish Exchanges</td>
<td>3,651</td>
</tr>
<tr>
<td>3</td>
<td>TMX Group</td>
<td>3,559</td>
</tr>
<tr>
<td>4</td>
<td>JPX</td>
<td>3,513</td>
</tr>
<tr>
<td>5</td>
<td>Nasdaq - US</td>
<td>2,859</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Rank</th>
<th>Exchange</th>
<th>Market Capitalization (USD mil.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>NYSE</td>
<td>17,786,787</td>
</tr>
<tr>
<td>2</td>
<td>Nasdaq - US</td>
<td>7,280,752</td>
</tr>
<tr>
<td>3</td>
<td>JPX</td>
<td>4,894,919</td>
</tr>
<tr>
<td>4</td>
<td>Shanghai Stock Exchange</td>
<td>4,549,288</td>
</tr>
<tr>
<td>5</td>
<td>LSE Group</td>
<td>3,878,774</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Rank</th>
<th>Exchange</th>
<th>Trading Value (USD mil.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Shanghai Stock Exchange</td>
<td>21,342,843</td>
</tr>
<tr>
<td>2</td>
<td>Shenzhen Stock Exchange</td>
<td>19,611,249</td>
</tr>
<tr>
<td>3</td>
<td>NYSE</td>
<td>17,477,291</td>
</tr>
<tr>
<td>4</td>
<td>BATS Global Markets - US</td>
<td>14,217,128</td>
</tr>
<tr>
<td>5</td>
<td>Nasdaq - US</td>
<td>12,515,349</td>
</tr>
<tr>
<td>6</td>
<td>JPX</td>
<td>5,540,696</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Rank</th>
<th>Exchange</th>
<th>Volume</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>CME Group</td>
<td>3,531,760,591</td>
<td>2.6%</td>
</tr>
<tr>
<td>2</td>
<td>National Stock Exchange of India</td>
<td>3,031,892,784</td>
<td>61.2%</td>
</tr>
<tr>
<td>3</td>
<td>Eurex</td>
<td>2,272,445,891</td>
<td>8.3%</td>
</tr>
<tr>
<td>4</td>
<td>Intercontinental Exchange</td>
<td>1,998,810,416</td>
<td>-9.8%</td>
</tr>
<tr>
<td>5</td>
<td>Moscow Exchange</td>
<td>1,659,441,584</td>
<td>17.4%</td>
</tr>
<tr>
<td>6</td>
<td>BM&amp;FBovespa</td>
<td>1,358,592,857</td>
<td>-4.4%</td>
</tr>
<tr>
<td>7</td>
<td>CBOE Holdings</td>
<td>1,173,934,104</td>
<td>-11.4%</td>
</tr>
<tr>
<td>8</td>
<td>Dalian Commodity Exchange</td>
<td>1,116,323,375</td>
<td>45.0%</td>
</tr>
<tr>
<td>9</td>
<td>Zhengzhou Commodity Exchange</td>
<td>1,070,335,606</td>
<td>58.3%</td>
</tr>
<tr>
<td>10</td>
<td>Shanghai Futures Exchange</td>
<td>1,050,494,146</td>
<td>24.7%</td>
</tr>
<tr>
<td>11</td>
<td>Nasdaq</td>
<td>1,045,646,992</td>
<td>-8.9%</td>
</tr>
<tr>
<td>12</td>
<td>Korea Exchange</td>
<td>794,935,326</td>
<td>17.3%</td>
</tr>
<tr>
<td>13</td>
<td>BSE</td>
<td>614,894,523</td>
<td>-18.6%</td>
</tr>
<tr>
<td>14</td>
<td>JSE Securities Exchange</td>
<td>488,515,433</td>
<td>63.0%</td>
</tr>
<tr>
<td>15</td>
<td>BATS Exchange</td>
<td>397,881,184</td>
<td>97.0%</td>
</tr>
<tr>
<td>16</td>
<td>Osaka Exchange</td>
<td>361,459,935</td>
<td>16.7%</td>
</tr>
<tr>
<td>30</td>
<td>Tokyo Financial Exchange</td>
<td>48,986,442</td>
<td>19.8%</td>
</tr>
<tr>
<td>35</td>
<td>Tokyo Commodity Exchange</td>
<td>24,399,068</td>
<td>11.6%</td>
</tr>
</tbody>
</table>

### Other Derivative Exchanges in Japan

- **Tokyo Financial Exchange (TFX)**
  - **(Products)** Interest Rate Derivatives, FX Margin, Equity Index Margin
  - **(CCP)** TFX
  - **(Regulator)** FSA

- **Tokyo Commodity Exchange (TOCOM)**
  - **(Products)** Metal, Energy and Agriculture Derivatives
  - **(CCP)** Japan Commodity Clearing House
  - **(Regulator)** METI, MAFF

- **Osaka Dojima Commodity Exchange (ODE)**
  - **(Products)** Agricultural Derivatives
  - **(CCP)** Japan Commodity Clearing House
  - **(Regulator)** METI, MAFF

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Financial Performance of JPX

FY2015 Revenue Breakdown

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trading</td>
<td>45%</td>
</tr>
<tr>
<td>Information</td>
<td>15%</td>
</tr>
<tr>
<td>Listing</td>
<td>11%</td>
</tr>
<tr>
<td>Clearing</td>
<td>19%</td>
</tr>
<tr>
<td>Others</td>
<td>10%</td>
</tr>
</tbody>
</table>

(JPY bil.)

FY2015 Expenses Breakdown

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal Expenses</td>
<td>32%</td>
</tr>
<tr>
<td>Systems Maintenance/Operating Expenses</td>
<td>19%</td>
</tr>
<tr>
<td>Depreciation/Amortization</td>
<td>20%</td>
</tr>
<tr>
<td>Others</td>
<td>29%</td>
</tr>
</tbody>
</table>

FY2015 Financial Results

<table>
<thead>
<tr>
<th>Category</th>
<th>Amount (JPY bil.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Revenue</td>
<td>114.7</td>
</tr>
<tr>
<td>Operating Expenses</td>
<td>50.9</td>
</tr>
<tr>
<td>Operating Income</td>
<td>66.2</td>
</tr>
<tr>
<td>Net Income</td>
<td>45.1</td>
</tr>
<tr>
<td>ROE</td>
<td>18.2%</td>
</tr>
</tbody>
</table>

Market Cap Ranking (as of Oct. 2016)

- CME: 3,761 (JPY bil.)
- HKEX: 3,670 (JPY bil.)
- ICE: 3,550 (JPY bil.)
- DB: 3,515 (JPY bil.)
- LSEG: 3,401 (JPY bil.)
- BM&F: 3,059 (JPY bil.)
- NASDAQ: 3,050 (JPY bil.)
- JPX: 2,817 (JPY bil.)
- ASX: 2,079 (JPY bil.)
- SGX: 1,954 (JPY bil.)
- CBOE: 1,470 (JPY bil.)
- TMX: 1,319 (JPY bil.)

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STEP UP TO THE NEXT

I Satisfying diverse investor needs and encouraging mid- to long-term asset building

II Supporting listed companies in enhancing corporate value

III Fulfilling social mission by reinforcing market infrastructure

IV Creating new horizons of exchange business
Today’s Topics

1. Corporate Overview

2. Cash Equity Market Structure

3. Efforts to Enhance Corporate Value/SME Market Development

4. Self-Regulation

5. Other Products
Cash Markets Structure

Cash Equity Market

- More than 3,500 Issues
  - 1st Section
  - 2nd Section
- ETF/ETNs
  - 224 Issues
- REITs
  - 56 Issues
- Listed Infrastructure Funds

Number of Companies (as of Jun. 2016)

1st Section: 772
2nd Section: 228
Mothers: 542
JASDAQ: 1,958

Daily Average Trading Value (2015)

- 1st Section: 2,854
- 2nd Section: 33
- Mothers: 94
- JASDAQ: 74

Market Capitalization (as of May 2016)

- 1st Section: 512,117
- 2nd Section: 5,923
- Mothers: 3,975
- JASDAQ: 7,886
Breakdown of Trading Value by Type of Investors (2015)

TSE 1st Section
- Foreign Investors: 61%
- Individuals: 17%
- Domestic Institutions: 8%
- Proprietary Trading: 15%

TSE 2nd Section
- Individuals: 65%
- Proprietary Trading: 4%
- Domestic Institutions: 8%
- Foreign Investors: 23%

TSE Mothers
- Individuals: 72%
- Proprietary Trading: 2%
- Domestic Institutions: 5%
- Foreign Investors: 21%

TSE JASDAQ
- Individuals: 67%
- Proprietary Trading: 2%
- Domestic Institutions: 7%
- Foreign Investors: 24%
Shareholding by Type of Investors

(Chart 2) Distribution Percent of Market Value Owned by Type of Shareholder

<table>
<thead>
<tr>
<th>Type of Shareholder</th>
<th>Market Value Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individuals</td>
<td>40%</td>
</tr>
<tr>
<td>Business Corporations</td>
<td>25%</td>
</tr>
<tr>
<td>Financial Institutions</td>
<td>15%</td>
</tr>
<tr>
<td>City &amp; Regional Banks</td>
<td>10%</td>
</tr>
<tr>
<td>Foreigners</td>
<td>10%</td>
</tr>
</tbody>
</table>

(Note): The market value of Financial Institutions excludes that of City & Regional Banks.

Household Financial Assets

(2016 Q2)

- **Currency/Deposit**: 53%
- **Insurance/Pension**: 30%
- **Equity**: 8%
- **Investment Trust**: 5%
- **Securities**: 1%
- **Others**: 3%

JPY 1,746 tril.
TSE accounts for about 91% of aggregate trading value in Japan. Besides overall market qualities and investors’ confidence in the TSE markets, the following factors also contribute to a high market share of TSE.

- Well established and simple market structure
- Competitive Fee Rates
- Renewal of arrowhead and optimal tick structure
- Best execution not solely focusing on execution prices

**Regulation on “Proprietary Trading Systems (PTS)”**
If the trading volume at PTS is 10% or more of exchange trading volume for the past 6 months, such PTS is required to obtain an exchange license.
Trading Mechanism

Call Auction Method

- Used to determine single execution price after accumulating orders

Continuous Auction

- Used to continuously determine matching price and quantity based on price and time priority

Time

- 8:00: Call Auction
- 9:00: Morning Session
- 11:30: Lunch Break
- 12:05: Afternoon Session
- 12:30: Call Auction
- 15:00: Accept Orders

Order Types

- Limit Order
- Market Order

Optional Order Conditions

- On Open
- IOC
- On Close
- Limit to Market on Close
**Systems Infrastructure (arrowhead)**

<table>
<thead>
<tr>
<th>arrowhead</th>
<th>Order Response</th>
<th>About 0.3 milliseconds</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Data Dissemination</td>
<td>About 1.0 millisecond</td>
</tr>
</tbody>
</table>

**Data Feed Types**

<table>
<thead>
<tr>
<th>FLEX Standard</th>
<th>Last sales price, 10 BBO, indices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Dissemination</td>
<td>Last sales price, full depth, no. of orders</td>
</tr>
</tbody>
</table>

**Connectivity**
Increase in No. of Orders

Number of Orders

(mil. orders)

Co-Lo
arrownet
Co-Lo ratio (right axis)

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High Frequency Trading

• Market making is the most basic but widely employed technique employed by HFT.

• To profit from the bid-ask spread, HFT have to quote both best bid and best offer on the order book (make liquidity) and wait for other investors to match those orders (take liquidity).

• To enhance such chances, orders have to arrive first on the order book (to get time priority).

• If they cannot get priority, orders need to be revised or cancelled immediately.

• As profit from each trade is minimal, a large number of trades is necessary.

• At the end of day, ideal to have no positions.

Implications

Actively traded stocks will enhance possibility that orders are taken. HFT is neutral to market direction.

HFT requires low latency systems and networks.

Causes sharp increase in no. of orders

Avoids markets where trading costs are high
**Price Stabilizing Mechanism**

- **Special Buy Quote (1st Buffer)**
  - Prevent trading outside of the dynamic price band
  - Shift to call auction mode and invite better priced orders

- **Sequential Buy Quote (2nd Buffer)**
  - Prevent immediate buying up/selling down within one-minute interval
  - Shift to call auction mode when reaching the price that is at twice the price band

- **Limit Up (3rd Buffer)**
  - No executions beyond the limit up/down prices
  - Price range set based on the closing price on the previous trading day (static)

- **Limit Down (3rd Buffer)**

- **Stock Price**
## Hard and Soft Limits

- Both exchange and brokers set soft and hard limits to prevent erroneous orders.

### Soft Limit
- 5 - 30% of listed shares

### Hard Limit
- More than 30% of listed shares

### Result
- Alert is shown on the monitoring terminal. Exchange staff immediately calls broker to confirm whether the order was a mistake.
- Order is automatically rejected.

### Brokers
- Brokers have to set both soft and hard limits to prevent erroneous orders from being placed.
Risk Management Tools in arrowhead

TP’s Trading Terminal

**Normal case**
- Virtual Server 1
- Place orders

**Abnormal disconnection**
- Virtual Server 2
- Stop orders

**1: Cancel on disconnect**
- Virtual Server 3

**2: Kill switch**

**JPX Trading System (arrowhead)**
- Participant
- Gateway
- Order Book

**Place orders**
- 3: User hard limit
- All orders are automatically canceled.
- Instruction to cancel all orders

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“High-speed algorithmic trading” has been shown to provide liquidity to the market which reduces spreads, benefitting retail and other investors.

However, it may be necessary to implement a registration system for investors that engage in high-speed algorithmic trading and require some obligations to understand their activities.

While specific details (including the definition of “high-speed algorithmic trading”) are to be discussed in the future, the main points of the registration system under consideration are as below:

| Organizational Structures and Risk Controls | • Appropriate management and operation of trading systems (e.g. ensuring trading systems have adequate capacity; testing and monitoring trading systems; taking adequate measures to prevent erroneous orders)  
| • Procurement of competent personnel (e.g. retaining staff that have the necessary knowledge to conduct high-speed algorithmic trading) |
| Notification and Information Provision | • Provide notification to the regulatory authority that the company is engaging in algorithmic trading  
| • Clearly identifying orders that are algorithmic trades  
| • Registration of the algorithmic trading strategy  
| • Creating and maintaining transaction records |
| Other rules | • Establish an office or have a representative or agent located in Japan  
| • Be subject to financial regulations  
| • Maintain suitability of the firm’s main shareholders  
| • Submit business reports  
| • Maintain proper internal controls (e.g. draw up internal rules, conduct employee training) |

Broker-dealers will be prohibited from accepting trades from unregistered investors who engage in high-speed algorithmic trading and/or those who have not established a proper internal organizational or risk control framework as outlined above.
Today’s Topics

1. Corporate Overview

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5. Other Products
Measures to Enhance Corporate Value/Profitability

Economic environment prior to Abenomics
- Under prolonged deflation, a shrinking population, currency appreciation, bedrock regulations, and high corporate taxes, corporate managers were
  - More focused on maintaining status quo and avoiding risks
  - Less attentive to capital efficiency and the need to enhance corporate value for shareholders

The following measures have been implemented to instill pro-growth mindsets.

Corporate Governance Code
- Lays down 73 principles on (1) shareholder rights, (2) cooperation with stakeholders (sustainability), (3) disclosure, (4) board responsibilities and effective use of independent directors, and (5) dialogue with shareholders, on comply-or-explain basis
  - The follow-up council examines companies’ response and further measures to substantiate the Code’s intended effect.

JPX-Nikkei 400 Index
- Showcases companies with a high investment appeal in terms of ROE and corporate behavior (e.g., appointment of independent directors, adoption of IFRS, and disclosure in English)
  - Many companies moved to set ROE targets and increase shareholder returns.
Positive Changes in Corporate Japan

Compliance with Corporate Governance Code

Returns to shareholders

Two or more independent outside directors (1st Section)

Mothers Market

Mothers started in 1999 as SME market separate from main markets (1\textsuperscript{st} and 2\textsuperscript{nd} section), to provide growth capital to emerging high growth companies.

In 2010, the concept of Mothers was re-envisioned as a step-up market for growing companies to the main board.

- After 10 years from listing, more stringent delisting requirement was imposed.
- If continuing to list, the company has to choose whether it will move to the 2\textsuperscript{nd} Section or stay in Mothers.
- If staying in Mothers, it has to demonstrate its high growth potential.

Clear market concept is effective for attracting companies and investors.
Vibrant IPO Markets

Rule Relaxation in the Past

- Financial statements upon new listing was shortened to a two-year period.
- For the three-year period after a new listing, Internal Control Report does not have to be audited by certified public accountant.
- The number of shareholders requirement was relaxed from 300 to 200 for Mothers and JASDAQ markets.

Initiatives to Raise Investors’ Interests

- JPX sponsors a platform to provide analyst reports.
- TSE IR Movie Square on YouTube features listed companies.
- Executive interviews posted on JPX website.
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About Self-Regulatory Functions

- A financial instruments exchange needs to conduct the following self-regulatory functions.
  - Business related to listing and delisting of financial instruments
  - Investigation on members’ compliance with the law and regulations
  - Other matters such as market surveillance, admission of members, disciplinary actions on members, examination of disclosure by listed companies

- The following three options are available for fulfilling above responsibilities.

<table>
<thead>
<tr>
<th>Types</th>
<th>Available for</th>
<th>Employed by</th>
</tr>
</thead>
</table>
| 1. Exchange conducts SRO operations internally | • Membership-Type Exchange  
• Stock Company-Type Exchange | →Sapporo, Fukuoka  
→Nagoya, |
| 2. Exchange entrusts SRO operations to “Self-Regulatory Organization” | • Membership-Type Exchange  
• Stock Company-Type Exchange  
• Exchange Holding Company | →JPX |
| 3. Exchange entrusts SRO operations to internal “Self-Regulatory Committee” | • Stock Company-Type Exchange | →OSE (until Jul. 2013 when JPX-R started to act as SRO for OSE) |
• When exchange entrusts SRO functions to Self-Regulatory Organization, it has to obtain prior approval of the Prime Minister by satisfying the following.
  • Such Self-Regulatory Organization has obtained the license from the Prime Minister.
  • The method for calculating the fees payable to SRO are adequate and clear.
  • SRO is prohibited from using information obtained from the exchange for any purposes other than the entrusted operation.

• Fairness and independence of the Self-Regulatory Organization are ensured by the following requirements.
  • The majority of Board of Governors are outside and/or independent governors.
  • A governor can be dismissed by approval of four-fifths or more at a General Meeting of Members.

**Treatment of Listing and Delisting Criteria**

• Developing listing and delisting criteria are not considered as self-regulatory functions, since those criteria need to be developed by taking business factors into account.

• Therefore, in the case of JPX, TSE develops those criteria, but listing and delisting examination are entrusted to JPX-R. However, the law requires the consent of SRO when the exchange develops, revises, and abolishes those criteria.
<table>
<thead>
<tr>
<th>Item</th>
<th>Contents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delisting</td>
<td>Termination of the listing agreement between TSE and a listed company.</td>
</tr>
<tr>
<td>“Security on Alert”</td>
<td>Designation given to cases where the listed company has made false statements in a securities report, etc. and, in addition, improvement of the internal management system, etc. is deemed to be highly necessary.</td>
</tr>
<tr>
<td>Improvement Report</td>
<td>Requested when improvement is deemed to be highly necessary in cases of violations of timely disclosure obligations or the Code of Corporate Conduct. Available for public inspection. After 6 months from the submission of such Improvement Reports, the company is requested to submit an “Improvement Status Report”, a report on the status of execution and operation of improvement measures</td>
</tr>
<tr>
<td>Financial Penalty</td>
<td>Taken when the confidence of shareholders/investors in the market is deemed to have been undermined in cases of the listed company violating securities listing regulations (timely disclosure rules and/or the Code of Corporate Conduct) or other rules.</td>
</tr>
</tbody>
</table>
Regulatory Measures against Trading Participants (Inspection)

**TP Admission**

- Examines applicants in terms of financial & operational criteria
- No. of TP: TSE/93, OSE/108

**Inspection of TP**

- Conducts General Inspections, Follow-up Inspections, and Special Inspections
- 12 inspections during the 1st half of 2016
- Major inspection items in 2016 Inspection Plan
  - Order Management Systems
  - System Risk Management Systems
  - Underwriting Examination Systems for IPO
  - Systems for Management of Corporate Information
  - Credit Risk Management Concerning Customer Positions for Margin Trading, etc.

**Disciplinary Action**

- Disciplinary Committee & BOD at JPX-R decides on actions (fines, censure, trading suspension, and limiting or revoking trading qualifications).
- TSE & OSE sanction TP based on JPX-R’s decision.

**Educational Activities**

- Various seminars are provided to TP.
- Case Study Handbook also promotes understanding on compliance requirement.

http://www.jpx.co.jp/english/rules-participants/participants/actions/index.html
Regulatory Measures against Trading Participants (Surveillance)

Selection of Stocks

Investigation

Selection of Stocks for Examination

Examination

Disposition

Market Manipulation
- Selection by market surveillance
- Receive information from trading participants or other depts.

Insider Trading
- Issues for which material facts have been announced

- Analysis of trends in price and trading volume
- Investigate trend in trading share of each trading participant
- Interviews with trading participants (refer

Receive reports of market surveillance results from trading participants.

Request background of insider information announcement from listed company.

Request and analyze trading data of entrusting party from trading participants.

In the event that the JPX-R concludes that further in-depth investigation is required.

Refer to trading participants for background of order placement and execution and detailed customer information, and then analyze them.

- Reporting to Securities and Exchange Surveillance Commission
- Issue warning to the listed company/trading participants as needed
## Market Surveillance Activity

<table>
<thead>
<tr>
<th></th>
<th>FY 2013</th>
<th></th>
<th>FY 2014</th>
<th></th>
<th>FY 2015</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Investigation</td>
<td>Examination</td>
<td>Investigation</td>
<td>Examination</td>
<td>Investigation</td>
<td>Examination</td>
</tr>
<tr>
<td>Insider Trading</td>
<td>1,726</td>
<td>177</td>
<td>1,985</td>
<td>134</td>
<td>2,266</td>
<td>163</td>
</tr>
<tr>
<td>Market Manipulation</td>
<td>568</td>
<td>16</td>
<td>1,143</td>
<td>31</td>
<td>1,021</td>
<td>15</td>
</tr>
<tr>
<td>Others (mainly</td>
<td>1,010</td>
<td>1</td>
<td>359</td>
<td>1</td>
<td>318</td>
<td>0</td>
</tr>
<tr>
<td>derivative products</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>3,304</td>
<td>194</td>
<td>3,487</td>
<td>166</td>
<td>3,605</td>
<td>178</td>
</tr>
</tbody>
</table>
Today’s Topics

1. Corporate Overview
2. Cash Equity Market Structure
3. Efforts to Enhance Corporate Value/SME Market Development
4. Self-Regulation
5. Other Products
## Derivatives Product Lineup at OSE

<table>
<thead>
<tr>
<th>Category</th>
<th>Underlyings</th>
<th>Product</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Japanese Indices</strong></td>
<td>Nikkei Stock Average (Nikkei 225)</td>
<td>Nikkei 225 Futures</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Nikkei 225 mini</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Nikkei 225 Options</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Weekly Options</td>
</tr>
<tr>
<td></td>
<td>TOPIX (Tokyo Stock Price Index)</td>
<td>TOPIX Futures</td>
</tr>
<tr>
<td></td>
<td></td>
<td>mini-TOPIX Futures</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TOPIX Options</td>
</tr>
<tr>
<td></td>
<td>JPX-Nikkei Index 400</td>
<td>JPX-Nikkei 400 Futures</td>
</tr>
<tr>
<td></td>
<td><strong>TSE Mothers Index</strong></td>
<td>TSE Mothers Futures</td>
</tr>
<tr>
<td></td>
<td>TOPIX Core30</td>
<td>TOPIX Core30 Futures</td>
</tr>
<tr>
<td></td>
<td>Russell/Nomura Prime Index (RN Prime Index)</td>
<td>RN Prime Index Futures</td>
</tr>
<tr>
<td></td>
<td>TOPIX Banks Index</td>
<td>TOPIX Banks Index Futures</td>
</tr>
<tr>
<td><strong>Overseas Indices</strong></td>
<td>Dow Jones Industrial Average (DJIA)</td>
<td>DJIA Futures</td>
</tr>
<tr>
<td></td>
<td>FTSE China 50 Index</td>
<td>FTSE China 50 Index Futures</td>
</tr>
<tr>
<td></td>
<td>TWSE Capitalization Weighted Stock Index</td>
<td>TAIEX Futures</td>
</tr>
<tr>
<td></td>
<td>CNX Nifty</td>
<td>CNX Nifty Futures</td>
</tr>
<tr>
<td><strong>Dividends Indices</strong></td>
<td>Nikkei 225 Dividend Index</td>
<td>Nikkei 225 Dividend Index Futures</td>
</tr>
<tr>
<td></td>
<td>TOPIX Dividend Index</td>
<td>TOPIX Dividend Index Futures</td>
</tr>
<tr>
<td></td>
<td>TOPIX Core30 Dividend Index</td>
<td>TOPIX Core30 Dividend Index Futures</td>
</tr>
<tr>
<td><strong>Volatility Indices</strong></td>
<td>Nikkei Stock Average Volatility Index (Nikkei 225 VI)</td>
<td>Nikkei 225 VI Futures</td>
</tr>
<tr>
<td><strong>REIT Indices</strong></td>
<td>TSE REIT Index</td>
<td>TSE REIT Index Futures</td>
</tr>
<tr>
<td><strong>Bond</strong></td>
<td>Standardized 3%, 5-year JGB</td>
<td>5-year JGB Futures</td>
</tr>
<tr>
<td></td>
<td>Standardized 6%, 10-year JGB</td>
<td>10-year JGB Futures</td>
</tr>
<tr>
<td></td>
<td>Price of standardized 6%, 10-year JGB</td>
<td>Options on JGB Futures</td>
</tr>
<tr>
<td></td>
<td>Standardized 6%, 20-year JGB</td>
<td>mini-10year JGB Futures</td>
</tr>
<tr>
<td><strong>Individual Security</strong></td>
<td>Individual security</td>
<td>Securities Options</td>
</tr>
</tbody>
</table>
Steady Growth and Challenges Ahead

- Strong franchise in Japanese equity indices and JGB-related products with trade volume nearing record levels in 2015.
- New J-Gate (matching engine) enabled timely product expansion, trading hours extension to 5:30 a.m. in the Night Session, and enhanced risk management.
- Aiming to add more rate-related products and expand into commodities business if so approved.
ETF & ETN

Product line-up (as of Jun. 2016)

Japanese Equity (84)
Foreign Equity (41)
Commodity (38)
Leveraged, Inverse, Enhanced (45)
Fixed Income (7)
REIT (9)
Others (5)
J-REIT

**Market Size** (as of May 2016)

- US-REIT, 106.8
- J-REIT, 11.9
- FR-REIT, 6.9
- A-REIT, 10.8
- S-REIT, 5.0
- UK-REIT, 6.7
- HK-REIT, 2.9
- Others, 5.9

**Investors by Asset Type** (as of Feb. 2016)

- **Office**
  - Financial Institutions: 58.7%
  - Business Corporations: 10.3%
  - Foreigners: 22.0%
  - Individuals: 8.9%

- **Residential**
  - Financial Institutions: 62.2%
  - Business Corporations: 10.6%
  - Foreigners: 16.6%
  - Individuals: 10.6%

- **Retail & Logistics, Others**
  - Financial Institutions: 58.5%
  - Business Corporations: 8.1%
  - Foreigners: 25.1%
  - Individuals: 8.4%

**REIT Market Cap and No. of Issues** (as of May 2016)

- Market Cap (left axis)
- Number of REITs (right axis)

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Appendix 1: Corporate Overview
**Financial Target (FY2016-FY2018)**

<table>
<thead>
<tr>
<th>Operating Revenue</th>
<th>1st Medium-Term Management Plan (Actual) *2 (FY2013-FY2015)</th>
</tr>
</thead>
<tbody>
<tr>
<td>+ JPY 15 bil.</td>
<td>JPY 108 bil.</td>
</tr>
<tr>
<td>Approx. + 13%</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Net Income</th>
<th>TJY 40 bil.</th>
</tr>
</thead>
<tbody>
<tr>
<td>+ JPY 8 bil.</td>
<td>JPY 123 bil.</td>
</tr>
<tr>
<td>Approx. + 20%</td>
<td></td>
</tr>
</tbody>
</table>

*1 Targeted revenue and income increase from initiatives in this 2nd Medium-Term Management Plan.

*2 Estimates based on 3-year average trading activity during the 1st Medium-Term Management Plan (cash equity daily trading value JPY 3.1 tril., derivatives annual trading volume 350 mil. units)

*3 Revenue and income based on total of actual performance for 1st Medium-Term Management Plan and targets for 2nd Medium-Term Management Plan, ROE projections based on such income.

*4 Implementation of initiatives stated in this 2nd Medium-Term Management Plan and targeted revenue and income increase may be affected by external environment. Revenue is also linked to cash equities and derivatives trading conditions. As such, actual performance may deviate from targets due to market conditions and other factors.
Basic Policy on Profit Distribution

JPX adopts a dividend policy with a target payout ratio of about 60% tied to business performance while giving due consideration to the importance of internal reserves for the following purposes:

- Maintaining sound financial health as a financial instruments exchange group,
- Preparing for risks as a clearing organization, and
- Enabling the group to pursue investment opportunities to raise the competitiveness of its markets as they arise.
• Licensed as "Financial Instruments Exchange" by the Prime Minister

• While “Membership-Type Exchange” and “Stock Company-Type Exchange” are provided under the law, TSE and OSE chose the latter corporate form.

• Business scope shall be limited to operation of financial instruments exchanges and other related business.

• Rule changes have to be approved by the Prime Minister.

• The Prime Minister may implement the following actions, if necessary.
  - Dismiss an officer who violated the law
  - Require submission of report, and inspect its business and records
  - Revoke license, suspend business, and order change in business
  - Suspend trading
  - Issue business improvement order

• Officers and employees must abide by confidentiality obligation and prohibition on preferential treatment under the FIEA
Appendix 2: Cash Equity Market Structure
Margin Trades

Standardized Margin Transaction
- Large Shareholder, Securities Firms, Life Insurance Companies
- Japan Securities Finance
- Securities Firms
- Investors

Negotiable Margin Transaction
- Loan Transaction
- Institutional Investors, etc.
- TSE/JSCC
- Securities Firms
- Investors

Margin Trade/Total Trade (Shares)

<table>
<thead>
<tr>
<th>Year</th>
<th>Standardized</th>
<th>Negotiable</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td></td>
<td>10%</td>
</tr>
<tr>
<td>2011</td>
<td></td>
<td>20%</td>
</tr>
<tr>
<td>2012</td>
<td></td>
<td>30%</td>
</tr>
<tr>
<td>2013</td>
<td></td>
<td>40%</td>
</tr>
<tr>
<td>2014</td>
<td></td>
<td>50%</td>
</tr>
<tr>
<td>2015</td>
<td></td>
<td>60%</td>
</tr>
</tbody>
</table>

Margin Trade by Individual Investors

<table>
<thead>
<tr>
<th>Year</th>
<th>Short</th>
<th>Long</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2012</td>
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<td>2013</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2014</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Short Selling Regulations

<table>
<thead>
<tr>
<th>Points</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Naked Short Selling</td>
<td>Prohibited</td>
</tr>
<tr>
<td>Uptick Rule</td>
<td>Triggered only when the price declines by 10 percent from the base price of each issue</td>
</tr>
<tr>
<td>Marking Requirements</td>
<td>Sell order has to specify if it is long sales or short sales.</td>
</tr>
<tr>
<td>Position Reporting</td>
<td>Short sales position of 0.2% or more of the No. of outstanding shares has to be reported to exchange through brokers. If it reaches 0.5% or more, its disclosure is made on the exchange's web-site.</td>
</tr>
<tr>
<td>Exemption</td>
<td>Margin Sales of 50 trading lots or less by retail investor, Arbitrage trades, Hedged trades, and so on</td>
</tr>
</tbody>
</table>

### Breakdown of Long/Short Sales in Oct. 2016

- **Long**: 62.1%
- **Short**: 37.9%
ToSTNet (Tokyo Stock Exchange Trading NeTwork System) is a separate market for block trading and basket trading. All cash securities listed in the auction market are automatically available on the ToSTNet market.

**Single Stock Trading (ToSTNet-1)**
Pre-arranged trading within 7% range from the last price in the auction market or at VWAP based price

**Basket Trading (ToSTNet-1)**
Pre-arrange basket trading (>15 stocks /JPY 100 mil.) within 5% range from the last prices in the auction market

**Closing Price Trading (ToSTNet-2)**
Orders are matched based on time priority at closing price or VWAP

**Off-Auction Own Share Repurchase Trading (ToSTNet-3)**
Used by issuing company to purchase own shares at previous day’s closing price
Appendix 3: Clearing and Settlement
Clearing and Settlement Flow

Risk management at JSCC

- Clearing Participant Qualification
- Collateral Requirements
- Monitoring on participants’ financial conditions and unsettled trades
- Loss compensation scheme
Loss Compensation Scheme

**Default Management Process**
- In the event of a Clearing Participant’s default, JSCC suspends the scheduled delivery of securities and payment of funds to the defaulting participant.
- At the same time, in order to fix the amount of losses arising from the default, JSCC executes the trades to offset the Unsettled Contracts of that participant, as well as selling the securities which was supposed to be delivered.

**Loss Compensation Scheme**
- The losses resulting from Clearing Participant’s default shall be compensated in the following order:

1: First Layer
2: Second Layer
   - Cash Product: approx. JPY 11.1 billion
   - Derivatives: approx. JPY 17.4 billion
   (as of March 31, 2016)
3: Third Layer:
   - approx. JPY 20.0 billion (as of March 31, 2016)
4: Fourth Layer
5: Fifth Layer
Appendix 4: Self-Regulation
### Numerical Listing Criteria

<table>
<thead>
<tr>
<th></th>
<th>Main Market</th>
<th></th>
<th>Mothers</th>
<th>JASDAQ</th>
<th>TOKYO PRO Market</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1st Section</td>
<td>2nd Section</td>
<td></td>
<td>Standard</td>
<td>Growth</td>
</tr>
<tr>
<td><strong>Number of shareholders</strong></td>
<td>2,200 or more</td>
<td>800 or more</td>
<td>200 or more</td>
<td>200 or more</td>
<td></td>
</tr>
<tr>
<td>** Tradable shares**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of tradable shares</td>
<td>20,000 units or more</td>
<td>4,000 units or more</td>
<td>2,000 units or more</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Market capitalization of tradable shares</td>
<td>JPY 1 billion (USD 10m) or more</td>
<td>JPY 1 billion (USD 10m) or more</td>
<td>JPY 500 million (USD 5m) or more</td>
<td>JPY 500 million (USD 5m) or more</td>
<td></td>
</tr>
<tr>
<td>Ratio of tradable shares to listed shares</td>
<td>35% or more</td>
<td>30% or more</td>
<td>25% or more</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public offering</td>
<td>—</td>
<td>—</td>
<td>500 trading units or more</td>
<td>10 percent or more or 1,000 trading units</td>
<td></td>
</tr>
<tr>
<td>Market capitalization of listed shares</td>
<td>JPY 25 billion (USD 250m) or more</td>
<td>JPY 2 billion (USD 20m) or more</td>
<td>JPY 1 billion (USD 10m) or more</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of years of business operation</td>
<td>3 years or more</td>
<td>—</td>
<td>1 year or more</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>Shareholders' equity</td>
<td>JPY 1 billion (USD 10m) or more</td>
<td>—</td>
<td>JPY 200 million (USD 2m) or more</td>
<td>Not negative</td>
<td>—</td>
</tr>
<tr>
<td>Amount of profits or Market capitalization</td>
<td>[Ordinary profit] Total amount of JPY500 million (USD 5m) or more in the last 2 fiscal years [Market cap] Market cap: JPY 50 billion (USD 500m) or more Sales: JPY 10 billion (USD 100m) or more</td>
<td>—</td>
<td>[Ordinary profit] JPY100 million (USD 1m) or more [Market cap] JPY5 billion (USD 50m) or more</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Measures in Participants’ Inspection in Response to HFT

<table>
<thead>
<tr>
<th>Specific risks</th>
</tr>
</thead>
<tbody>
<tr>
<td>✔ Abnormal orders due to system glitch, etc.</td>
</tr>
<tr>
<td>✔ Large losses that directly drive customers to bankruptcy</td>
</tr>
<tr>
<td>✔ Possibility of significant impact on exchange market operations</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Viewpoint</th>
<th>Main Check Items</th>
</tr>
</thead>
</table>
| **System Risk Management** | • Testing is conducted ahead of launching and modifying order placement systems.  
• Appropriate preventive measures are taken after system glitch. |
| **Order Management** | • Values to limit risk for preventing excessive amount of order placement and positions, etc. are set and managed.  
• Response when abnormality is detected |
| **Credit Risk Management** | • Values that consider the acceptable range of risk for the company are set.  
• Values for each customer are determined based on its order placement method, financial resources, etc. Settings are regularly reviewed. |
# Measures in Market Surveillance in Response to HFT

<table>
<thead>
<tr>
<th>JPX Initiatives</th>
<th>Outline</th>
</tr>
</thead>
<tbody>
<tr>
<td>◆ Introduction of market surveillance system and strengthening its functionalities, accumulation of surveillance and analysis techniques and know-how, etc.</td>
<td>• Start market surveillance that addresses millisecond trading (2011〜)</td>
</tr>
<tr>
<td></td>
<td>• Launch next generation market surveillance system including sophisticated alerts designed for HFT and algorithmic trading (2015〜)</td>
</tr>
<tr>
<td>◆ Close communications with inspection unit and the Securities and Exchange Surveillance Commission (SESC)</td>
<td>• Provide inspection unit with information related to efficiency of trading participant’s trading management system that were identified in the course of market surveillance</td>
</tr>
<tr>
<td></td>
<td>• Cooperate with the SESC</td>
</tr>
<tr>
<td>◆ Creation of a new specialized team for HFT</td>
<td>• For more accurate and more efficient market surveillance for HFT, a new specialized team was created to analyze particular HFT order patterns and accumulate know-how</td>
</tr>
<tr>
<td></td>
<td>• Launch a research project on algorithmic trading in cooperation with external specialists (2014〜)</td>
</tr>
<tr>
<td>◆ Preventing unfair trading (cooperation with stakeholders from an early stage)</td>
<td>• Investigate details with regard to abnormal order placement or price formation notified by real-time monitoring units in TSE and OSE</td>
</tr>
<tr>
<td></td>
<td>• Warn investors through early-stage cooperation with trading participants</td>
</tr>
</tbody>
</table>