Your Exchange of Choice

JAPAN EXCHANGE GROUP, INC.

JPX Report 2017
Japan Exchange Group, Inc. (JPX) is a holding company that operates financial instruments exchanges, including Tokyo Stock Exchange (TSE) and Osaka Exchange (OSE). By providing comprehensive market trading services for financial instruments ranging from equities to derivatives, we create market environments in which users can participate with confidence.

On the publication of JPX Report 2017
Japan Exchange Group, Inc. conducts business in accordance with our corporate philosophy of contributing to the realization of an affluent society by promoting sustainable development of the market. Earning the support and confidence of all of our stakeholders—including shareholders, market users, and local communities—for the way our business is conducted is vital to achieving this mission. In preparing this report on our activities in FY2016, we referenced the International Integrated Reporting Framework issued by the International Integrated Reporting Council (IIRC), our aim being to provide all of our stakeholders with a longer-term understanding of JPX’s corporate philosophy and the significance of our existence in this society, along with the concrete initiatives and actions that evolve from these concepts. We will continue working to enhance our reports in the future and ask for your ongoing support.

August 2017
Corporate Philosophy

Contributing to realizing an affluent society through sustainable market development

Our mission is to contribute to the realization of an affluent society by promoting sustainable development of the market. Committed to our public nature and credibility, we build highly convenient, efficient, and transparent markets, and provide creative and attractive services. Our efforts help us attract the support and confidence of investors and market users and reap the rewards in the form of profits.

Disclaimer

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.
Overview of JPX

The Creation of JPX – A New Group Structure

Provide market users with secure, reliable, and convenient venues for trading

JPX was formed in January 2013 through a merger between Tokyo Stock Exchange Group, operator of one of the world’s largest stock markets, and Osaka Securities Exchange, the market with the largest share of derivatives trading in Japan.

JPX, together with its subsidiaries and affiliates, establishes and administers markets for users to trade with confidence at any time. As Japan’s leading securities exchange group, JPX will continue to enhance its competitiveness in increasingly connected and globalized financial markets, while providing highly innovative, quality services with a level of reliability required by their public nature.
Overview of JPX

The JPX Philosophy

Place public confidence as our top priority and constantly strive to improve convenience

JPX monitors the needs of diverse stakeholders and works constantly to maximize overall customer satisfaction. Driven by our commitment to the continual challenge of improving convenience, we provide highly innovative, quality products and services. We build highly reliable social infrastructure that is not only fair and transparent, but also highly competitive, stable, convenient, and cost efficient.

In order to understand the needs of various stakeholders and to maximize overall customer satisfaction, we always think from the customer’s perspective and continue to look for optimum solutions.

Putting the Customer First

To strengthen global competitiveness and improve customer convenience, we work on offering creative products and services with the spirit and passion for a challenge, without fear of failure.

Pursuing Creativity

Securing Social Credibility

We stably operate markets with a high degree of fairness and transparency on a daily basis and, with that, construct a highly reliable social infrastructure that achieves strong competitiveness, stability, convenience, and cost efficiency.

Harnessing Employee Talent

We maintain a working environment that allows us to capitalize on the diversity of each and every employee and where they are able to perform at their full potential.

Four “C’s”

Customer First
Creativity
Credibility
Competency
Comprehensive services, from listing and trading of securities, to clearing and settlement, as well as information distribution

JPX integrated cash equities markets at Tokyo Stock Exchange in July 2013, and derivatives markets at Osaka Exchange in March 2014. In addition to these two exchanges, JPX Group also includes a self-regulatory subsidiary, which carries out the examination and supervision processes needed to maintain market quality. Our comprehensive services also encompass clearing and settlement functions. We are continually working to provide attractive markets as secure, convenient trading environments.
Business Model

Founded on the provision of services to meet the needs of market users, with revenue from fees for those services

Our revenues consist of fees paid by market participants including securities companies, as well as listed companies and information vendors, in consideration of the services done across JPX Group to provide an optimal trading environment with high standards of fairness, security, and reliability. Our income is derived from revenues from trading services, clearing services, listing services, and information services.

While our revenue structure is exposed to market fluctuations, our operating expenses are less likely to be affected by market conditions.
Overview of JPX

Infrastructure for sustainable development

Basic policy

Steady contribution to value creation for companies, investors, and the overall society by providing essential infrastructure to support economic revitalization

Vibrant securities markets are essential to economic development and general prosperity. Expanding the base of market participants is a key factor for sustainable growth and requires a continually robust financial market infrastructure, together with diverse products and services. JPX Group supports the creation and improvement of value for companies and investors and prosperity for the greater society through sustainable market development.

Value Creation

Steady contribution to value creation for companies, investors, and the overall society by providing essential infrastructure to support economic revitalization

Vibrant securities markets are essential to economic development and general prosperity. Expanding the base of market participants is a key factor for sustainable growth and requires a continually robust financial market infrastructure, together with diverse products and services. JPX Group supports the creation and improvement of value for companies and investors and prosperity for the greater society through sustainable market development.

Infrastructure for sustainable development

- Market reliability
- Guaranteed fairness (self-regulation)
- System usability (ease of trading)
- Attractive listed products
- Wide-ranging investor base

Basic policy

- Increasing investment in sustainable market development based on successful integration
- Realization of integrated group strengths
- Proactive expansion into new business areas
Overview of JPX

For companies:
A society offering flexible business financing methods

For society:
Price discovery functions
Economic thermometer

For investors:
Effective asset management opportunities

Key policies for sustainable development

Meeting diverse investment needs and revitalizing medium/long-term asset building

Supporting enhancement of value for listed companies

Addressing social expectations by improving market infrastructure

Opening up new frontiers for exchange business

Value creation
Overview of JPX

Financial Highlights

Operating Revenue/Operating Expenses

- Trading Services Revenue 45.7
- Clearing Services Revenue 21.4
- Listing Services Revenue 12.9
- Information Services Revenue 18.1
- System Maintenance & Operation Expenses 10.8
- Depreciation and Amortization 10.9
- Personnel Expenses 15.6
- Other 12.7

Operating Revenue (FY2016)
JPY 107.8 billion

Operating Expenses (FY2016)
JPY 50.1 billion

Operating Revenue/Operating Income

- Trading Services Revenue 45.7
- Clearing Services Revenue 21.4
- Listing Services Revenue 12.9
- Information Services Revenue 18.1
- System Maintenance & Operation Expenses 10.8
- Depreciation and Amortization 10.9
- Personnel Expenses 15.6
- Other 12.7

Operating Revenue (FY)
- 2014: 106.1
- 2015: 114.7
- 2016: 107.8

Operating Income (FY)
- 2014: 53.5
- 2015: 66.2
- 2016: 59.3

Operating Expenses (FY)
- 2014: 52.8
- 2015: 50.9
- 2016: 50.1

Net Income (attributable to owners of the parent company)/ROE

- Net Income (JPY bil.)
  - 2014: 15.6
  - 2015: 18.2
  - 2016: 16.4

- ROE (%)
  - 2014: 20
  - 2015: 20
  - 2016: 20

EPS/Dividends per Share

- EPS (JPY)
  - 2014: 62.70
  - 2015: 81.74
  - 2016: 77.00

- Dividends per Share (JPY)
  - 2014: 25
  - 2015: 50
  - 2016: 47

Note 1: Figures are for basic net income per share.
Non-Financial Highlights

Composition of the Board of Directors

- Directors: 6
- Independent Outside Directors: 7

Lectures and Classes for Students

- Approx. 830 sessions
- Approx. 36,000 attendees

Seminars for Retail Investors

- Approx. 120 sessions
- Approx. 17,000 attendees

No. of Visitors to JPX Facilities

- Approx. 68,000

No. of New Hires by Gender

- Female: 7
- Male: 18

Employees’ Average Years of Service

- Male: 15.9
- Female: 20.5

Note: FY2016 results
## FY2016 TOPICS

### 2016

#### April

**Start of PoC testing for blockchain technology**

JPX commenced proof of concept (PoC) testing to verify whether blockchain technology can be applied to the financial market infrastructure. The first round of testing was carried out with multiple vendors between April and June 2016. In August, we published a JPX Working Paper concerning the usability of blockchain technology, issues going forward, and other aspects. Since April 2017, we have continued testing to verify the technology in cooperation with a wide range of stakeholders, including financial institutions and IT vendors, based on the experience and knowledge gained during the first round of PoC testing.

#### June

**First listing on infrastructure funds market**

TSE established the infrastructure funds market in April 2015 as a means for responding to a) growing infrastructure investment needs in such areas as sustainable energy power generation and b) the rising social awareness of the importance of infrastructural development. The first issue was listed in June 2016, and there were a total of three listed infrastructure funds available for trading in the market as of the end of March 2017. We will continue our efforts to further stimulate growth in the infrastructure funds market by attracting more listings and growing AUM.

#### July

**Launch of New J-Gate**

OSE launched a new derivatives trading system (New J-Gate) with the aim of fortifying market infrastructure and, thereby, making room for further expansion of the derivatives market. New J-Gate boasts greater system processing capacity and new functionalities to enhance system convenience and reliability for market users. Alongside the new system, four new products, including TSE Mothers Index Futures, hit the market and trading hours were further extended. New J-Gate has given rise to a market environment that offers more convenience and security to investors, trading participants, and all market users.

### 2017

#### February

**Application of AI to market surveillance**

JPX-R has become the first organization in the world to use artificial intelligence (AI) in market surveillance operations. Typically, surveillance personnel screen each and every transaction to detect malicious activities, such as insider trading and market manipulation. The partial transfer of such tasks to an AI system is expected to enhance the fairness of JPX markets, because the staff will now be able to focus on detailed investigations and scrutinize transactions more deeply and in greater detail. Testing has verified that the AI system can detect the possibility of unfair trading with high accuracy. Preparations are now underway to introduce a working AI system by the end of FY2017.

#### March

**Launch of JPX-Nikkei Mid and Small Cap Index**

TSE and Nikkei, Inc. commenced joint calculation and publishing of the new JPX-Nikkei Mid and Small Cap Index, which focuses on stocks of small and medium enterprises. The new index applies the concept of the JPX-Nikkei Index 400, which is an index comprised of highly attractive listed companies, to mid and small cap equities in order to meet the needs of a wider range of investors. With JPX-Nikkei Mid and Small Cap Index, we aim to further develop and vitalize the Japanese securities market by providing new investment options via index-linked products to investors in and outside Japan.
Following the achievement of our targets under the 1st Medium-Term Management Plan, we are now working under the 2nd Medium-Term Management Plan to step up our investment in growth, further develop JPX markets, and diversify our business portfolio.
JPX is currently implementing its 2nd Medium-Term Management Plan. Our goal for this plan, now in its second year, is to leverage the successful business integration as the foundation for sustainable market growth and development. Under the plan, we are focusing the combined strengths of JPX Group to introduce new products and services to enable us to meet a wide range of investor needs. We aim to continue improving our corporate value while providing value to market participants on various levels, including support for enhancing the value of listed companies, expansion of the scope for IPOs, further reinforcement of risk management and other market systems as public infrastructure, and the expansion of new exchange business.
Message from the CEO

Step Up to the Next...

Corporate Philosophy and Creed

JPX’s mission is to “contribute to the realization of an affluent society by promoting continuous development of the market by ensuring our public nature and credibility, constructing the foundation of the market which is highly convenient, efficient and transparent, and providing creative and attractive services”. These efforts help us to garner greater support and confidence from investors and other market users, which then allows us to reap rewards in the form of profits.

This corporate philosophy expresses the goals and values that guide our business activities and is the foundation for our management planning and decision-making. All JPX officers and employees look to fulfill this unchanging philosophy in their day-to-day tasks.

Challenges

Trading in cash equities and derivatives markets provided by JPX is significantly influenced by global economic and market trends. To achieve sustainable market development, we need to earn the support of market users in Japan and overseas by offering high quality services. We are also working to diversify our business portfolio to maintain a robust financial base so that we can continue to operate our markets reliably even if the external environment deteriorates.

Under our 2nd Medium-Term Management Plan spanning FY2016 to FY2018, we aim to leverage the success of our business integration as the foundation for sustainable market growth and development. Our basic policy is to focus the combined strengths of JPX Group toward dynamic expansion into new business areas, while also targeting business portfolio diversification from a medium- to long-term perspective and aggressively pursuing our core initiatives.

Medium-Term Management Plan

March 31, 2017 marked the end of the first year of the 2nd Medium-Term Management Plan. The plan has been updated to that date to reflect developments, including progress on the core initiatives and those relating to high-speed trading, which is a new priority for JPX Group. We will continue to focus on the core initiatives while maintaining the basic policy of the 2nd Medium-Term Management Plan.

Our first core initiative is to encourage medium- and long-term asset building while satisfying diverse investor needs. We will employ various channels to enhance our ability to provide information to the younger generation and those new to investing. We will also seek to attract new investors, list investment products to accommodate investor needs, and develop new indices to showcase the appeal of Japanese stocks. For derivatives, we will introduce new products and promote the use of derivatives among institutional investors. We will also continue working toward the comprehensive exchange initiative.

Our second core initiative is to help listed companies enhance their corporate value. We will encourage companies to disclose reports on corporate governance, financial results, and other information in English, and we will create an environment in which information on listed companies is readily available to investors. Through initiatives in these and other areas, we aim to facilitate dialogue between investors and listed companies, while further enhancing the effectiveness of corporate governance.

We also aim to contribute to the sustainable growth of the Japanese economy by enabling the efficient supply of risk money. Specific initiatives in this area include measures to expand the scope for IPOs, including unlisted companies from outside Tokyo. We will also be working to clarify the concepts of our different markets.

The third core initiative is to reinforce our market infrastructure in keeping with our social role. We will enhance risk management and improve usability in relation to clearing and settlement services. We will also take steps to shorten the settlement cycle for stocks and JGBs with the aim of further reducing settlement risk.

Meanwhile, besides enhancing our backup systems as part of our preparedness for wide-area disasters, we will also strengthen our cyber security.
In addition to these initiatives, we will continue our efforts to enhance risk management systems related to market operations. We will also pursue other objectives, including a smooth transition to the new rules related to high-speed trading, further reinforcement of our cash equity trading platform, and the actual deployment of artificial intelligence for market surveillance.

The fourth core initiative is to expand our exchange business. In line with our commitment to diversifying our business portfolio over the medium- to long-term, we will target expansion into new business areas, including expanding our clearing services for OTC derivatives.

Global trends in financial regulatory reform and new technological advances could dramatically change the business environment for JPX Group. We are preparing for these changes through research and development relating to exchange business and through nurturing an innovative organizational culture, as we continue to strengthen our overseas business bases and improve our research capabilities.

Social Responsibilities

Our core business activity, the operation and management of market infrastructure, entails extremely important social responsibilities.

We recognize the public nature of our activities and the need for neutrality, and we are strongly aware of the importance of continuing to enhance our corporate governance, especially compliance, as well as management transparency and accountability.

2nd Medium-Term Management Plan (FY2016-FY2018)

Step Up to the Next

Pursue the next step forward in developing market infrastructure and services and encouraging investment in the securities market

Increase investment for sustainable market development to build on successful TSE-OSE integration

Leverage competencies across JPX Group

Further develop JPX markets through stronger cross-division cooperation and complementary relationships in the corporate group

Aggressively pursue new business

Diversify business portfolio toward ensuring stable market operations

Mid- to Long-Term Vision

Well-balanced business portfolio

Highly liquid cash equities markets that offer a broad range of attractive products to various investors

Cash equities market business

Maintain and enhance trust in the market

Derivatives business

New business

Derivatives markets that offer deep liquidity across multiple asset classes

New business segments that accommodate diverse investor needs and support stable market operations

2nd Medium-Term Management Plan
In addition, we will also tap into resources for our core business areas to provide financial and economic education programs and engage in activities to deepen our ties with local and international communities, and with our stakeholders to increase our contributions to society.

We hope our stakeholders will give us their continued support in our endeavors.

Conclusion

JPX Group will continue to pursue sustainable market development and the revitalization of the Japanese economy, as we strive to cooperate with and gain the understanding of both Japanese and overseas investors, listed companies, securities companies and other market participants, our regulators, and society in general.

August 2017

Director & Representative Executive Officer,
Group CEO
Japan Exchange Group, Inc.

Overview of 2nd Medium-Term Management Plan (FY2016-FY2018)

Increase investment for sustainable market development to build on successful TSE-OSE integration

Leverage competencies across JPX Group

Aggressively pursue new business

Core Initiatives

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

• Increase efforts to encourage stable asset building by young generations and those new to investing
  • Promote necessary improvement of an environment conducive to use of ETFs as a long-term regular and diversified investment tool
  • Strengthen efforts to expand the range of investor base for derivatives trading

II Supporting listed companies in enhancing corporate value

• Encourage constructive dialogue between listed companies and investors in order to enhance effectiveness of cooperate governance

III Fulfilling social mission by reinforcing market infrastructure

• Strengthen the structure and operation of risk management for market operation
  • Smoothly introduce rules and regulations for high-speed trading

IV Creating new horizons of exchange business

• Promote research and study towards utilization of fintech

Update of 2nd Medium-Term Management Plan
Enhancing Corporate Value

Financial Strategy

Realizing Integration Synergies

The 1st Medium-Term Management Plan, which was formulated at the time of management integration in 2013, encompassed management and financial objectives for maximizing cost synergies through organizational and infrastructural integration and streamlining to create a stable earnings base. The major objective for these initiatives was a reduction in costs of at least JPY 8.5 billion by FY2015 in comparison with FY2012.

Thereafter, JPX succeeded in achieving this objective through cost-cutting of about JPY 7.0 billion via integration of overlapping systems and through another JPY 1.5 billion in cost reductions from realignment and consolidation of the business network and review of operations. As a result, JPX built flexible and resilient financial foundations that allow for new investments.

Financial Objectives under the 2nd Medium-Term Management Plan

While the 1st Medium-Term Management Plan aimed to clamp down on expenses, such as by reducing operating expenses by JPY 8.5 billion, the 2nd Medium-Term Management Plan aims for expansion.

In concrete terms, the initiatives taken under the 2nd Medium-Term Management Plan are geared toward achieving two main targets for FY2018. The first is adding JPY 15.0 billion in operating revenue, and the second is working on expanding net income by JPY 8.0 billion, taking into account increases in operating expenses and other factors.

Compared with actual average results under the 1st Medium-Term Management Plan, operating revenue and net income are expected to increase by 13% and 20%, respectively.

Though it is difficult to forecast the market conditions through the end of FY2018, if the average actual results for FY2014–2016 are examined, return on equity (ROE) will reach approximately 17%, resulting in performance levels that are comparable with those of FY2015.

Maintain the overall framework for management and financial policies for 2nd Medium-Term Management Plan and mid- to long-term capital policy

Accelerate capex, considering increase in the initially planned amount

<table>
<thead>
<tr>
<th>Operating Revenue</th>
<th>Net Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Target$^{1,4}$</td>
<td></td>
</tr>
<tr>
<td>+JPY 15 bil.</td>
<td>+JPY 8 bil.</td>
</tr>
<tr>
<td>Approx. +13%</td>
<td>Approx. +20%</td>
</tr>
</tbody>
</table>

1st Medium-Term Management Plan (Actual)$^{2}$ (FY2013-FY2015)

<table>
<thead>
<tr>
<th>FY2018$^{3,4}$</th>
<th>JPY 123 bil.</th>
</tr>
</thead>
<tbody>
<tr>
<td>JPY 108 bil.</td>
<td>JPY 40 bil.</td>
</tr>
<tr>
<td>JPY 48 bil.</td>
<td></td>
</tr>
</tbody>
</table>

(Reference)

ROE

FY2018$^{3,4}$

Approx. 17 %

Notes:
1. Targeted revenue and income increase from initiatives in the 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. and derivatives annual trading volume 350 mil. contracts).
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 the 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.
Enhancing Corporate Value

Capital Policy for Sustainable Development of the Market

Under the 2nd Medium-Term Management Plan, JPX will implement a policy of increasing its investments for growth to support sustainable development of the market. In the medium-to-long term, this will contribute to the enhancement of revenue stability and expansion of revenue size of JPX through diversification of its business portfolio.

If the figures are combined for the Tokyo and Osaka exchanges during the five years before JPX came into being and before the policy of monetary easing, the average estimated ROE was approximately 5%. Going forward, we will continue our business management in consideration of capital efficiency in order to implement a business model that allows us to secure an ROE of approximately 10% in the medium-to-long term, even under unfavorable market conditions.

JPX must secure a firm financial base to stably operate the market as a public infrastructure. However, JPX will also give flexible consideration to providing further returns to shareholders as it considers the necessity of growth investment while maintaining a target dividend payout ratio of 60%.

Acquisition of Own Shares and Issuance of Corporate Bonds

In FY2016, we conducted the first acquisition of own shares since the founding of JPX. Between July 29, 2016, and May 18, 2017, we bought back approximately 12.71 million shares on the TSE market for a total of approximately JPY 20 billion.

The JPY 20-billion acquisition of own shares was financed by a bond issue for the same amount on March 16, 2017. Japan’s negative interest rate environment has further reduced the cost of borrowing and facilitated the use of debt. We therefore decided to conduct acquisition of own shares and issuance of corporate bonds as a way to improve capital efficiency by adjusting the balance between debt and shareholders’ equity. These actions also helped to improve shareholder returns.

JPX will continue to make active use of both debt and shareholders’ equity to improve its corporate value.

Invest aggressively to pursue revenue/profit expansion and stability, while balancing sound financial health and shareholder returns, and thereby achieve sustainable development of the market

- Increase profits and expand stable revenue base
- Increase investment
  (Total capex: approx. JPY 46 bil.)
  - Invest to expand derivatives and new business to grow revenues
  - Reinforce revenue base through diversifying business portfolio

- Sustainable Market Development
- Generate profit
- ROE susceptible to market conditions
  - 5yr avg. ROE before BOJ easing (FY2008-FY2012) approx. 5%
  - 3yr avg. ROE after BOJ easing (FY2013-FY2015) approx. 16%
- Management focus on capital efficiency
- Financial Resilience
  - Secure financial base to ensure stable operations as public infrastructure provider
- Shareholder Returns
  - Aim for approx. 60% dividend payout ratio
  - Flexibly consider further shareholder returns while securing growth capex

Target 10% ROE that is above capital costs over the mid- to long-term

Note 1: 5-year average ROE for FY2008-FY2012 is based on combined net income and equity capital of TSE and OSE before business integration.
Encouraging Mid- to Long-Term Asset Building

One of the core initiatives targeted by JPX under its 2nd Medium-Term Management Plan is to satisfy diverse investor needs and encourage mid- to long-term asset building. Because of changes in Japan’s demographics, there is an urgent need to improve the financial literacy of retail investors and to diversify and enhance mid- and long-term asset management, including management by institutional investors. Progress in these areas is dependent on sound and sustainable market development.

For these reasons, TSE aims to create sustainable markets that will be attractive to investors through initiatives that focus on support for asset building of retail investors, and on listing of attractive investment products that meet investor needs. One specific initiative is the reinforcement of promotional activities targeting retail investors by the Financial Literacy Support Department, which was established in FY2016. We are actively engaged in promotional activities for retail investors, including JPX-led lectures at various seminars, and the operation of a dedicated website, money-bu-jpx.com, launched in December 2016 to provide information about asset building.

We place particular importance on the development of an environment to encourage the use of ETFs. ETFs offer a number of advantages, including excellent usability and transparency, which make them ideal as a long-term regular and diversified investment tool for retail investors. By FY2018, we aim to increase the number of ETF holders by over 500,000, and the total net asset value of ETFs by over JPY 5 trillion. In the past year, the number of ETF holders has risen by 280,000, and the total net asset value of ETFs by JPY 6.5 trillion.

Going forward, we will consider introducing a market-making system to enhance liquidity and improving the efficiency of ETF creation and redemption process. ETFs will also be eligible for the installment-type Nippon Individual Savings Account (NISA) system, which will be launched in 2018. The establishment of new systems and development of new ideas by related parties are expected to stimulate further growth in the use of ETFs.

A second focus will be the development of new indices. TSE has long been engaged in the calculation of indices to meet a variety of investment needs. In January 2016, we launched the JPX-Nikkei Mid and Small Cap Index. We expect the development of new indices to contribute to the further diversification of the product lineup.
Enhancing the Value of Listed Companies

Another core initiative under the 2nd Medium-Term Management Plan is to support listed companies in enhancing corporate value.

In June 2015, TSE began to apply Japan’s Corporate Governance Code as the framework for structural reforms designed to strengthen the ability of Japanese companies to cope with international competition. Investor perceptions of Japanese stocks are starting to improve in response to these reforms and environmental changes. For example, almost 90% of companies listed on the TSE 1st Section have appointed two or more independent outside directors, and the ROE of Japanese companies is starting to improve.

Corporate governance reforms will remain a key part of the “third arrow” of Abenomics. To ensure the effectiveness of these reforms, we need to foster constructive dialogue between investors and companies. TSE will continue its initiatives to improve the effectiveness of corporate governance, including the creation of an environment conducive to dialogue between listed companies and investors.

For the Japanese economy to achieve sustainable growth, we need to ensure stable supply of risk money to growth sectors. TSE is promoting IPOs of attractive companies that are considering listing, through its support activities, including seminars and one-on-one visits. We are actively engaged in such activities in regions other than Tokyo. Such promotional campaigns have led to the IPOs of 31 companies outside of Tokyo in 2015, and 31 in 2016. These figures represent 32% and 36% respectively of total IPOs in those years. Regional economic revitalization is one of the most challenging goals for Japan. TSE aims to contribute to the achievement of this goal through its contribution to IPOs.

Going Forward

TSE will remain focused on the creation of more convenient and more attractive markets for all market participants. Initiatives toward this end include promotional activities designed to expand the breadth of the investor base, listing of diverse products, and the improvement of liquidity.
Enhancing Corporate Value

Osaka Exchange, Inc.

Expansion of Derivatives Market and Nighttime Trading

Trading in OSE’s derivatives market has quadrupled over the past 10 years. One reason for this growth is the existence of the Nikkei 225 mini contract, which began trading in 2006. Enjoying over 20% of retail participation by volume, it has grown to become the world’s third most traded stock index futures product.

Another key feature of developments over the past decade has been the extremely rapid expansion of nighttime trading. We began nighttime trading in 2007 and have since extended the trading hours several times to meet the needs of market participants. In July 2016, we extended the night session to 5:30 a.m., and moved up the start of the day trading session for stock index futures from 9:00 a.m. to 8:45 a.m.

The ratio of activity in the night session to overall volume in a trading day is increasing. In 2015, this ratio was 36%, renewing the yearly all-time high. Recently, in May 2017, it has risen to 41.8%.

Initiatives to Strengthen Competitiveness

The key factors to the competitiveness of a derivatives market are service quality and reliability, the diversity of listed products available, and the expansion of its investor base.

Service quality and reliability are determined by three aspects. First, whether the trading system, including its processing speed, meets the global standard; second, whether the market provides risk management functions for trading participants; and third, whether the trading hours provide global coverage. We believe that our new J-GATE trading system, which launched in July 2016, measures up well in the current global competitive landscape.

As systems and technologies continue to develop and improve, we will make the necessary investments to further enhance usability and reliability.

We are also working to enhance the diversity of our listed products. In addition to the listing and promotion of new equity-related products, we will also continue to explore the possibilities for evolving into a comprehensive exchange.

For example, in July 2016, we launched TSE Mothers

Derivatives Market Trading Volume

![Derivatives Market Trading Volume Graph](image)
Index Futures as Japan’s first futures product for Japan’s emerging stocks. Also, in May 2015, we introduced trading in Nikkei 225 Weekly Options in line with the global expansion of weekly options trading. These products have yet to fulfill their potential, but we will continue to implement measures to promote and develop these markets.

OSE already offers an extensive product line-up, especially in terms of equity-based products. However, we have not yet moved into commodities, a field that is expanding globally, so we will continue to explore the possibilities in this area.

The third factor I mentioned earlier is the expansion of the investor base. Overseas investors account for around 70% of trading volume on the OSE derivatives market. We see the expansion of the domestic investor base, covering retail and institutional investors that currently contribute around 30% of trading volume, as an important part of our efforts to expand the overall investor base; and, we will strengthen various initiatives toward the achievement of this goal. Measures targeting retail investors include promotion activities, such as joint seminars with securities companies, designed to raise awareness of derivatives as effective tools for asset building and management. While these efforts are unlikely to reap benefits quickly, we will continue to step up our efforts to facilitate asset building by retail investors from a medium- to long-term perspective.

Some Japanese institutional investors have started to make active use of derivatives as part of a shift toward more sophisticated asset management methods. We see this trend as an excellent opportunity, and we will actively support other Japanese institutional investors to start and expand trading with a view to increasing the use of derivatives.

Shifting the topic to overseas investors, new players are continually emerging, and we see a trend toward growing regional diversity. Our perception is that there are still many overseas investors who could potentially participate in the OSE derivatives market.

In these circumstances, there are plans to introduce new HFT regulations. To prevent confusion arising from misunderstanding of these regulations, we will disseminate accurate information in a timely manner to both our existing and new investors.

Derivatives Trading Volume and Ratio of Night Session Trading

![Graph showing derivatives trading volume and ratio of night session trading from 2007 to 2016.](image)
Japan Exchange Regulation

Maintaining Market Confidence, Contributing to Capital Market Development in Japan

The mission of an exchange is to provide fair, dependable markets in which investors can trade with confidence, while enjoying efficiency and usability. An extremely important requirement for market operators—being the parties closest to the markets—is to develop suitable rules and systems, allowing them to exercise appropriate self-regulation to ensure that all listed companies are qualified, prevent unfair market transactions, and maintain the soundness of securities companies and other market participants.

Direct finance is playing an increasingly important role in the revitalization of the Japanese economy. We need to strengthen functions and structures for market supervision so that we can build a financial system with market functions at its core. Regulation by government authorities and self-regulation by exchanges and other organizations both have their advantages. We need to combine and use those advantages to build an efficient and harmonious structure that is highly effective and efficient as a whole.

Self-regulation can be seen as a quality control system for exchanges because of its role in ensuring that markets are fair and dependable, and it is the core function of any market operator. The self-regulatory processes of JPX Group are based on this mindset.

JPX and Japan Exchange Regulation

Diagram showing the structure of Japan Exchange Group with JPX and Japan Exchange Regulation.
We will combine our core values—neutrality and independence—with efficiency and convenience.

To perform our self-regulatory role appropriately, we need to build an organizational structure that combines a high level of autonomy focused on the protection of the public good and investors, with management and administration based on fairness and neutrality. At the same time, we must respond quickly and effectively to various market phenomena, while maintaining extensive and highly specialized knowledge about market functions and characteristics. This is why exchanges have historically performed self-regulatory functions.

With the trend toward borderless trading and the emergence of international competition among markets, exchange organizations will increasingly need to adapt flexibly to environmental changes, while working with increased determination to improve efficiency and usability. This is reflected in a general shift toward demutualization of exchanges. TSE and OSE are companies within JPX Group and operate as subsidiaries of JPX, which is a listed company itself.

In this context, we need to satisfy dual imperatives: the neutrality of self-regulation, and the business strategies and profitability of our exchanges. The method that JPX Group chose to achieve this was to create an organizational structure in which an independent regulatory corporation specializing in self-regulation processes exists within the same corporate group as the exchanges. Our aim was to establish a corporation that would exist close to the markets and possess a high level of specialized knowledge, while operating independently from the exchanges that run markets, and performing its functions effectively from a position of neutrality.

In addition, outside governors hold the majority of seats on the Board of Governors, which is the supreme decision-making body for JPX-R. This ensures that our decision-making processes are also subject to an independent governance structure.

JPX-R performs its tasks in close cooperation with the exchanges and is constantly sharing essential information with them. We carry out investigations independently, and the exchanges implement measures, such as approval or disciplinary action, on the basis of our findings.

Globally Unique Organizational and Operational Structure

In other countries and regions, self-regulatory processes are performed by a variety of organizational structures. The structure of those organizations is determined by the historical evolution of each market, as well as by legal systems and practices.

The organizational and operational structure of JPX-R is unique in the world. We believe that this structure enables us to ensure the efficiency, usability, and profitability of market operations, as well as the fairness and reliability of capital markets, while also maintaining a high standard of specialist knowledge.

JPX-R is determined to ensure market fairness and earn the confidence of investors by continuing to deliver highly effective self-regulatory functions that are in harmony with the market environment and legal framework.

### Activities of Japan Exchange Regulation

<table>
<thead>
<tr>
<th>Activity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Listing examination</td>
<td>Examinations concerning the qualifications of companies that wish to be listed</td>
</tr>
<tr>
<td>Monitoring of listed companies</td>
<td>Checking information disclosure and corporate behavior by listed companies</td>
</tr>
<tr>
<td>Examination and inspection of trading participants</td>
<td>Inspections concerning the trading qualifications and regulatory compliance of securities companies, etc.</td>
</tr>
<tr>
<td>Market surveillance</td>
<td>Investigation and examination of unfair market trading</td>
</tr>
<tr>
<td>Prevention of unfair transactions</td>
<td>Compliance support and information dissemination for listed companies and trading participants</td>
</tr>
</tbody>
</table>
Clearing and Risk Management Functions
Designed to Enhance Service Quality

JSCC plays two roles in financial instruments transactions. Our first role is the assumption of obligations. When stocks, derivatives, and other instruments are traded, JSCC stands between the purchasers and sellers—accepting and delivering the securities and/or money in place of the original parties. Through this service, we provide an environment in which parties to transactions can trade securely without worrying about credit risks relating to the other party.

Our second role is netting. Netting involves the calculation of the difference between the amounts of money and securities to be delivered and received, so that the amounts paid and received can be offset. This allows large volumes of transactions to be settled efficiently, since settlements between the parties and JSCC are based only on differences between amounts payable and receivable and the securities to be delivered.

JSCC began to provide clearing service for exchange transactions in January 2003, after becoming the first company in Japan licensed to engage in the securities obligation assumption business (now known as the "financial instruments obligation assumption business").

Before the establishment of JSCC, settlements for securities transactions were processed in individual exchanges. By centralizing clearing operations, JSCC has dramatically improved the efficiency and convenience of settlement of securities and funds after the conclusion of market transactions.

As a financial instruments clearing institution, JSCC provides clearing services not only for exchange transactions, but also for OTC derivatives (CDS and IRS transactions), and JGB OTC transactions.

The Role of JSCC in Financial and Capital Markets

Notes 1: OTC is an abbreviation for "Over-the-Counter", referring to when the buyer and seller transact with each other directly.
2: “Assumption of Obligation” refers to becoming the counterparty to each side of a transaction via clearing. Because of this, clearing organizations are known as “central counterparties (CCPs)”. 
Note 1: T+1 Settlement refers to a settlement cycle where settlement is implemented on the next business day (+1) following the Trade Date (T), while T+2 Settlement refers to a settlement cycle where settlement is made on the second business day (+2) from the Trade Date. Currently, the settlement cycle is “T+2” for JGBs and “T+3” for equities, etc.

Strengthening Role as Core Infrastructure via Expanded Scope of Services

JSCC provides core infrastructure for financial instruments transactions. Our basic management philosophy is to contribute to the improvement of the international competitiveness of Japanese capital markets by enhancing the efficiency, convenience, and safety of financial instruments markets under an effective risk management structure.

Under this management philosophy, we place great importance on the enhancement of the services that JSCC provides to users. This is reflected in the following two key management policies.

Our first key policy is, therefore, enhancement of the quality of clearing functions, and reinforcement of risk management and systems infrastructure. We see the continuing improvement of safety and efficiency as the source of our competitiveness as a clearing institution. We are also committed to the continuing improvement of the quality of services provided to JSCC users.

Our second key policy reflects the expansion of our role as a clearing institution. We will work in that environment to strengthen our role as core infrastructure by expanding the scope of our services, and we will actively strengthen JSCC’s capabilities as core infrastructure for financial and capital markets so that we can provide diverse users with clearing services for a wide variety of instruments.

Based on these management policies, we are implementing a range of measures under our medium-term management plan for FY2016–2018. In this time of rapid change in the market environment and regulatory systems, we will continue to work with clearing participants and other users to strengthen our role as core infrastructure in financial and capital markets as a member of JPX Group.

JSCC Medium-Term Management Plan (FY2016–2018)

I. Reinforcement of Clearing Functions, Risk Management, and IT Systems towards Service Quality Improvement

<table>
<thead>
<tr>
<th>Listed Products Clearing Service</th>
<th>Replace current listed derivatives clearing system for improvement of risk management functions as well as capability for new product and revision of related rules (Derivatives Clearing Renewal Project)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Take steps to shorten the settlement cycle for equities (T+2)¹</td>
</tr>
<tr>
<td>OTC Derivatives Clearing Service</td>
<td>Take measures for further enhancement of functionality/convenience</td>
</tr>
<tr>
<td></td>
<td>Improve compression scheme for IRS Clearing Service</td>
</tr>
<tr>
<td></td>
<td>Implement position transfer at Client Clearing for CDS Clearing Service, etc.</td>
</tr>
<tr>
<td>JGB OTC Transaction Clearing Service</td>
<td>Take steps to shorten the settlement cycle for JGB transactions (T+1)¹</td>
</tr>
<tr>
<td></td>
<td>Revisions of Rules related to shortening settlement cycle</td>
</tr>
<tr>
<td>Company-Wide</td>
<td>Discuss towards optimizing overall Clearing System by streamlining/relocating, etc. system functions</td>
</tr>
<tr>
<td></td>
<td>Discuss towards reinforced risk management pursuant to PFMI additional guidance, etc.</td>
</tr>
</tbody>
</table>

II. Reinforcement of the Company’s Role as Core Infrastructure through Expansion of the Scope of Services

<table>
<thead>
<tr>
<th>Listed Products Clearing Service</th>
<th>Take steps to expand listed products eligible for clearing in response to the expansion of listed derivatives products</th>
</tr>
</thead>
<tbody>
<tr>
<td>OTC Derivatives Clearing Service</td>
<td>Expand OTC derivatives products eligible for clearing</td>
</tr>
<tr>
<td></td>
<td>Discuss towards clearing Cross Currency Swaps</td>
</tr>
<tr>
<td></td>
<td>Expand Tenor (time to maturity) of Single Name CDS transactions eligible for clearing, etc.</td>
</tr>
<tr>
<td>JGB OTC Transaction Clearing Service</td>
<td>Take steps for starting clearing service for Inflation-Linked Bonds</td>
</tr>
<tr>
<td>Company-Wide</td>
<td>Take measures to deal with expansion of users, including those required by overseas regulations</td>
</tr>
<tr>
<td></td>
<td>In addition to discussing towards expansion of eligible products for clearing, discuss wider range of post-trade service possibilities</td>
</tr>
</tbody>
</table>

Note 1: T+1 Settlement refers to a settlement cycle where settlement is implemented on the next business day (+1) following the Trade Date (T), while T+2 Settlement refers to a settlement cycle where settlement is made on the second business day (+2) from the Trade Date. Currently, the settlement cycle is “T+2” for JGBs and “T+3” for equities, etc.
Enhancing Corporate Value

IT Strategy

IT Strategy as the Source of Our Competitiveness

Exchanges provide venues to gather large numbers of sellers and buyers. Today those venues exist on systems, and the quality of these systems and their information processing capabilities has a direct bearing on competitiveness.

Thanks to rapid advances in information technology, companies and investors can now look across the world and choose the market that offers the best investment environment. At the same time, the needs of market users are becoming increasingly complex and sophisticated. To meet these needs and become the market of choice, we must constantly improve our system infrastructure to enhance convenience for our users. Exchanges are core financial infrastructure, and our most important mission is to provide sound venues by stably operating systems that are highly reliable and scalable.

JPX sees IT both as a source of competitiveness and also as a means to enhance its competitive edge. We will deploy the latest technology as far as possible to construct and continue providing highly reliable and convenient market infrastructure and services.

Improving Corporate Value by Constantly Enhancing Systems and Challenging the Limits

The arrowhead cash equity trading system currently handles trading of over 3,500 listed stocks, while our J-GATE derivatives trading system provides access to Japan’s best-known futures and options products, including those linked to Nikkei 225, TOPIX, and 10-year JGBs. Through these systems, we continue to develop and provide one of the world’s leading markets.

For example, in September 2015, we upgraded the arrowhead system to improve processing speed and trim the time between receiving an order and returning the receipt notice from 1 millisecond to about 0.3 milliseconds. These system improvements facilitate stress-free trading for participants with a wide range of investment styles. Some overseas exchanges offer even faster processing, but our goals for the arrowhead system upgrade went beyond aiming for faster processing, as we pursued three objectives: improved reliability, improved convenience, and improved system capability. We focused on improving overall system
Enhancing Corporate Value

capability, covering not just processing speed but also reliability and scalability, which included the provision of risk management functions and capacity expansion. As a result, the upgraded system now boasts world-class system stability and services from a comprehensive perspective that covers convenience, reliability, and scalability.

In July 2016, we renewed our J-GATE system. With improved processing capacity and newly supported system functions, we have enhanced convenience and reliability for market users. We also introduced four new products, including TSE Mothers Index Futures, extended our trading hours, and made other revisions to our market rules as we provide support for derivatives market growth through improved infrastructure.

Our goals for FY2017 are to expand our clearing and settlement services and strengthen the system infrastructure. We will be working to enhance the risk management functions of our clearing systems and upgrade the functions for derivatives clearing as we diversify our services.

In recent years, there has also been increased awareness of security threats as a major issue. We will continue to respond to these threats by strengthening and enhancing cybersecurity.

The strength and resilience of its systems infrastructure are the source of competitiveness for an exchange. Our experience from system upgrades and other initiatives has given our IT divisions the ability to undertake challenges without fear of failure, resulting in better skills and positive attitudes.

We will continue to boldly embark on new challenges as we work to enhance the corporate value of JPX through our IT strategy.

### 2nd Medium-Term Management Plan (FY2016-2018)

<table>
<thead>
<tr>
<th>Initiative 1</th>
<th>Expand clearing and settlement services and enhance system infrastructure</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Strengthen system foundations for product diversification and more sophisticated risk management</td>
<td></td>
</tr>
<tr>
<td>• Develop and strengthen systems infrastructure for shorter settlement cycle and post-trade business expansion</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Initiative 2</th>
<th>Design next-generation trading systems</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Start developing next-generation trading systems with a focus on enhancing user-friendliness and reliability of JPX markets, as well as improving cost effectiveness</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Initiative 3</th>
<th>Launch next J-GATE and next ToSTNeT systems</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Promote development of systems with high processing capacity, reliability, and fault tolerance with the aim of expanding product lineup, boosting existing products, and increasing market liquidity</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Initiative 4</th>
<th>Strengthen BCP and cybersecurity</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Strengthen cybersecurity to counter increasing threat</td>
<td></td>
</tr>
<tr>
<td>• Start reviewing contingency plans based on revisions to the government’s basic disaster management plan and enhancing contingency operations</td>
<td></td>
</tr>
</tbody>
</table>

Increase investment for sustainable market development to build on successful TSE-OSE integration

Leverage competencies across JPX Group
Further develop JPX markets through stronger cross-division cooperation and complementary relationships in the corporate group

Aggressively pursue new business
Diversify business portfolio toward ensuring stable market operations

JPX REPORT 2017 27
Moving Forward as Your Exchange of Choice

Japan Exchange Group, Inc. (JPX) was founded in January 2013 with the aim of becoming the exchange of choice in Asia. Our vision, as stated in the 2nd Medium-Term Management Plan launched in FY2016, is to drive sustainable market development while responding to the increasingly diverse and sophisticated needs of market users by maintaining a balanced business portfolio spanning the three areas of cash equities markets, derivatives markets, and peripheral business.

JPX will step up to the next stage of its evolution by working under the 2nd Medium-Term Management Plan to become your exchange of choice.

Step up to the Next...
Sustainable Management System

JPX has a social mission to support the economy as a provider of public infrastructure. We are committed to the fulfillment of this mission through the maintenance and development of effective corporate governance systems.
Continuing efforts to enhance corporate governance, taking in diverse perspectives to improve corporate value

— What is your assessment of JPX’s corporate governance structure?

Tsuda: Let me first describe some of the features of the corporate governance system at JPX.

In terms of our organizational makeup, we adopt the “Company with Nominating Committee, etc.” structure. We chose this structure, because it clearly demarcates the management oversight and executive functions. The majority of its board members are independent outside directors with diverse views and backgrounds.

As for the makeup of our Board of Directors, independent outside directors hold the majority of seats, and our outside directors vary from being directors at other listed companies to legal experts, certified public accountants, and academics. They all have extensive knowledge and experience of their respective fields. Our board also offers diversity with two female directors, one of whom is a foreign national.

We actively seek input from our outside directors on the management and operation of the Board of Directors and its meetings. Based on my own experience as an outside director at other companies, I am impressed with how our outside directors come forward to express their views in a very open and candid manner.

Kobayashi: As the parent company of TSE, which formulated Japan’s Corporate Governance Code, JPX must be a leader in good governance. In that sense, the current situation at JPX, including its management team, can serve as an example to other companies as they strive to survive and prosper in the 21st century.

Without knowledge of the company’s operations, independent outside directors can find it difficult to participate in discussions. JPX provides various channels and opportunities to help us obtain that knowledge. For example, besides getting to talk with executive officers and the management, we also visit the company’s facilities to get a feel of company operations on-site. Of course, it is not perfect, so we should remember to revisit the PDCA cycle. That said, I think JPX is in an extremely good position.

In my capacity as a director of several other companies, JPX is often seen as a
Our business model involves the operation of securities exchanges, which is highly unique for a listed company.
—Tsuda

Since JPX offers its shares to the public, its basic social responsibility as a public entity is no different from that of an ordinary company. As a listed company, JPX is a public entity and must communicate effectively, and it should continue improving its communication with the public.
—Kobayashi

Tsuda: I feel that everyone is closely watching how JPX goes about enhancing its corporate governance. We have to commit ourselves to compliance with the Code, but at the same time we need to recognize that our business model involves the operation of securities exchanges, which is highly unique for a listed company.

As such, some people may wonder to what extent JPX can serve as an example to other companies. What is your view on this?

Kobayashi: While JPX’s field and business model are highly unique, since the company offers its shares to the public, it has many shareholders and other stakeholders. Based on this reason alone, its approach to outside communication should be no different from that of an ordinary company. As a listed company, JPX is a public entity and must communicate effectively, and it should continue improving its communication with the public.

— How about the effectiveness of the Board of Directors?

Tsuda: To explain briefly, our effectiveness assessment system is based on the Independent Outside Directors Committee, which we established in March 2016. This committee consists only of part-time independent outside directors. As such, independent outside directors exchange information and share views at committee meetings in the absence of directors with executive duties. We created this committee to strengthen the management oversight function. As for the effectiveness of the Board of Directors and the Nomination Committee, Audit Committee, and Compensation Committee, which are statutory bodies, the Independent Outside Directors Committee assesses them through questionnaire surveys with all directors. Some directors are also interviewed.

One example of a change resulting from this assessment is the establishment of the Risk Policy Committee, which is a voluntary organ that we created in response to advice that we needed to improve our risk management. Since we wanted to bring outside perspectives to our risk management activities, the majority of committee members are independent.
outside directors, and inside executive directors have little involvement in the committee’s activities. The Risk Policy Committee discussed the risks that JPX should focus on in FY2017 as the basis for a preventive approach to risk management. We also carefully considered ways to maximize the benefits of effectiveness assessments. Do you have any suggestions for further improvements?

**Kobayashi:** Those in executive roles, in the course of their career over the years at JPX, tend to cultivate certain values, or a shared rationality, and become somewhat monocultural. In other words, their ideas, culture, and approach to work are likely to be aligned in a certain direction. Independent outside directors come from various backgrounds, and each brings his or her own perspective, approach, and views. We need to allow them to express their views freely and put them forward as input for discussion. My experience has been that JPX listens carefully and calmly to such input, even if it is highly critical.

I believe that issues raised during last year’s effectiveness assessment are steadily being rectified. However, we can never be sure what awaits us amid these changing times, so constantly acting to make things better is also important.

For example, we were already aware that JPX has been thinking about risk management, and we began to discuss ways to broaden and deepen the scope of its risk management activities. We need to set milestones and work to achieve improvements through continually repeating the PDCA cycle, while also remaining aware of the gap between the ideal state and reality.

People within JPX can sometimes surprise us with interesting analysis, so if you create opportunities for debate about approaches toward risk management, you can foster a culture that looks at risk. Such debate should include not only the management, but also younger employees. I believe JPX has reached the start line to grow from strength to strength as a company with the evolution of this culture.

**Tsuda:** When we discussed the types of risks at JPX, we began by gathering the views of employees across all levels of seniority as input for discussion by the Board of Directors. We have received a lot of advice and new insights, especially from our outside directors, particularly that JPX cannot afford to stay monocultural because it is a listed company that is highly public in nature. We have taken this input on board, and I believe that we are responding appropriately.

We brought outsiders into our Board of Directors, and we are already seeing the benefits of them holding the majority of seats. We cannot afford to feel complacent about the results of the assessment of the effectiveness of the Board of Directors, but my impression is that we are making steady progress.

— What do you think of the support system for outside directors?

**Tsuda:** To facilitate effective debate at Board of Directors meetings, secretariat staff are tasked to brief board members in advance on the agenda items. We also created an Audit Committee Office with dedicated staff to provide similar assistance to Audit Committee members. What do you think of this support structure?

**Kobayashi:** My impression is that this structure provides quite comprehensive support. It helps us to understand JPX itself, as well as the agenda items. However, there has also been discussion about the workload for secretariat staff, and some directors have suggested that we should be briefed in small groups. I have a strong preference for one-on-one briefings, which allow me to speak frankly when raising doubts or questioning things. So from my point of view, I have said that I hope the briefings continue in the present way. I hear that at other companies, one-on-one briefings are extremely effective in helping directors gain a deeper understanding, and therefore lead to better debate.
Tsuda: Since our goal is to ensure that the Board of Directors engages in meaningful debate, I believe that it is extremely important for this support structure to be firmly established and continually improved.

— Any thoughts on the role of the Board of Directors in further improving corporate governance and enhancing corporate value?

Tsuda: You hold outside directorships, auditorships, and other positions at various companies, in addition to your main role as a director of a trading company. Based on your experience, are there any cases that could serve as reference to JPX?

Kobayashi: I see companies adopting various KPIs, such as ROE between 10% and 15%, or certain ROIC. Many companies also base their compensation structures on medium-to-long-term perspectives. Companies have a responsibility to present their medium-to-long-term visions. I think you have to carefully examine and deliberate how to provide incentives, starting from the top. In the case of JPX, you have to also consider the balance with its public role.

I think there will come a time when the management has to share and align its views on the vision for JPX three, five, 10, or even 20 years down the road, and conduct a review of the structures accordingly.

Tsuda: Every company constantly faces turning points in its business. Particularly, in the world of finance and securities, with the rapid development of fintech, we can never be sure what technologies will become mainstream tomorrow. Whether exchanges will continue to exist in the future is closely linked to the evolution of these technologies. Your insights are the difference between life and death for JPX.

With fintech and information technology evolving rapidly, we must be ready to respond and present our vision for the future of exchanges to our stakeholders.

—Tsuda

Kobayashi: People from different fields will have different ideas, or even unique perspectives, about what could happen over the next 10 or 20 years. For example, trading companies will always see change as opportunity, but the changes that are happening in the 21st century are totally different from those in the 20th century. This difference is rooted in advancements in information and communications technology. The speed and extent of change is extremely rapid and varied. How should a company respond to changes that impact every industry across the world? Obviously we must remain on our toes, but there will be times when simply being ready will not be enough.

What are the growth strategies for JPX in this environment? Although it might be misleading to say that trying to maintain the status quo would automatically mean failure, maintaining the status quo is not an approach for the current environment. You must consider various aspects, such as how the growth strategies should be modified, the impact of a shrinking population, changes in society, the global situation, and ways to actually apply fintech.

This is why JPX has brought together people from diverse backgrounds, with different corporate cultures, and ideas to talk about their dreams, visions, and strategies, so that inside and outside directors can come together to share ideas and inspire each other. Our role is to contribute as we go about improving this mechanism.

Tsuda: Although a securities exchange is very different from an ordinary company, our mission is obvious – the survival of JPX in global competition. There are many issues to ponder over, including areas that we should prioritize within JPX, and how we should approach new fields, such as fintech. We benefit from the frank input from our independent outside directors, and we will ensure that this continues as we work to further enhance our corporate value.

Do you have any thoughts on how JPX can enhance its corporate value? —Tsuda
Board of Directors
**Corporate Governance**

**Hiroki Tsuda**  
Director (Chairperson of the Board of Directors), Outside Director

- **Apr. 1972** Joined Ministry of Finance  
- **Aug. 2002** Director-General, Tokyo Customs  
- **Jan. 2003** Deputy Vice Minister for Policy Planning and Co-ordination  
- **Jul. 2004** Deputy Vice Minister  
- **Jul. 2006** Director-General of the Budget Bureau  
- **Jul. 2007** Administrative Vice Minister of Finance  
- **Sep. 2008** Professor, Graduate School of Public Management, Waseda University  
- **Jun. 2015** Outside Director of the Company (current position)  
  Chairperson of the Board of Directors of the Company (current position)

- **No. of Company shares held:** 100 shares

**Hiromi Yamaji**  
Director and Executive Officer

- **Apr. 1977** Joined The Nomura Securities Co., Ltd. (currently Nomura Holdings, Inc.)  
- **Jun. 1997** General Manager, Personnel Department  
- **Jun. 1998** Member of the Board in charge of Investment Banking Products Division  
- **Jun. 2000** Managing Director, Head of Global Investment Banking Division  
- **Apr. 2002** President & CEO, Nomura Europe Holdings plc (London) and Chairman, Nomura Holding America Inc. (New York)  
- **Apr. 2007** Executive Vice President, Global Investment Banking, in charge of Corporate Finance Division, Nomura Securities Co., Ltd.  
- **Jun. 2013** Director of the Company (current position)  
  President & CEO, Osaka Stock Exchange, Inc. (current position)

- **No. of Company shares held:** 17,980 shares

**Hironaga Miyama**  
Director and Executive Officer

- **Apr. 1979** Joined Electric Power Development Co., Ltd.  
- **Apr. 1988** Joined Tokyo Stock Exchange  
- **Jun. 2002** Director, General Administration Department, Tokyo Stock Exchange, Inc.  
- **Jun. 2004** Director, Information Services Department  
- **Jun. 2005** President, Representative Director, ICJ, Inc.  
- **Dec. 2005** Executive Officer, Tokyo Stock Exchange, Inc.  
- **Oct. 2007** Standing Governor, Tokyo Stock Exchange Regulation (currently Japan Exchange Regulation)  
- **Jun. 2009** Senior Executive Officer, Tokyo Stock Exchange Group, Inc.  
- **Jan. 2013** Senior Executive Officer of the Company (current position)  
  President & CEO, Tokyo Stock Exchange, Inc. (current position)

- **No. of Company shares held:** 20,000 shares

**Hiromi Yamaji**  
Director and Executive Officer

- **Apr. 1978** Joined Tokyo Stock Exchange  
- **Nov. 2001** Director, Derivatives Department, Tokyo Stock Exchange, Inc.  
- **Jun. 2003** Director, Treasury Department  
- **Jun. 2004** Director, Corporate Strategy Department  
- **Jun. 2005** Executive Officer  
- **Jun. 2007** Senior Executive Officer  
- **Jun. 2011** Managing Director  
- **Jun. 2013** President & CEO, Japan Securities Clearing Corporation (current position)  
- **Apr. 2016** Executive Officer of the Company (current position)  
- **Jun. 2017** Director of the Company (current position)

- **Significant Concurrent Position:**  
  Director, Tokyo Stock Exchange, Inc.

- **No. of Company shares held:** 9,000 shares
## Corporate Governance

### Christina Ahmadjian
**Director, Independent Director, Outside Director**

- **Significant Concurrent Positions:**
  - Professor, Graduate School of Commerce and Management, Hitotsubashi University
  - Outside Director, Mitsubishi Heavy Industries, Ltd.

- **No. of Company shares held:**
  - 200 shares

### Hitoshi Ogita
**Director, Independent Director, Outside Director**

- **Significant Concurrent Positions:**
  - Professor, Columbia University

### Hideaki Kubori
**Director, Independent Director, Outside Director**

- **Significant Concurrent Positions:**
  - Professor, Hitotsubashi University

### Main Kohda
**Director, Independent Director, Outside Director**

- **Significant Concurrent Positions:**
  - Chairman, Japan Foreign Trade Council, Inc.

### Eizo Kobayashi
**Director, Independent Director, Outside Director**

- **Significant Concurrent Positions:**
  - Chairman, OMRON Corporation

### Significant Concurrent Positions:
- **Board of Directors:**
  - Committee Chairmen:
    - Corporate Governance Committee (Chairperson)
    - Compensation Committee (Chairperson)
    - Nomination Committee (Chairperson)
    - Audit Committee (Chairperson)

### Office Members:
- **Eizo Kobayashi**
  - Director, Independent Director, Outside Director
  - Joined Asahi Breweries, Ltd. (current position)
  - Professor, Graduate School of International Corporate Strategy, Hitotsubashi University
  - Outside Director, NEC Corporation

- **Christina Ahmadjian**
  - Director, Independent Director (current position)
  - Associate Professor, Graduate School of International Corporate Strategy, Hitotsubashi University

- **Hitoshi Ogita**
  - Director, Independent Director (current position)
  - Managing Corporate Officer, Senior General Manager of Kyushu Regional Headquarters
  - NEC Corporation

- **Hideaki Kubori**
  - Director, Independent Director (current position)
  - Managing Corporate Officer, Senior General Manager of Karashin-etsu Regional Headquarters

- **Main Kohda**
  - Director, Independent Director (current position)
  - Senior Managing Director (currently ITOCHU Corporation)

- **Eizo Kobayashi**
  - Director, Independent Director (current position)
  - Dean, Graduate School of International Corporate Strategy
  - Outside Director, Japan Airlines Co., Ltd.

### Office Hyperlinks:
- **Corporate Strategy**
- **Policy, Ministry of Land, Infrastructure, Transportation and Tourism**
- **Cabinet Office, Government of Japan**
- **Shiga University**
- **Columbia University School of Business**

### Significant Concurrent Positions:
- **Novelist**
- **Chairman, Tokyo Metropolitan Federation of Corporate Taxpayers Associations**
- **Chairman and Vice President, Asahi Regional Headquarters**
- **Senior Adviser, Asahi Group Holdings, Ltd.**
- **Counselor, Bank of Japan**

### Office Addresses:
- **LOXL Group Corporation**
- **Hitotsubashi University**
- **Tokyo Stock Exchange Regulation Group, Inc.**
- **OMRON Corporation**
- **NP Group Corporation**
- **LIXIL Group Corporation**
- **Columbia University School of Business**
- **Asahi Breweries, Ltd.**
- **Japan Broadcasting Corporation**
- **Japan Tobacco Inc.**
- **Mitsubishi Heavy Industries, Ltd.**
- **NEC Corporation**
- **OFRICS**
- **Okinawa City University**

### Notes:
- **No. of Company shares held:**
  - 100 shares
  - 3,100 shares
  - 10 shares
  - 50 shares
  - 100 shares
  - 300 shares
  - 500 shares
  - 100 shares
  - 1,000 shares
Corporate Governance

Makoto Minoguchi
Director

Apr. 1984 Joined Tokyo Stock Exchange
Jun. 2007 Director, General Administration Department, Tokyo Stock Exchange, Inc.
Aug. 2007 Director, General Administration Department, Tokyo Stock Exchange Group, Inc.
Jun. 2008 Director, Corporate Strategy Department
Oct. 2010 Director, Listing Examination Department, Tokyo Stock Exchange Regulation (currently Japan Exchange Regulation)
Jun. 2011 Standing Governor
Jun. 2015 Managing Director, Japan Securities Clearing Corporation
Apr. 2017 Managing Director and Executive Officer

Significant Concurrent Position:
Statutory Auditor, Tokyo Stock Exchange, Inc. (current position)
No. of Company shares held: 7,200 shares

Kimitaka Mori
Director, Independent Director, Outside Director

Apr. 1980 Joined Shinwa Accountants (currently KPMG AZSA LLC)
Jun. 2000 Representative Partner, Ashii & Co. (currently KPMG AZSA LLC)
Jun. 2004 Director of financial services, KPMG AZSA & Co. (currently KPMG AZSA LLC)
Jun. 2006 Board Member, KPMG AZSA & Co.
Jul. 2011 Chairman, KPMG FS Japan
Jun. 2013 Retired from KPMG AZSA LLC
Jul. 2013 Established Mori Certified Public Accountant Office
Chairman and President, The Japanese Institute of Certified Public Accountants
Jul. 2016 Advisor, The Japanese Institute of Certified Public Accountants (current position)

Significant Concurrent Positions:
Certified Public Accountant
Adviser, The Japanese Institute of Certified Public Accountants
Outside Corporate Auditor, MITSUI & CO., LTD.
Outside Corporate Auditor, East Japan Railway Company
Outside Director, SUMITOMO LIFE INSURANCE COMPANY
No. of Company shares held: 300 shares

Tsuyoshi Yoneda
Director, Independent Director, Outside Director

Apr. 1976 Joined National Police Agency
Jul. 1997 General Manager, Wakayama Prefectural Police Headquarters
Sep. 2001 General Manager, Criminal Affairs Department, Metropolitan Police Department
Aug. 2003 General Manager, Kyoto Prefectural Police Headquarters
May 2005 General Manager, Organized Crime Department, National Police Agency
Sep. 2007 Commissioner, Criminal Affairs Bureau
Jun. 2008 Commissioner-General’s Secretariat
Oct. 2011 Deputy Director-General

Significant Concurrent Positions:
Commissioner General
Retired
No. of Company shares held: 100 shares

Management Team

Japan Exchange Group, Inc.

Akira Kiyota
Director & Representative Executive Officer, Group CEO

Ryusuke Yokoyama
Senior Executive Officer & COO (IT Planning)

Yoshinori Karino
Senior Executive Officer (IT Planning)

Yoshihiro Isaka
Senior Executive Officer (Global Strategy)

Koichiro Miyahara
Director & Executive Officer (Management of Tokyo Stock Exchange, Inc.)

Hiromi Yamaji
Director & Executive Officer [Management of Osaka Exchange, Inc.]

Hironaga Miyama
Director & Executive Officer (Management of Japan Security Clearing Corporation)

Isao Hasegawa
Executive Officer (General Administration and Human Resources)

Satoshi Futagi
Executive Officer (Corporate Strategy and Clearing & Settlement Development)

Atsushi Tabata
Executive Officer & CFO (Treasury, Corporate Communications and Investor Relations)
### Tokyo Stock Exchange, Inc.

<table>
<thead>
<tr>
<th>Name</th>
<th>Position and Responsibilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Koichiro Miyahara</td>
<td>President &amp; CEO</td>
</tr>
<tr>
<td>Moriyuki Iwanaga</td>
<td>Director &amp; Senior Executive Officer (Equities and Financial Literacy Support)</td>
</tr>
<tr>
<td>Yasuyuki Konuma</td>
<td>Director &amp; Senior Executive Officer (Listing and New Listings)</td>
</tr>
<tr>
<td>Akira Kiyota</td>
<td>Director (Part-time)</td>
</tr>
<tr>
<td>Takashi Moriya</td>
<td>Standing Statutory Auditor</td>
</tr>
<tr>
<td>Katsushi Kuroda</td>
<td>Statutory Auditor</td>
</tr>
<tr>
<td>Atsushi Shimizu</td>
<td>Statutory Auditor</td>
</tr>
<tr>
<td>Makoto Minoguchi</td>
<td>Statutory Auditor</td>
</tr>
<tr>
<td>Ryusuke Yokoyama</td>
<td>Senior Executive Officer (IT Administration, IT Development (Information and Clearing) and IT Services)</td>
</tr>
<tr>
<td>Yoshihiro Isaka</td>
<td>Senior Executive Officer (Information Services)</td>
</tr>
<tr>
<td>Yoshinori Karino</td>
<td>Senior Executive Officer (Tokyo Site Contingency)</td>
</tr>
<tr>
<td>Masayuki Murata</td>
<td>Executive Officer (Equities Business Development and Financial Literacy Support)</td>
</tr>
<tr>
<td>Isao Hasegawa</td>
<td>Executive Officer (General Administration)</td>
</tr>
<tr>
<td>Katsumi Ao</td>
<td>Executive Officer (Listing)</td>
</tr>
<tr>
<td>Hiroki Kawai</td>
<td>Executive Officer (Equities and IT Development (Equities Trading))</td>
</tr>
<tr>
<td>Tatsuya Kamiki</td>
<td>Executive Officer (Tokyo Site Contingency)</td>
</tr>
</tbody>
</table>

### Osaka Exchange, Inc.

<table>
<thead>
<tr>
<th>Name</th>
<th>Position and Responsibilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hiromi Yamaji</td>
<td>President &amp; CEO</td>
</tr>
<tr>
<td>Yoshinori Karino</td>
<td>Director &amp; Senior Executive Officer (IT Development (Derivatives) and IT Services)</td>
</tr>
<tr>
<td>Tatsuya Kamiki</td>
<td>Director &amp; Executive Officer (Market Operations)</td>
</tr>
<tr>
<td>Masahiko Maruyama</td>
<td>Standing Statutory Auditor</td>
</tr>
<tr>
<td>Yasuhiro Ogawa</td>
<td>Statutory Auditor</td>
</tr>
<tr>
<td>Shunsuke Matsui</td>
<td>Statutory Auditor</td>
</tr>
<tr>
<td>Ryusuke Yokoyama</td>
<td>Senior Executive Officer (IT Administration, IT Development (Derivatives) and IT Services)</td>
</tr>
<tr>
<td>Yoshihiro Isaka</td>
<td>Senior Executive Officer (Information Services)</td>
</tr>
<tr>
<td>Kazuo Fukuda</td>
<td>Senior Executive Officer (Market Planning, Derivatives Business Development and Financial Literacy Support)</td>
</tr>
<tr>
<td>Isao Hasegawa</td>
<td>Executive Officer (General Administration)</td>
</tr>
<tr>
<td>Akira Tagaya</td>
<td>Executive Officer (Market Planning, Derivatives Business Development and Financial Literacy Support)</td>
</tr>
<tr>
<td>Koichi Masuda</td>
<td>Governor</td>
</tr>
<tr>
<td>Shosaku Shimomura</td>
<td>Standing Auditor</td>
</tr>
<tr>
<td>Takashi Moriya</td>
<td>Auditor</td>
</tr>
</tbody>
</table>

### Japan Exchange Regulation

<table>
<thead>
<tr>
<th>Name</th>
<th>Position and Responsibilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Takafulmi Sato</td>
<td>President</td>
</tr>
<tr>
<td>Yasushi Suzuki</td>
<td>Managing Governor (Listing Examination, General Administration)</td>
</tr>
<tr>
<td>Hiroyuki Matsuzaki</td>
<td>Standing Governor (Trading Participants Examination and Inspection, Market Surveillance and Compliance)</td>
</tr>
<tr>
<td>Takeshi Hirano</td>
<td>Standing Governor (Listed Company Compliance)</td>
</tr>
<tr>
<td>Toru Ishiguro</td>
<td>Governor</td>
</tr>
<tr>
<td>Hidetaka Kawakita</td>
<td>Governor</td>
</tr>
<tr>
<td>Koichi Masuda</td>
<td>Governor</td>
</tr>
<tr>
<td>Shosaku Shimomura</td>
<td>Standing Auditor</td>
</tr>
<tr>
<td>Takashi Moriya</td>
<td>Auditor</td>
</tr>
</tbody>
</table>

### Japan Securities Clearing Corporation

<table>
<thead>
<tr>
<th>Name</th>
<th>Position and Responsibilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hironaga Miyama</td>
<td>President &amp; CEO</td>
</tr>
<tr>
<td>Masaki Shizuka</td>
<td>Director &amp; Senior Executive Vice President (Corporate Planning Division, Strategic Planning Division, and OTC Derivatives Clearing Service)</td>
</tr>
<tr>
<td>Hiyoyasu Ichimoto</td>
<td>Director &amp; Executive Officer (Listed Products Clearing Service, System Planning Division and OTC JGB Clearing Service)</td>
</tr>
<tr>
<td>Yosuke Inaida</td>
<td>Director (Part-time)</td>
</tr>
<tr>
<td>Hironao Eguchi</td>
<td>Director (Part-time)</td>
</tr>
<tr>
<td>Kazuhiko Ohashi</td>
<td>Director (Part-time)</td>
</tr>
<tr>
<td>Yasumasa Nishi</td>
<td>Director (Part-time)</td>
</tr>
<tr>
<td>Satoshi Futagi</td>
<td>Director (Part-time)</td>
</tr>
<tr>
<td>Masatoshi Yoshihara</td>
<td>Director (Part-time)</td>
</tr>
<tr>
<td>Hiroshi Kagiwada</td>
<td>Standing Statutory Auditor</td>
</tr>
<tr>
<td>Shigeru Nakajima</td>
<td>Statutory Auditor</td>
</tr>
<tr>
<td>Masao Yanaga</td>
<td>Statutory Auditor</td>
</tr>
<tr>
<td>Tatsuya Kamiki</td>
<td>Executive Officer (Tokyo Site Contingency)</td>
</tr>
</tbody>
</table>

Note 1: Outside
Corporate Governance

JPX seeks to fulfill its social mission by serving as vital public infrastructure in the form of Japan's central financial instruments market, and is committed to appropriately developing its corporate governance system.

Basic Views
In order to conduct management in line with its corporate philosophy (page 1), JPX is aware of the importance of having its stakeholders understand its corporate philosophy and corporate activities. Therefore, JPX has established the basic views on corporate governance from the following four perspectives.

- Corporate Philosophy and Social Mission
JPX Group operates markets that are a public asset and fulfills its social mission by pursuing the sustainable development of its markets.

- Market Operations
JPX Group operates markets with the view that garnering support for and fostering confidence in the markets it establishes are in the common interest of all investors and market users, and maintaining and enhancing such support and confidence will build the foundations for sustainable development of its markets.

- Enhanced Corporate Value
In pursuing the sustainable development of its markets, JPX must continue to accommodate the diverse needs of shareholders and other stakeholders, and through this JPX will enhance its corporate value over the medium to long term.

- Effective Corporate Governance
JPX strives to constantly improve its corporate governance system to further facilitate effective and proper systems, so as to support the sustainable development of its markets.

Corporate Governance System
JPX clearly segregates the management oversight and business execution functions and adopts the structure of "a company with a nomination committee and other committees" to strengthen oversight and raise the transparency of management.

Corporate Governance System Diagram

Note: 1. The post of COO is vacant as of June 16, 2017.
Corporate Governance

Composition of the Board of Directors
The JPX Board of Directors is comprised of 13 members. The functions of the board include increasing the transparency and accountability of the management and enhancing supervision of the appropriateness of business execution. To accomplish this, the composition of the board includes a non-executive Chairman, who is among eight outside directors that constitute a board majority. Of these eight outside directors, seven are filed as persons that satisfy the independent director criteria.

The breakdown of the seven independent directors is as follows: two corporate managers, one legal professional, one certified public accountant, and three academics or former government officials. Each director has considerable experience and insight in his/her respective field and contributes to a structure that allows for multi-faceted external perspectives to be readily incorporated into the management of JPX.

Establishment of Risk Policy Committee
JPX established a Risk Policy Committee with the aim of further improving its corporate governance. The role of the new committee, which consists mainly of outside directors, is to bring an outside perspective to risk management.

Nomination, Compensation, and Audit Committees
As required by law, JPX has a Nomination Committee and a Compensation Committee for the purpose of ensuring transparency and objectivity in the appointment/removal and compensation of directors and executive officers. Outside directors are in the majority in both these committees. The appointment and removal of directors and executive officers are thoroughly deliberated and determined by the Nomination Committee and put forth for approval at general shareholders meetings, and the compensation of directors and executive officers is determined by the Compensation Committee.

JPX also has an Audit Committee, as required by law, to perform the audit function. This committee is made up of five directors (including one full-time Audit Committee member), of which four, including a certified public accountant, are outside directors. JPX also has an Audit Committee Office to assist the committee members in the performance of their duties.

Establishment of Independent Outside Directors Committee
JPX established an Independent Outside Directors Committee as a corporate organ composed exclusively of part-time independent outside directors to allow them to exchange information and form consensus among themselves. The committee will help part-time independent outside directors to better perform management oversight and facilitate active discussion at Board of Directors meetings.

Independent Outside Directors Committee

| Objectives | For part-time independent outside directors to exchange information and form consensus
| Frequency of meetings | In principle, at least twice a year
| Committee Chairman | The committee chairman convenes meetings and presides over them. When the committee deems it necessary for ensuring smooth communication, the content of the discussions of the committee may be reported to the chairman of the board, the CEO, and other members of management.

Evaluating the Effectiveness of the Board of Directors
At JPX, the Board of Directors analyzes and evaluates its own effectiveness based on questionnaire surveys and interviews with all board members. The Independent Outside Directors Committee, which is composed of part-time independent outside directors, conducts the evaluation to increase the objectivity and transparency of the evaluation process.

Board Effectiveness Evaluation Cycle

---

All Directors
Self-evaluation based on interviews and/or questionnaires

Other members of management
Consideration of improvements, etc.

Independent Outside Directors Committee
Evaluation of improvements, etc.

Board of Directors
Confirmation of evaluation improvements, etc.

Independent Outside Directors Committee
Review

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JPX REPORT 2017  41
Summary of Results of Evaluation of the Effectiveness of the Board of Directors for FY2016

Board of Directors

The following four issues were raised.

- **Steering and Composition of the Board of Directors**
  1. The composition of the board should be further diversified with a view to the future in light of the external environment and business conditions.
  2. The agenda should be set and ample time should be provided to discuss strategically important themes.

- **Director Training/Communication with Executive Officers**
  There have been improvements since FY2015, but further efforts are needed.

- **Risk Management**
  The initiatives taken since FY2016 to strengthen risk management should be continually reviewed.
  
  In view of these comments, members of the management considered improvement measures and confirmed that the Board of Directors will appropriately implement improvement measures.

Nomination Committee

The following two issues were raised.

- The composition of the committee should be further diversified with a view to the future in light of the external environment and business conditions.

- The Nomination Committee should be given an appropriate scope for discussion.
  
  In view of these comments, the Nomination Committee confirmed that it will properly examine improvement measures.

Compensation Committee

There were comments that the appropriateness of remuneration policies should be continually reviewed while building a shared awareness of the basic policy toward how remuneration is determined.

In view of these comments, the Compensation Committee confirmed that it will properly examine improvement measures.

Audit Committee

The following two issues were raised.

- There should be appropriate opportunities for the Audit Committee, independent auditors, and the Internal Auditing Office to exchange views.

- There should be more opportunities for the Audit Committee to exchange views with executive officers, etc.

  In view of these comments, the Audit Committee confirmed that it will properly examine improvement measures.

Directors and Executive Officers

Remuneration and Factors for Determining Remuneration

The remuneration for directors, executive officers, and statutory auditors is determined by the Compensation Committee, which is composed of a majority of independent outside directors.

Remuneration is comprised of (1) basic remuneration, (2) bonus, and (3) JPX stock.

For executive officers,

1. **Basic remuneration** is consideration for daily business execution and participation in management commensurate with each position and its duties.

2. **Bonuses** consist of short-term incentives, which are calculated using consolidated net income as the indicator, and medium-term incentives, which are linked to progress toward the achievement of business plan objectives and management and financial targets.

3. **Remuneration in the form of JPX stock** is incentive for improving corporate value in the medium to long term.

Directors (excluding directors who also serve as executive officers), in view of the roles they perform and their independence, receive only basic remuneration. They do not receive bonus or remuneration in the form of JPX stock.

Compensation Paid to Directors and Executive Officers

<table>
<thead>
<tr>
<th>Directors/Executive Officers</th>
<th>No. of Recipients</th>
<th>Amount Paid (JPY mil.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Directors (of which outside directors)</td>
<td>12 (11)</td>
<td>140 (112)</td>
</tr>
<tr>
<td>Executive officers</td>
<td>8</td>
<td>422</td>
</tr>
</tbody>
</table>

WEB

Corporate Governance

Risk Management

To fulfill its public role and continue increasing its corporate value, JPX designs and conducts its risk management with a recognition of the need to maintain a system to provide sound and stable business operations.

Risk Management Systems

JPX faces numerous risks in the course of its operations, including risks associated with system glitches, legal matters, compensation in the event of defaults by clearing participants, administrative errors, and other operations. JPX has established a Risk Policy Committee, chaired by an outside director, and Risk Management Committee, chaired by the CEO, to address risk. In line with JPX Risk Management Policy, these committees are responsible for identifying risks as well as developing and implementing measures to prevent such risks before they occur. JPX also has a system in place to ensure swift and appropriate response when risks do or are likely to materialize.

The Risk Policy Committee consists of at least five members, the majority of whom are outside directors. In principle, the committee is chaired by an outside director.

The Risk Management Committee is composed of core members and project members who oversee the risks of specific projects.

The CEO (who serves as chairman), the Executive Officer overseeing the General Administration Department, and the department director make up the core members, while the chairman of the committee assigns project members to specific cases as they arise.

The Risk Management Policy serves to prevent risks before they occur by indicating and classifying the risks JPX faces. Departments or sections are assigned to handle the classified risks, and information on the assessments of operations and issues to be addressed are periodically brought before the Risk Policy Committee and Risk Management Committee.

Each fiscal year, the Risk Policy Committee identifies the significant risks requiring priority action in JPX Group. The results of this process are submitted to the Board of Directors as recommendations in the form of a Comprehensive Risk Management Statement. JPX Group works to reduce the possibility of realization of the risks based on the Comprehensive Risk Management Statement and responds flexibly to risks that materialize. When a major issue occurs, the Risk Management Committee gains an overall grasp of the situation and orchestrates a concerted response by giving directions for dealing with the issues as quickly as possible. The system calls for all necessary information to be reported to management promptly and without fail.
Corporate Governance

Risk Classification

<table>
<thead>
<tr>
<th>Types of Risks</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business environment and business strategy risk</td>
<td>Economic fluctuations, legal matters, demographic changes, technological progress, investor trends, public opinion and errors in choice of businesses</td>
</tr>
<tr>
<td>Accidents and disaster risk</td>
<td>Major earthquakes, typhoons, tsunami, epidemics, terrorism, failure/stoppage of social infrastructure, fires and accidents</td>
</tr>
<tr>
<td>System risk</td>
<td>Inadequate hardware capacity and application errors</td>
</tr>
<tr>
<td>Legal risk</td>
<td>Violations of laws in the course of business, business partner’s failure to perform on contracts, and risks related to anti-social forces</td>
</tr>
<tr>
<td>Financial risk</td>
<td>Jeopardized reliability of financial reporting, lack of funds and loss or damage to assets, including deposits</td>
</tr>
<tr>
<td>Human risk</td>
<td>Personnel shortage, industrial accidents, and risks related to employee health</td>
</tr>
<tr>
<td>Information security risk</td>
<td>Information leakage, improper access, computer viruses</td>
</tr>
<tr>
<td>Operational risk</td>
<td>Mistakes/misjudgments in operational procedures</td>
</tr>
<tr>
<td>Risk of associated companies</td>
<td>Emergence of risk in Group companies</td>
</tr>
<tr>
<td>Reputational risk</td>
<td>Decline in public reputation due to acts and statements by employees and/or third parties</td>
</tr>
<tr>
<td>Credit risk and liquidity risk arising from obligation assumption business</td>
<td>Emergence of losses due to default, etc. by clearing participants</td>
</tr>
<tr>
<td>Other risks</td>
<td>Risks other than those mentioned above</td>
</tr>
</tbody>
</table>

Significant Risks

Each fiscal year, we identify significant risks* that could affect JPX Group. We control the possibility of the realization of the risks by implementing the necessary preventive measures. We also implement measures to ensure that we are able to respond flexibly in the event that risks materialize.

Note:
JPX Group approaches risk management on two levels.
First, all group companies work to identify risks in the internal environment.
Second, there is wide-ranging discussion involving the management team about potential risk factors in the external environment, including geopolitical risk. Based on the results of these discussions, we then examine significant risks.
Many risks are detected at the discussion stage. We examine these in detail to identify the risks that require the greatest attention in each fiscal year, on the basis of the potential impact on JPX Group if the risk is realized, and the frequency with which such risks are likely to arise. We then take preventive measures targeting specific significant risks.

Significant Risks

Systems Capacity Management

In recent years, with faster systems and the growing prevalence of co-location services, there has been an increase in the number of orders processed by JPX trading systems every day. In view of these changes, JPX is monitoring market trends and system usage and working to manage the system capacity of JPX Group as a whole by utilizing projections to prepare for and prevent any system capacity issues that may arise.

Capacity management is not conducted by IT-related departments alone, but also by the Capacity Management Committee with the CIO as chairperson. The cross-divisional committee is made up of executive officers and departments involved in market operations. Geared toward realizing even better systems, the committee monitors, analyzes, and assesses system operation conditions, works on improvements for current systems, and provides feedback on the design and development of next-generation systems. The committee employs the PDCA management cycle in its activities, while reporting to management periodically and on an as-needed basis to make swift and appropriate decisions on priority or emergency issues related to system capacity.

Business Continuity in Emergencies

JPX's core responsibility as a market operator within the social infrastructure is to provide reliable markets for market users to trade with confidence. Therefore, even when major risks do materialize, such as in the form of natural disasters or terrorist acts, JPX must be prepared to answer the call of society and continue operations. To be ready for such situations, JPX establishes its Business Continuity Plan (BCP) to define our response to materialized risks.

The basic concept of the BCP is to continue operations as far as possible even in times of emergency. If suspension is unavoidable, then the affected operations should be resumed.
as soon as possible. For instance, even if a serious incident, such as a major earthquake, occurs and operations are suspended, in principle, JPX aims to resume clearing operations in about two hours and trading operations within 24 hours to prevent the loss of a trading day to the greatest extent possible.

To achieve said targets, in addition to its primary data center where operations normally take place, JPX also maintains a secondary (backup) center, which is located in a different area to avoid having both centers be simultaneously affected. If the primary center is affected by a disaster and cannot continue operations, operations are switched over to trading and other core systems in the backup center to allow trading to resume as quickly as possible.

Furthermore, in preparation for a large-scale earthquake and other wide-area disasters, the core telecommunications network, arrownet, is designed as an optical ring network that surrounds the Tokyo metropolitan area.

Even if a part of the network is severed by a disaster, transmissions will be re-routed immediately, ensuring that connections are maintained.

The BCP also defines the response policy for each type of identified risk, as well as detailed plans for establishing the BCP emergency headquarters and securing personnel and communication methods. JPX reviews its BCP at least once a year and revises it accordingly in light of changes in the environment.

Crisis Management

Procedures for Restoring Business Activities after Disaster Occurs

System for Responding when BCP is Implemented

Contingency Plan

Alongside the need for exchanges to provide opportunities for trading, in order to maintain fair price formation in the market, it is also necessary for securities companies and other market participants who place orders to the exchange market to maintain a certain level of preparedness.

JPX formulates contingency plans for disseminating and publishing its basic response policies when it becomes difficult to continue trading, such as when there is a glitch in a JPX or external system, a natural disaster or terrorist act, or when parts of the social infrastructure cease to function. For example, when trading participants that account for 50% or more of securities trading can no longer participate in the market, we will decide whether to suspend trading after comprehensively considering the impact on liquidity, and fair and reliable price formation.
Stable and appropriate business activities require not only well-designed business operating systems, but also for all members of management and employees to have a strong sense of ethics and observe laws and rules as a matter of course. For this reason, JPX has introduced a program to heighten awareness of compliance issues.

**Internal Control Systems**

JPX has established the Basic Policy on Establishment of Internal Control System and developed its internal control systems based on this policy. To ensure the proper operation of business processes throughout the corporation, JPX has created systems for ensuring compliance with laws and regulations, safeguarding and managing information, managing loss risk, ensuring efficient operations, and for internal control of JPX Group. To ensure that these systems are functioning properly, the Internal Auditing Office, an independent unit that reports directly to the CEO, periodically confirms and assesses the status of internal controls.

**Role of Compliance Hotline**

JPX has a Compliance Hotline in place to provide a channel for reporting information and making inquiries regarding clear or suspected violations of laws and internal rules, including against the Charter of Corporate Behavior. When certain behavior involving JPX officers or employees is suspected to be in violation of compliance, the hotline makes it possible to detect such acts promptly from an incoming call and introduce measures and frameworks to address them.

**Activities for Continued Awareness**

JPX engages in a number of activities to ensure continued awareness of compliance issues. These include holding meetings of staff in charge of compliance matters from all organizational units, distributing compliance handbooks, communicating information on compliance matters through the intranet, and holding e-learning courses.

**Compliance Program**

JPX has a Charter of Corporate Behavior in place as a set of standards for ethics and morals, which clearly states the expected corporate behavior. In order to realize effective internal control functions, JPX continues to increase awareness of compliance among management and employees through further development of internal systems, as well as through educational and training activities.

**Role of Charter of Corporate Behavior**

The Charter of Corporate Behavior serves to maintain harmony with society and make clear the social responsibilities that an open and transparent corporation should fulfill.

The Charter states the basic policies for corporate behavior from the perspectives of ethics and morals. It also clearly indicates JPX’s stance of placing importance on investors and reflects JPX’s commitment to being an open company.

**Development of Internal Structure**

Under the JPX organizational structure, the CEO assumes responsibility for compliance and oversees all compliance-related matters. The CEO is assisted by the executive officer responsible for compliance and the Compliance Secretariat, which takes charge of operating the Compliance Hotline and the execution of other administrative matters.
JPX is working to build reciprocal understanding and trust through continual dialogue with all stakeholders. We see this approach as essential to the development of sound, sustainable markets.
Engagement with Stakeholders

In addition to continuing to exert its principal roles of developing market infrastructure and operating markets, JPX believes it is important to maintain ongoing dialogue with a wide range of stakeholders to deepen mutual understanding. These include, but are not limited to shareholders, listed companies, trading participants (securities companies), and other related organizations. Such dialogue enables us to understand the expectations and needs of stakeholders. JPX is committed to using this information in operating markets and achieving symbiosis with society and to securing sustained growth in corporate value.

Dialogue with Stakeholders Leads to Mutual Understanding

- Opportunities for ongoing dialogue, publishing information related to the market
- Expectations of and need for market operation

Investors - Shareholders - Listed Companies

Information Vendors - Trading Participants

Government and Securities Related Groups - Employees

International Organizations - Society and the Natural Environment

Academic and Research Organizations - JPX
Engagement with Society

The corporate philosophy of JPX is to contribute to realizing an affluent society through healthy and sustainable market development. To realize this corporate philosophy, JPX works to vitalize financial and capital markets, promotes financial education, collaborates with related organizations, implements research activities, and makes the results available to the public.

Promotion of Financial Education

Japan is facing problems arising from a shrinking workforce and limitations on its social security system. Therefore, the major task at hand for Japan is figuring out how to use its assets as efficiently as possible to generate economic growth for the next generation. JPX believes it can help to address these issues by raising the financial literacy of each and every member of our society and by pushing for a shift from savings to investments. To this end, JPX implements various initiatives.

In Japan, households have ample monetary assets, totaling more than JPY 1.8 quadrillion; however, these assets are still not fully utilized. Examination of the composition of Japanese household assets shows that cash and deposits account for a substantial 52.0% of the total, while stocks and other investments account for only 14.6%.

If even a portion of the aforementioned household cash and deposits that account for over half of household assets were to be invested in publicly traded companies, this could potentially increase production capacity and lead to new products and services. If businesses expanded, this would bring additional employment and lead to increased wages. We thus need to create a virtuous cycle in the Japanese economy by promoting the shift from savings to investments.

On the other hand, if we rely only on existing systems and approaches, as the times undergo major changes, such as the social security system being reviewed with low birthrates and the aging of the population, there will be no guarantees that there might be sufficient financial resources for the elderly to live affluent lives after retirement. Each and every one of us must build our assets in a manner suited to our life cycles.

For this reason, JPX offers programs, including Japan Economic Support Project (+YOU) and JPX Academy, to provide opportunities for and motivate beginners with zero or limited experience to think about investments. JPX also offers various educational programs that aim to increase financial and economic literacy by providing practical information on investment products and investment methods. JPX contributes to the development of the Japanese economy through these activities by providing more people with the information necessary to participate in the market, thereby accelerating the shift from savings to investments.

Initiatives to Encourage Participation in the Market

- Opportunities to think about investment
- Knowledge of investment
- Promoting the shift from “savings to investment”

Highlighting the significance of investment and offering information to increase knowledge of investment
- +YOU Project
- JPX Academy, etc.
Support for All Generations

<table>
<thead>
<tr>
<th>Level</th>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elementary</td>
<td>2,000</td>
</tr>
<tr>
<td>Junior high</td>
<td>5,800</td>
</tr>
<tr>
<td>High school</td>
<td>8,700</td>
</tr>
<tr>
<td>University</td>
<td>10,000</td>
</tr>
<tr>
<td>Adults</td>
<td>14,000</td>
</tr>
</tbody>
</table>

Notes: 1. Figures for elementary and junior high are the sum of participants in the Outreach to Schools and Economics Lectures for Parents and Children programs.
2. Figures for adults are the sum of participants in events, such as JPX Academy and +YOU Project.

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**JPX Academy**

“Finance and economics” and “asset building” are relevant to everyone, and there is a growing need to provide and increase opportunities for people of any generation to learn about them.

At JPX Academy, besides covering equities and derivatives in our explanations on financial products, such as stocks and exchange traded funds (ETFs), we offer information from a neutral point of view on macroeconomic trends, the latest economic theories, and other subjects relevant to asset building and management. In FY2016, a cumulative total of 8,500 persons participated in JPX Academy programs.

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**Outreach to Schools (Elementary to High Schools)**

Although our daily lives are closely related to the economy and stock companies, there are very few opportunities to learn about these topics in school. To remedy this situation, JPX sends staff to speak during politics and economics or civics classes at schools. They give lectures on how stock companies work and mix some role-play and skits to let students become familiarized with finance and economics. During FY2016, JPX held over 120 lectures, reaching out to nearly 4,300 students. These lectures are also given at TSE and OSE along with tours of the facilities to let students experience the dynamism of economics on-site. In FY2016, Tokyo alone welcomed a cumulative total of 8,800 students for 410 lectures.

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**Economics Lectures for Parents and Children (Elementary and Junior High School Students)**

JPX holds many events, mostly during summer vacation, for elementary and junior high school students and their families to become familiarized with finance and economics. In FY2016, a cumulative total of 2,300 persons participated in these events. OSE held a program called “Learning with Children - Finance and Stocks Summer School”, for fourth grade to sixth grade students in collaboration with Osaka prefectural government’s finance and public relations committee, Japan Securities Dealers Association, and other organizations. The students heard explanations from on-site staff as they visited key facilities in the Osaka financial and economic community.

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**Lectures for University Students**

JPX offers lectures at universities nationwide to substantially deepen the understanding of finance, economics, and securities markets among college students who will soon be deeply involved in the Japanese economy. Students also have the opportunity to visit TSE and OSE to gain firsthand experience and attend lectures.

In FY2016, more than 200 lectures were held as part of this program, attracting nearly 8,000 attendees.

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**Sponsored Courses**

To help nurture the next generation of leaders, JPX holds sponsored courses at Keio University and Sophia University. The lectures mainly focus on listing and disclosure systems, presenting case studies while discussing issues (i.e., the expected role of listed companies and the latest developments in laws, economics, management, and accounting) related to the securities market.
Seminars for Teachers

JPX offers lectures on economics to teachers. Held mainly during summer vacation, this program equips junior high and high school teachers with knowledge for classroom teaching of subjects such as social sciences and civics. JPX also sends staff to speak at training and study sessions for teachers.

Visits to JPX Facilities

To give everyone a better firsthand understanding of securities exchanges, JPX opens its facilities to a various group and individuals from elementary school children to university students and the general public.

In FY2016, over 68,000 persons in total visited TSE Arrows at TSE and OSE Gallery at OSE.

Joint Projects with Securities Industry Groups

JPX collaborates with securities industry groups and organizations to offer programs to disseminate information and forge a deeper understanding of securities.

In particular, JPX offers simulated stock investment programs for students from junior high to university to help them learn about the relationship between stock price fluctuations and economic phenomena. Nearly 9,000 students participated in these programs.

JPX Entrepreneur Experience Program

The JPX Entrepreneur Experience Program is aimed at giving students the experience of running and managing a simulated start-up stock company that operates a bazaar stall. This entrepreneur education program involves events for participants to learn and gain the ability to think on their own initiative and, thereby, contribute to their zest for life.

The JPX Entrepreneur Experience Program Committee collaborates with schools and regional communities as part of JPX’s activities to support financial literacy; and, in FY2016, the program reached 15 locations across Japan and drew about 430 participants.

This initiative received an honorable mention award from the judges of the FY2015 and FY2016 edition of an award that recognizes companies that offer hands-on experience activities for young people and is sponsored by the Ministry of Education, Culture, Sports, Science and Technology. JPX has been recognized for two consecutive years as a corporation that offers outstanding experience activities for young people as part of its contribution to society.
In December 2016, we established TSE money-bu-jpx.com, a website to provide retail investors with information about asset building. The purpose of this initiative was to help as many people as possible to engage in asset building by informing them about the importance of asset building through long-term, diversified investment. The site presents stories about the role of money in familiar situations, using language that is accessible even for novice investors. Screenshots from the website are provided below (currently available only in Japanese).
TSE has been involved in the "+YOU Japanese Economy Support Project" since FY2012 under the slogan of "imparting new energy upon Japan through the securities markets". The objective of this project is to inform as many people as possible of the true meaning and dynamics of securities investments.

Japan Support Nationwide Caravans

This is a series of seminars to communicate the meaning, significance, and appeal of stock investment to new and potential investors in an easily understandable way. We invite speakers who are experts in investment to hold seminars for participants, including those who have no interest in economics or investment, by providing easy-to-grasp explanations on the attractiveness of investment. In FY2016, we held 31 seminars with participation surpassing that of last year for a cumulative total of 4,267 participants. The follow-up survey revealed that 92.6% of the participants were "very satisfied" or "satisfied", and 92.7% responded that they "had a more positive attitude toward investment" or "had a relatively more positive attitude than before".

<table>
<thead>
<tr>
<th>Region</th>
<th>No. of Seminars</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tohoku/Hokkaido</td>
<td>41 (4)</td>
<td></td>
</tr>
<tr>
<td>Chubu</td>
<td>22 (3)</td>
<td></td>
</tr>
<tr>
<td>Kanto/Koshinetsu</td>
<td>84 (15)</td>
<td></td>
</tr>
<tr>
<td>Kinki/Chugoku/Shikoku</td>
<td>67 (7)</td>
<td></td>
</tr>
<tr>
<td>Kyushu/Okinawa</td>
<td>22 (2)</td>
<td></td>
</tr>
</tbody>
</table>
| Total                   | 236 (31)        | total since FY2012
|                         |                 | total for FY2016

Each and Every One of Us Has a Role in the Japanese Economy

TSE President and CEO Koichiro Miyahara speaks to participants.
Engagement with Stakeholders

Promoting International Cooperation

Contribution to International Organizations

World Federation of Exchanges (WFE)
WFE is a global industry association of exchanges and clearing organizations with more than 60 members across the world. It is engaged in making policy recommendations, conducting surveys and research, and providing statistical data on capital markets. WFE also supports the development of market infrastructure through facilitating information sharing among member exchanges and providing technical support for emerging exchanges. Recent WFE activities include sharing information on the role of exchanges in promoting ESG (environmental, social, and governance), cybersecurity and fintech initiatives, and conducting research on various market systems such as measures to encourage small- and medium-sized enterprises to list.

JPX actively supports WFE initiatives by participating in the General Assembly, Board of Directors, and Working Committee.

Especially noteworthy was JPX’s leadership in establishing a study group on financial education and literacy in November 2015.

As the chair of this group, JPX engages in activities to facilitate coordination and collaboration among exchanges in the area of financial education.

Asian and Oceanian Stock Exchanges Federation (AOSEF)
AOSEF is a regional federation of 19 stock exchanges (as of July 2017) for the Asia-Oceania region. AOSEF aims to facilitate information sharing and provide mutual technical support among member exchanges. JPX serves as the secretariat for AOSEF, promoting research initiatives while also leading the General Assembly and Working Committee.

Recent activities include information sharing among member exchanges on initiatives to promote markets for start-up companies and the role of exchanges in improving market liquidity.

Trainees from Overseas Exchanges (commissioned by JICA)
In recent years, the subject of the establishment and development of stock exchanges in rapidly growing countries in Asia has become an important topic. Each year since 1995, commissioned by Japan International Cooperation Agency (JICA), JPX accepts trainees from exchanges and related organizations of various countries and tailors the content of the training programs to their needs as a way of contributing to the development of their stock markets.

JPX staff deliver lectures on topics related to core exchange business, ranging from listing examination, listed company compliance, trading rules, trading participant regulations, and clearing and settlement operations, as well as recent topics such as corporate governance. Recently, besides the multinational training program, we also added a Myanmar-only program that focuses on exchange establishment and administration. In 2015, we provided support for the establishment of Yangon Stock Exchange. In 2016, JPX continued to provide management support after the opening of the exchange, playing a part in JICA’s follow-up program in Yangon, and holding open seminars and supplementary lectures in the city.
Facilitating Studies and Research

JPX Working Papers
JPX conducts studies and research on changes in the environment surrounding the market and related legal systems with a view to enhancing its competitiveness. The results of such studies are compiled and published by JPX officers and employees with contributions from external researchers. Bringing together the academic approaches of external researchers and the knowledge and data that JPX Group obtains in the course of operating its markets, these papers are published to invite broad commentary from academia, research institutes, market users, and related parties.

JPX Study Group on the Financial Instruments and Exchange Act
In recent years, with developments such as the enforcement of the Financial Instruments and Exchange Act, the legal framework for finance and securities in Japan has undergone major changes. JPX supports expert research on finance and securities law by providing a platform for a study group on the Financial Instruments and Exchange Act with the aim of making research on this topic broadly available in Japan and overseas. Focusing on the Financial Instruments and Exchange Act, the 23-member study group of leading researchers holds discussions and publishes reports on a wide range of legal issues related to the securities market. Meetings are held monthly between the Tokyo and Osaka venues with minutes and reports posted on the JPX website. The reports are periodically compiled into publications that are distributed to researchers and related organizations.

Joint Research with The University of Tokyo
JPX collaborates with The University of Tokyo to conduct research on data analysis and simulation technologies to contribute to the stability and efficiency of financial instruments exchange markets.

JPX’s finance research team works with the research teams under Professor Kyoshi Izumi and Associate Professor Fujio Toriumi at the Department of Systems Innovation, School of Engineering of The University of Tokyo to bring together expertise to develop technology to analyze the huge amounts of data generated by high-speed, high-frequency trading, and other forms of trading. By using simulation technology to create situations that cannot be observed in the market, the teams also examine technology and rule design that could facilitate more stable and efficient operations of financial instruments exchange markets. The results of such joint research are published in the form of JPX Working Papers.

JPX Working Papers Published in FY2016

<table>
<thead>
<tr>
<th>Date</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>December 2016</td>
<td>Analysis of the Impact of Capital Adequacy Regulation on Multiple Asset Markets using Artificial Market Simulation</td>
</tr>
<tr>
<td>December 2016</td>
<td>Investigation of Frequent Batch Auctions using Agent Based Model</td>
</tr>
<tr>
<td>September 2016</td>
<td>Movements related to Listed Infrastructure Funds Markets in the U.S. - Studies of MLP, YieldCo, Solar REITs –</td>
</tr>
<tr>
<td>August 2016</td>
<td>Applicability of Distributed Ledger Technology to Capital Market Infrastructure</td>
</tr>
<tr>
<td>June 2016</td>
<td>Analysis of Differences in Trading Behavior in Day and Night Sessions for Nikkei 225 Futures</td>
</tr>
</tbody>
</table>

JPX Study Group on the Financial Instruments and Exchange Act
http://www.jpx.co.jp/english/corporate/csr-activities/research-activities/

Study Group report (published in Japanese)
Engagement with Shareholders and Investors

JPX focuses on activities for establishing relationships based on mutual understanding by promoting two-way communication with shareholders and investors. JPX actively provides the corporate information necessary for investment decisions and shares views obtained through dialogue with shareholders and investors, which senior management can utilize, thereby contributing to enhancing corporate value.

Engagement with Shareholders

JPX held its annual general shareholders meeting for FY2016 (April 1, 2016 to March 31, 2017) on June 16, 2017, with 2,038 shareholders in attendance. JPX has made a video clip of the meeting available (only in Japanese) via its website for shareholders who were not able to attend the meeting.

The notice of the shareholders meeting is sent out three weeks ahead of the meeting to provide shareholders with sufficient time to decide on how to exercise their voting rights. Also, four weeks prior to the meeting, the Japanese and English versions of the notice are made available on the JPX website.

The notice is also simultaneously made available to overseas shareholders via the Electronic Voting Platform for Institutional Investors. In addition, JPX is working to present the information in the notice in a more easily understandable form.

Shareholders may send in their decisions by post or via the Internet, as well as the Electronic Voting Platform to exercise their voting rights. For the annual general meeting held on June 16, 2017, 87.7% of voting rights were exercised.
Engagement with Institutional Investors and Analysts

**IR Meetings**
JPX senior management meets with investors to reach out to domestic and overseas institutional investors, as well as analysts. In FY2016, JPX went on four separate trips to meet investors across Europe, the United States, and Asia, and participated in IR conferences both in Japan and abroad.

Reports on the contents of these meetings are provided periodically to management and related departments at JPX Group companies, and then reflected in JPX management practices.

**Briefing Session on Consolidated Financial Results and Medium-Term Management Plan**
JPX carried out Earnings Presentations of the second quarter and throughout the year in FY2016, providing a venue for investors and the management, including JPX Group CEO, to exchange views. Videos and audio recordings of such meetings are made available in Japanese and English as early as the same day. In this way, JPX is committed to providing domestic and overseas investors with timely information.

**In-House Seminars by Analysts**
We invited analysts covering JPX Group to present at a special seminar. The purpose of the event is to provide direct feedback within the company about external assessments of JPX Group.

Engagement with Retail Investors

JPX held a total of 20 company information sessions for approximately 2,000 retail investors via major IR events, including TSE IR Festa, as well as other opportunities such as live web seminars. JPX also actively provides information to retail investors on the IR section of its official website, which contains descriptions about JPX, materials/videos from informational meetings, as well as other content.

**JJPX hosts an IR e-mail service featuring the latest IR information for retail investors, which users can register for on the website.**

WEB
For Retail Investors (in Japanese only)
http://www.jpx.co.jp/corporate/investor-relations/individual/index.html

WEB
IR E-mail Distribution Services (in Japanese only)
http://www.jpx.co.jp/corporate/investor-relations/ir-mail/index.html
Engagement with Market Users

Building collaborative relationships based on confidence and trust among market participants is essential for exchange operations. Accordingly, JPX provides a range of opportunities for dialogue with market users. These dialogues allow JPX to ensure the transparency of market operations and to operate markets in more convenient ways.

Engagement with Trading Participants

Market Operating Committee
TSE and OSE, the market operators of JPX, each has a Market Operating Committee as the advisory units to their respective Board of Directors, which are composed of members with academic credentials, securities companies, institutional investors, and others. With the aim of realizing more convenient operations in the market, opinions are gathered from outside experts when deciding on major issues, such as the listing of new products, establishment of new markets, and rule revisions.

Exchanging Opinions with Representatives at Securities Companies
JPX believes that close communication with securities companies is extremely important to enhance operations at the exchanges. To this end, JPX engages with such entities, as needed, through meetings to exchange opinions with representatives of trading participants, as well as meetings and get-togethers with representatives of securities companies, including those who are not current trading participants.

Public Comments

To ensure fairness and enhance transparency of its decision-making processes, JPX creates opportunities for reflecting a diversity of opinions when decisions are made. A concrete example of this is JPX’s publishing of draft proposals on its website prior to making decisions to collect comments and suggestions from a broad range of stakeholders (public comments). Opinions that have been submitted in the public comment process are considered when making final decisions. These opinions are then compiled and posted on the JPX website, along with JPX’s views on the issues involved.

WEB Public Comments
http://www.jpx.co.jp/english/rules-participants/public-comment/
Engagement with Stakeholders

Engagement with Listed Companies

To ensure transparency, major reviews of the listing rules, which may have a significant impact on investors, listed companies, securities companies, and other stakeholders, are implemented as necessary based on the contents of discussions held by the Advisory Group on Improvements to TSE Listing System. This advisory group is composed of members selected from among persons with experience in business, academia, and other fields, as well as representatives of listed companies, institutional investors, securities companies, and other organizations.

In addition, each year JPX visits and sends out surveys to listed companies and takes the responses into account when formulating improvements to its market operations.

Engagement with Investors

In April 2016, JPX established Financial Literacy Support Departments at both TSE and OSE to strengthen marketing directed at individuals and investor education to accelerate retail investor’s asset building.

With the aim of further expanding the cash equities and derivatives markets, JPX also created the Client Relations, Equities Department and Equities Business Development Department as a contact point for investors and others at TSE, as well as the Derivatives Business Development Department at OSE.

The establishment of specialist units that are sensitive to the apparent and potential needs of market users is an example of our total commitment to our "Customer First" policy as JPX aims to be a company capable of responding quickly and flexibly to feedback on needs and expectations.

Engagement in Action

Compliance Learning Center

JPX-R’s Compliance Learning Center (COMLEC) provides opportunities for dialogue on compliance with market users with the aim of improving and deepening understanding of compliance matters. COMLEC is working toward improvement of social awareness of compliance by providing support services for securities companies, listed companies, and other market users, as well as by explaining laws and regulations related to insider trading and other aspects of financial instruments trading.

The COMLEC Logo

The COMLEC logo embodies the ideas of 1) a new awareness of compliance germinating from a COMLEC that exudes fairness and 2) COMLEC opening the door to a new era in compliance.

Seminars

- Insider trading seminars for corporate compliance officers (46 seminars/year, total of approx. 2,400 attendees)
- Market Surveillance Seminar for Trading Participants (held in December, approx. 140 attendees)
- Seminar for inspection officers (held in April, approx. 170 attendees)

Dispatching expert speakers

- In-house training at listed companies and securities companies (533 sessions, total of approx. 26,000 participants)

Publications and e-learning services

- Publication and provision of documents on insider trading regulations and internal management at securities companies
- Provision of e-learning training program content
Engagement with Employees

Human resources are one of the prime assets for enabling JPX to continue to increase its corporate value. In order to bring the best out of each and every employee, JPX endeavors to create workplaces where employees find it easy to work.

Human Resources Development

JPX has created an environment where employees can actively master specialized knowledge, access the latest information, and pursue free and creative thinking from a broad perspective. The programs provided vary and encompass career development training to enhance employee knowledge and skills according to their length of service and job responsibilities; skills development training to acquire foreign languages and expertise; and professional development training to obtain an MBA or other advanced degrees at overseas universities; and more.

Promoting Diversity

In FY2014, JPX formed a Diversity Promotion Group within its Human Resources Department. The group implements various initiatives to cultivate the diversity of employees and draw on their capabilities to the fullest. For JPX, “promoting diversity” means for each and every employee to have mutual respect (receptivity and tolerance) for other employees with differing values and lifestyles (diversity), and thus individual employees can work energetically and create new value (innovation) that leads to organizational growth.

With this in mind, the Diversity Promotion Group has been working since 2014 to expand the support systems and programs for childcare, family care, and women’s advancement in the workplace; and, beginning in FY2016, JPX has also introduced work style reforms for all employees. By remaining committed to these initiatives, JPX is working to develop a strong organizational base for future development.

Improvements in Support Systems: Maternity/Childcare and Family Care

JPX is working to enrich systems and programs to support maternity, parenting, and caregiving. These improvements are aimed at nurturing employee’s desire to remain in the workplace by providing greater flexibility and a work environment that caters to the needs of diverse values and lifestyles. Even for employees whose time is limited by childcare and family care responsibilities, JPX is taking initiatives to create a work environment where employees find it easy to work and can perform to their full potential. In FY2016, JPX was authorized to use the "Kurumin" mark to indicate its status as an enterprise that helps employees in balancing work and childcare.

Main Systems and Initiatives for Employees Involved in Childcare and Family Care

- Childcare/family care leave systems that offer more than statutory models
- Option of shorter working hours for childcare or family care
- Unique paid leave system for childcare/family care
- Hourly leave system for caring for sick children
- Reimbursements for extended childcare services and for temporary use of childcare facilities for sick children
- Family care seminars for employees and their family members and handbook to support employees in balancing work and family care

Supporting Employees

http://www.jpx.co.jp/english/corporate/csr-activities/employee/
Engagement with Stakeholders

Career Advancement for Female Employees
To promote the empowerment of women in the workplace, in addition to the above initiatives, JPX encourages female staff to identify with empowerment efforts by providing career training programs for women and opportunities to network with female employees of other companies. Through these initiatives, JPX has set a target of 6% female employees in managerial positions by FY2018 (5.0% as of April 2017). JPX aims to increase the ratio of women in managerial or higher level positions as we pursue our policy of cultivating and securing highly capable human resources for director and executive roles.

Employment of the Handicapped
Under the principle of "Competency (Harnessing Employee Potential)" laid out in the JPX Creed, in addition to encouraging female employees and those of advanced age to actively participate in the workplace, JPX also offers employment opportunities for persons with disabilities according to the individual’s abilities and aptitudes.

Role of Harassment Hotline
JPX pays close attention to individual rights and safety in the workplace and stipulates "respect for human rights and prohibition of discrimination" in its Charter of Corporate Behavior, which prohibits unfair discrimination based on gender, rank, maternity, and other individual attributes or circumstances, thereby creating an environment where employees can be at ease and realize their full potential. We also have a helpline from which employees can consult directly with the Human Resources Department and a compliance hotline that accepts anonymous reports as part of these efforts. JPX will continue these efforts to provide workplaces in which people can work with confidence and motivation, and be free from sexually discriminatory behavior and harassment.

Mental Health
JPX has made telephone and in-person counseling available to help employees maintain their physical and mental well-being. Since April 2010, in addition to industry physicians, JPX has drawn on the expertise of mental health specialists as advisors.

Safety and Health Initiatives
JPX holds monthly meetings of its Health and Sanitation Committee based on Japan’s Industrial Safety and Health Act. The Committee is comprised of a health officer, an industry physician, and employees.

Initiatives to Improve Communication among Employees
JPX hosts tours of its Tokyo and Osaka offices for employees' families and holds in-company events as opportunities for deepening friendships and communication among and between employees and their families.

JPX REPORT 2017
Engagement with Stakeholders

Special Feature—The JPX Approach to Work Style Reform

Work Style Reform Initiatives

JPX is implementing work style reforms with the aim of promoting innovation and encouraging employees to work creatively. We believe that work style reforms must be implemented through cooperation between employer and employees. As an employer, we are focusing on the development of environments in which employees can work flexibly, and on the creation of non-work time. We expect our employees to change both their work styles and their perceptions about working hours and productivity. We also expect them to expand their non-work experience and provide feedback that can be used in their work.

Work Style Reform Targets

We are approaching work style reform as a group-wide initiative. We have set targets for overtime hours and the number of annual paid leave days taken, with the aim of creating more off hours and providing more opportunities for off-hour activities.

Concrete Work Style Reform Initiatives by JPX

(1) Creating environments for flexible work styles

JPX has adopted flexible hours and remote work systems available to all employees with the aim of reducing work-related time and location constraints. In this way, JPX hopes to encourage each employee to choose the work style that best suits his/her personal circumstances.

(2) Introducing diversified leave systems

JPX has instated systems for "Professional Development Leave" and "Leave to Accompany Spouse" in such cases as when an employee chooses to study abroad or his/her spouse is given an overseas assignment, allowing for flexible work styles that adapt to employees’ diverse life plans.

(3) Adopting reemployment program for former employees

JPX has created a mechanism for reemploying individuals who for such reasons as child-rearing decided to resign from JPX in the past. The program offers ambitious and talented former employees an opportunity to once again contribute to and excel at JPX.

(4) Increasing opportunities for employees to engage in learning activities

JPX supports employees who would like to engage in activities for personal development during the extra time available thanks to work style reforms. JPX is raising the amount of subsidies offered and expanding the number of eligible courses for skills development training.

(5) Reforming corporate culture

JPX is working on reforming the corporate culture and encouraging employees to reevaluate their work ethics and behavior by offering lectures on work style reforms, running e-learning courses, regularly providing information, calling out directly to employees, and engaging in many other activities to said end.

Membership in Iku-boss Enterprise Alliance

We believe that managers or bosses can play the greatest part in reforming employee work attitude, as well as in creating more flexibility in employee work styles and off hours.

JPX has previously demonstrated the need for changing managers’ mindset about work styles through seminars by experts on work reform. Joining the Iku-boss Enterprise Alliance1 as one of our reform initiatives, JPX hopes to nurture executives and managers as Iku-boss2, ideal bosses of the new generation.

Notes:

1. The Iku-boss Enterprise Alliance is a network of companies that recognize the necessity of Iku-boss, dedicated to improving such awareness among managers and to developing them as ideal bosses of the new generation, where the life of employees diversifies.
2. An Iku-boss is a boss (male/female manager or corporate executive) who allows staff to balance work and family commitments and to pursue career development while achieving business targets, as well as enjoying his/her own work and private life.

Related content: “All JPX group companies join the Iku-boss Enterprise Alliance” [only in Japanese] http://fathering.jp/ikuboss/5527/

JPX CEO Akira Kiyota strives to create environments and systems that encourage work style reforms.
Engagement with Stakeholders

The Environment and Regional Communities

JXP aims to contribute toward the realization of a sustainable society and actively implements initiatives to reduce its environmental footprint. JXP also takes steps to raise environmental awareness among its employees through activities such as tree planting and community cleanup programs. In addition, JXP actively participates in events to give back to local communities that provide it with invaluable support on a day-to-day basis.

Contributing to the Environment

Reducing Our Environmental Footprint
As part of its activities to reduce its environmental footprint, JXP is cutting down its power consumption for lighting, air conditioning, and other purposes.

For example, we updated equipment in the TSE Building, which is our main business site, after the establishment in 2008 of a voluntary power consumption reduction target for the securities industry in response to the ratification of the Kyoto Protocol. The target called for the reduction of power consumption to 12% below the FY2002 level by FY2012. We have also worked to raise the environmental awareness of our employees. In FY2016, we continued the previous year’s program of updating air conditioning equipment and installing LED lighting. We also took comprehensive steps to minimize power consumption, especially by increasing the spacing between light fittings in shared/public spaces. These efforts reduced greenhouse gas emissions in the TSE Building to 9% below the target level for Phase 2 of the Tokyo Metropolitan Government’s Environment Ordinance. In FY2015, emissions were 10% below the target. Overall power consumption across JXP Group, including its data centers, is also declining with upgrades to new, highly energy-efficient equipment despite enlarging the facilities and equipment necessary for enhancing backup systems. Going forward, JXP will work to strengthen environmental management systems in JXP Group as a whole and take initiatives to reduce its environmental footprint to contribute to the creation of a sustainable society.

Nature Preservation and TSE Listings Forest
In June 2004, an area of about five hectares in Yurihonjo City, Akita Prefecture, was set aside for preservation as the “TSE Listing Forest”. This was done with the hope that the exchange market will grow and prosper along with the growth of newly planted saplings. Alongside this initiative, JXP holds classes entitled “Our Livelihood and Stock Companies” in nearby elementary schools that cooperate in its forest preservation activities. In 2015 and 2016, JXP held the JXP Entrepreneur Experience Program in the prefecture’s Nishime High School, deepening JXP’s relationships with the local community.

Contributing to Regional Communities

Every year, JXP participates in “Chuo City Marugoto Museum” (literally, all of Chuo City is a museum) to make the city that is home to TSE a living museum. For the event, JXP awards original products bearing the company logo as prizes in lucky draws.

JXP’s other contributions to local communities include participating in cleanup programs in Tokyo’s Kabutocho district and along the Sakai-suji street in Osaka’s Kitahama district.
Engagement with Stakeholders

Corporate Data: Environment and Employees

Energy Consumption at TSE Building (electricity and gas)

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Total usage</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electricity (kwh)</td>
<td>8,127,304</td>
<td>8,338,920</td>
<td>8,132,632</td>
<td>7,921,216</td>
<td>6,435,466</td>
<td>6,079,696</td>
<td>6,272,280</td>
<td>6,413,800</td>
<td>6,135,360</td>
<td>5,899,040</td>
<td>5,935,384</td>
</tr>
<tr>
<td>City gas (m³)</td>
<td>318,860</td>
<td>359,636</td>
<td>349,994</td>
<td>343,707</td>
<td>362,622</td>
<td>319,200</td>
<td>341,276</td>
<td>304,248</td>
<td>300,295</td>
<td>306,467</td>
<td>322,579</td>
</tr>
<tr>
<td>Per capita</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electricity (kwh)</td>
<td>11,013</td>
<td>10,901</td>
<td>10,078</td>
<td>9,660</td>
<td>9,214</td>
<td>9,214</td>
<td>7,666</td>
<td>7,15</td>
<td>7,297</td>
<td>7,044</td>
<td>6,899</td>
</tr>
<tr>
<td>City gas (m³)</td>
<td>432</td>
<td>470</td>
<td>434</td>
<td>419</td>
<td>449</td>
<td>404</td>
<td>420</td>
<td>346</td>
<td>344</td>
<td>363</td>
<td>403</td>
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<tr>
<td>Total emissions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CO₂</td>
<td>3,873</td>
<td>4,048</td>
<td>3,943</td>
<td>3,848</td>
<td>3,631</td>
<td>3,020</td>
<td>3,143</td>
<td>3,114</td>
<td>3,001</td>
<td>3,542</td>
<td>3,595</td>
</tr>
<tr>
<td>CO₂ emission target (based on Tokyo Metropolitan Environmental Security Ordinance)</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>3,585</td>
<td>3,585</td>
<td>3,585</td>
<td>3,585</td>
<td>3,585</td>
<td>3,956</td>
<td>3,956</td>
</tr>
<tr>
<td>CO₂ emission result (based on Tokyo Metropolitan Environmental Security Ordinance)</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>+1%</td>
<td>-16%</td>
<td>-12%</td>
<td>-13%</td>
<td>-16%</td>
<td>-10%</td>
<td>-9%</td>
</tr>
<tr>
<td>Per capita</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CO₂</td>
<td>5.25</td>
<td>5.29</td>
<td>4.89</td>
<td>4.69</td>
<td>4.5</td>
<td>3.82</td>
<td>3.87</td>
<td>3.54</td>
<td>3.44</td>
<td>4.19</td>
<td>4.49</td>
</tr>
</tbody>
</table>

Note: The volume of greenhouse gas emissions is calculated according to the method specified in the Tokyo Carbon Reduction Reporting Program issued in the Tokyo Metropolitan Environmental Security Ordinance. Figures for FY2010 through FY2014 were emission targets for the first compliance period of the ordinance. Those for FY2015 through FY2016 were for the second compliance period.

Employees¹

<table>
<thead>
<tr>
<th></th>
<th>FY2013</th>
<th>FY2014</th>
<th>FY2015</th>
<th>FY2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of employees by gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All</td>
<td>1,029</td>
<td>1,001</td>
<td>975</td>
<td>1,085</td>
</tr>
<tr>
<td>Male</td>
<td>742 (72.1%)</td>
<td>728 (72.7%)</td>
<td>716 (73.4%)</td>
<td>792 (73.4%)</td>
</tr>
<tr>
<td>Female</td>
<td>287 (27.9%)</td>
<td>273 (27.3%)</td>
<td>259 (26.5%)</td>
<td>293 (26.5%)</td>
</tr>
<tr>
<td>Average years of service</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All</td>
<td>17.1</td>
<td>17.3</td>
<td>16.7</td>
<td>17</td>
</tr>
<tr>
<td>Male</td>
<td>15.6</td>
<td>15.9</td>
<td>15.5</td>
<td>15.9</td>
</tr>
<tr>
<td>Female</td>
<td>21.1</td>
<td>21.0</td>
<td>20.2</td>
<td>20.5</td>
</tr>
<tr>
<td>No. of employees in managerial positions</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>351</td>
<td>350</td>
<td>336</td>
<td>339</td>
</tr>
<tr>
<td>Female</td>
<td>11 (3.1%)</td>
<td>13 (3.7%)</td>
<td>15 (4.5%)</td>
<td>17 (5.0%)²</td>
</tr>
<tr>
<td>No. of new hires</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>17</td>
<td>12</td>
<td>20</td>
<td>25</td>
</tr>
<tr>
<td>Females/foreigners</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>6</td>
<td>3</td>
<td>10</td>
<td>7</td>
</tr>
<tr>
<td>Ratio of annual paid leave taken</td>
<td>46.6%</td>
<td>49.9%</td>
<td>53.7%</td>
<td>67.0%</td>
</tr>
<tr>
<td>No. of male employees taking time off for childcare (including childcare leave)</td>
<td>1</td>
<td>8</td>
<td>10</td>
<td>7</td>
</tr>
<tr>
<td>No. of female employees returning to work after maternity leave</td>
<td>100%</td>
<td>94.1%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Notes:
1. Definition of JPX Group employees
2. Figures as of April 1, 2017
## Financial/Corporate Data

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<thead>
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<th>Section</th>
<th>Page</th>
</tr>
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<td>Consolidated Statement of Financial Position (IFRS)</td>
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<td>Consolidated Statement of Income/</td>
<td></td>
</tr>
<tr>
<td>Consolidated Statement of Comprehensive Income (IFRS)</td>
<td>73</td>
</tr>
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<td>Consolidated Statement of Changes in Equity (IFRS)</td>
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<td>Consolidated Statement of Cash Flows (IFRS)</td>
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<td>Economic Data/Market Data</td>
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<td>History of JPX</td>
<td>80</td>
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<td>Corporate Information/Stock Information</td>
<td>82</td>
</tr>
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</table>
## Financial/Corporate Data

### Review of Operations and Financial Condition

#### Financial Highlights of FY2016 (IFRS)

<table>
<thead>
<tr>
<th></th>
<th>FY2014</th>
<th>FY2015</th>
<th>FY2016</th>
<th>Year-on-year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Revenue</td>
<td>106,167</td>
<td>114,776</td>
<td>107,885</td>
<td>(6.0%)</td>
</tr>
<tr>
<td>Operating Expenses</td>
<td>52,863</td>
<td>50,925</td>
<td>50,185</td>
<td>(1.5%)</td>
</tr>
<tr>
<td>Operating Income</td>
<td>53,529</td>
<td>66,271</td>
<td>59,377</td>
<td>(10.4%)</td>
</tr>
<tr>
<td>Net Income(^1)</td>
<td>34,427</td>
<td>44,877</td>
<td>42,124</td>
<td>(6.1%)</td>
</tr>
<tr>
<td>EBITDA</td>
<td>65,743</td>
<td>77,791</td>
<td>71,595</td>
<td></td>
</tr>
<tr>
<td>Dividends per Share(^2) (yen)</td>
<td>25.0</td>
<td>50.0</td>
<td>47.0</td>
<td></td>
</tr>
<tr>
<td>ROE</td>
<td>15.6%</td>
<td>18.2%</td>
<td>16.4%</td>
<td></td>
</tr>
</tbody>
</table>

Notes: 1. Net income attributable to owners of the parent company.
2. Figures take account of a 2-for-1 stock split conducted with an effective date of October 1, 2015.

#### Average Daily Trading Value/Volume of Main Products

<table>
<thead>
<tr>
<th></th>
<th>FY2014</th>
<th>FY2015</th>
<th>FY2016</th>
<th>Year-on-year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash Equities (trading value)(^3)</td>
<td>JPY 2,856.4 billion</td>
<td>JPY 3,412.6 billion</td>
<td>JPY 2,998.7 billion</td>
<td>(12.1%)</td>
</tr>
<tr>
<td>TOPPIX Futures (trading volume)</td>
<td>84,785 contracts</td>
<td>93,824 contracts</td>
<td>89,966 contracts</td>
<td>(4.1%)</td>
</tr>
<tr>
<td>Nikkei 225 Futures(^4) (trading volume)</td>
<td>186,565 contracts</td>
<td>230,435 contracts</td>
<td>184,250 contracts</td>
<td>(20.0%)</td>
</tr>
<tr>
<td>Nikkei 225 Options(^5) (trading value)</td>
<td>JPY 27.8 billion</td>
<td>JPY 30.7 billion</td>
<td>JPY 24.8 billion</td>
<td>(19.1%)</td>
</tr>
<tr>
<td>10-year JGB Futures (trading volume)</td>
<td>36,745 contracts</td>
<td>34,658 contracts</td>
<td>28,569 contracts</td>
<td>(17.6%)</td>
</tr>
</tbody>
</table>

Notes: 1. Average daily trading value of common stocks on TSE 1st/2nd Sections, Mothers, JASDAQ, TOKYO PRO Market, and ETFs/ETNs, REITs, etc., in auction and off-auction trading.
2. Includes trading volume of Nikkei 225 mini, which is calculated using a conversion factor of 1/10.
3. Excludes weekly options.

#### Average Daily Trading Value/Volume of Main Products (Including auction and off-auction trading)

![Graph](chart.png)

Notes: 1. Average daily trading value of common stocks on TSE 1st/2nd Sections, Mothers, JASDAQ, TOKYO PRO Market, and ETFs/ETNs, REITs, etc., in auction and off-auction trading.
2. Includes trading volume of Nikkei 225 mini, which is calculated using a conversion factor of 1/10.
Adoption of IFRS

JPX has adopted the International Financial Reporting Standards (IFRS) to facilitate comparisons of financial results of JPX with those of other exchanges located overseas and to increase investor convenience.

Summary of Performance

During the fiscal year ended March 31, 2017 (FY2016), the stock market in Japan was greatly affected by uncertainty in global politics and the economy, such as the results of the United Kingdom (UK) referendum on its membership in the European Union (EU), as well as that of the presidential election in the United States (US). Toward the beginning of FY2016, TOPIX dropped to as low as 1,192.80 points (down 154.40 points from the end of March 2016) amidst a growing global risk-off trend that ensued in the wake of results from the UK referendum in favor of Brexit in June 2016 coupled with continuous yen appreciation and downward revisions of financial forecasts by Japanese enterprises. Thereafter, Trump’s victory in the US presidential election in November 2016 marked a turning point as market sentiment improved on the back of expectations for a US-driven global economic upturn and of a favorable domestic employment environment. Consequently, by March 2017, TOPIX stood at 1,512.60 points (up 165.40 points from the end of March 2016).

Under such circumstances, JPX Group sought to realize a well-balanced business portfolio of cash equities market business, derivatives market business, and new business, with a medium- and long-term viewpoint. During FY2016, the first year of the 2nd Medium-Term Management Plan covering FY2016 – FY2018, JPX Group energetically tackled the core initiatives of satisfying diverse investor needs and encouraging mid- to long-term asset building; supporting listed companies in enhancing corporate value; fulfilling our social mission by reinforcing market infrastructure; and creating new horizons of exchange business.

The consolidated financial results of JPX Group during FY2016 included operating revenue of JPY 107,885 million (down 6.0% year on year), operating expenses of JPY 50,185 million (down 1.5% year on year), operating income of JPY 59,377 million (down 10.4% year on year), income before income tax of JPY 60,604 million (down 10.6% year on year), and net income attributable to owners of the parent company of JPY 42,124 million (down 6.1% year on year).

Consolidated Statement of Income

Operating Revenue

Operating revenue in FY2016 decreased by 6.0% to JPY 107,885 million from FY2015 when both cash equity trading value and derivatives trading volume marked record-high levels.
### Financial/Corporate Data

#### Operating Revenue

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td></td>
<td>Amount (JPY mil.)</td>
<td>Ratio (%)</td>
</tr>
<tr>
<td>Trading Services Revenue</td>
<td>52,471</td>
<td>45.7%</td>
</tr>
<tr>
<td>Transaction Fees</td>
<td>43,294</td>
<td></td>
</tr>
<tr>
<td>Cash Equities</td>
<td>30,783</td>
<td>71.1%¹</td>
</tr>
<tr>
<td>Derivatives</td>
<td>12,510</td>
<td>28.9%¹</td>
</tr>
<tr>
<td>TOPIX Futures</td>
<td>1,934</td>
<td></td>
</tr>
<tr>
<td>Nikkei 225 Futures (incl. Nikkei 225 mini)</td>
<td>5,136</td>
<td></td>
</tr>
<tr>
<td>Nikkei 225 Options</td>
<td>3,543</td>
<td></td>
</tr>
<tr>
<td>10-year JGB Futures</td>
<td>1,597</td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td>298</td>
<td></td>
</tr>
<tr>
<td>Basic Fees</td>
<td>1,061</td>
<td></td>
</tr>
<tr>
<td>Access Fees</td>
<td>5,165</td>
<td></td>
</tr>
<tr>
<td>Trading System Facilities Usage Fees</td>
<td>2,854</td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td>95</td>
<td></td>
</tr>
<tr>
<td>Clearing Services Revenue</td>
<td>23,140</td>
<td>20.2%</td>
</tr>
<tr>
<td>Listing Services Revenue</td>
<td>13,250</td>
<td>11.5%</td>
</tr>
<tr>
<td>Initial/Additional Listing Fees</td>
<td>5,330</td>
<td></td>
</tr>
<tr>
<td>Annual Listing Fees</td>
<td>7,919</td>
<td></td>
</tr>
<tr>
<td>Information Services Revenue</td>
<td>17,706</td>
<td>15.4%</td>
</tr>
<tr>
<td>Other Operating Revenue</td>
<td>8,208</td>
<td>7.2%</td>
</tr>
<tr>
<td>Total</td>
<td>114,776</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Note: 1. Figures indicate percentage of Transaction Fees.

#### Reference: Major Stock Indexes

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>As of Mar. 31, 2016</td>
<td>As of Mar. 31, 2017</td>
</tr>
<tr>
<td>TOPIX</td>
<td>1,196.28 points —1,691.29 points</td>
<td>1,347.20 points —1,577.40 points</td>
</tr>
<tr>
<td>Nikkei 225</td>
<td>JPY 14,952.61 —JPY 20,868.03</td>
<td>JPY 16,758.67 —JPY 19,633.75</td>
</tr>
<tr>
<td>JPX-Nikkei 400</td>
<td>10,780.40 points —15,251.93 points</td>
<td>12,161.79 points —14,117.98 points</td>
</tr>
</tbody>
</table>

Note: Figures indicate percentage of Transaction Fees.
Trading services revenue comprises Transaction Fees based on the value of securities traded or volume of derivatives traded, Basic Fees based on the types of the trading participants’ trading qualification, Access Fees based on the number of orders, and Trading System Facilities Usage Fees based on the types of trading system facilities used.

During FY2016, trading services revenue decreased by 12.9% year on year to JPY 45,703 million due to decreases in both trading value of cash equities and trading volume of derivatives.

Clearing services revenue comprises clearing fees related to the assumption of obligations of financial instrument transactions carried out by JSCC.

During FY2016, clearing services revenue declined by 7.3% year on year to JPY 21,454 million.

Listing services revenue comprises Initial/Additional Listing Fees that are received based on the issue amount when a company initially lists or when a listed company issues additional shares, and Annual Listing Fees received from listed companies based on their market capitalization.

During FY2016, listing services revenue decreased by 2.6% year on year to JPY 12,903 million, due to the decrease in initial/additional listing fees.
Information services revenue

Information services revenue comprises revenue related to the provision of market information to customers such as information vendors (market information fees), revenue related to the index business, and revenue related to the provision of corporate action information and other information.

During FY2016, information services revenue rose by 2.3% year on year to JPY 18,112 million, mainly due to increases in market information fees and in index business revenue.

Other operating revenue

Other operating revenue includes the following main items:

- Usage fees for arrownet, which connects trading, market information, and other systems to trading participants and other users;
- Usage fees related to co-location services that allow trading participants, information vendors, and other users to install devices in the system center for the purpose of improving trade execution efficiency by shortening the time required for processes such as order transmission;
- Revenue from system development and operations conducted by consolidated subsidiary TOSHO SYSTEM SERVICE CO., LTD.; and
- Service fees related to trading systems.

During FY2016, other operating revenue increased by 18.3% year on year to JPY 9,711 million, mainly due to increases in revenues from arrownet usage fees and co-location services usage fees.
Operating Expenses

During FY2016, operating expenses decreased by 1.5% from the previous fiscal year to JPY 50,185 million. Among these, personnel expenses declined by 5.0% to JPY 15,614 million. Rent expenses on real estate also decreased by 12.1% year on year to JPY 4,062 million as space efficiency improvements in the system center were accompanied by the integration of co-location services.

System maintenance and operation expenses include expenses related to maintenance and management/operation of various systems such as the cash equity and derivatives trading systems. During FY2016, system maintenance and operation expenses decreased by 9.3% from the previous fiscal year to JPY 10,813 million.

Depreciation and amortization also increased by 10.1% year on year to JPY 10,983 million, mainly due to the replacement of cash equity and derivatives trading systems in and after the second half of FY2015. Other operating expenses increased by 9.3% year on year to JPY 8,711 million.

### Operating Expenses

<table>
<thead>
<tr>
<th></th>
<th>FY2015</th>
<th>FY2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personnel Expenses</td>
<td>(823)</td>
<td></td>
</tr>
<tr>
<td>Rent Expenses on Real Estate</td>
<td>(557)</td>
<td></td>
</tr>
<tr>
<td>System Maintenance &amp; Operation Expenses</td>
<td>(1,109)</td>
<td>(1,010)</td>
</tr>
<tr>
<td>Depreciation &amp; Amortization</td>
<td>+1,010</td>
<td>+1,010</td>
</tr>
<tr>
<td>Other</td>
<td>+739</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>50,925</td>
<td>50,185</td>
</tr>
</tbody>
</table>

Note: A part of the operating expenses incurred in a consolidated subsidiary, TOSHO SYSTEM SERVICE CO., LTD., which had been included in “other operating expenses”, has been reclassified as “system maintenance and operation expenses” effective from FY2016 to correctly reflect the nature of those expenses. The figures for FY2015 hereby presented have also been reclassified in the same manner for the convenience of the comparison with those for FY2016.

### Basic Policy for Allocation of Profit

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 corporate group to pursue investment opportunities to raise the competitiveness of its markets as they arise.

In line with this policy, the dividends for the fiscal year ending March 31, 2018 are planned to be JPY 48 per share (JPY 24 per share at the end of the second quarter).
## Consolidated Statement of Financial Position (IFRS)

### Assets

<table>
<thead>
<tr>
<th>Description</th>
<th>As of March 31, 2016 (JPY mil.)</th>
<th>As of March 31, 2017 (JPY mil.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current assets</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash and cash equivalents</td>
<td>66,547</td>
<td>73,553</td>
</tr>
<tr>
<td>Trade and other receivables</td>
<td>10,096</td>
<td>9,774</td>
</tr>
<tr>
<td>Clearing business financial assets</td>
<td>26,395,558</td>
<td>37,555,555</td>
</tr>
<tr>
<td>Specified assets for deposits from clearing participants</td>
<td>2,809,433</td>
<td>3,374,863</td>
</tr>
<tr>
<td>Specified assets for legal guarantee funds</td>
<td>483</td>
<td>474</td>
</tr>
<tr>
<td>Income tax receivables</td>
<td>5,055</td>
<td>8,507</td>
</tr>
<tr>
<td>Other financial assets</td>
<td>65,600</td>
<td>73,800</td>
</tr>
<tr>
<td>Other current assets</td>
<td>1,163</td>
<td>1,626</td>
</tr>
<tr>
<td>Total current assets</td>
<td>29,353,939</td>
<td>41,098,156</td>
</tr>
<tr>
<td>Non-current assets</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Property and equipment</td>
<td>6,025</td>
<td>5,140</td>
</tr>
<tr>
<td>Goodwill</td>
<td>67,374</td>
<td>67,374</td>
</tr>
<tr>
<td>Intangible assets</td>
<td>31,033</td>
<td>30,596</td>
</tr>
<tr>
<td>Retirement benefit assets</td>
<td>3,626</td>
<td>5,202</td>
</tr>
<tr>
<td>Investments accounted for using the equity method</td>
<td>7,592</td>
<td>8,809</td>
</tr>
<tr>
<td>Specified assets for default compensation reserve funds</td>
<td>27,948</td>
<td>27,948</td>
</tr>
<tr>
<td>Other financial assets</td>
<td>38,639</td>
<td>36,275</td>
</tr>
<tr>
<td>Other non-current assets</td>
<td>5,854</td>
<td>5,793</td>
</tr>
<tr>
<td>Deferred tax assets</td>
<td>4,741</td>
<td>3,635</td>
</tr>
<tr>
<td>Total non-current assets</td>
<td>192,836</td>
<td>190,775</td>
</tr>
<tr>
<td>Total assets</td>
<td>29,546,776</td>
<td>41,288,932</td>
</tr>
</tbody>
</table>

### Liabilities and equity

<table>
<thead>
<tr>
<th>Description</th>
<th>As of March 31, 2016 (JPY mil.)</th>
<th>As of March 31, 2017 (JPY mil.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current liabilities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trade and other payables</td>
<td>4,413</td>
<td>3,190</td>
</tr>
<tr>
<td>Loans payable</td>
<td>22,500</td>
<td>22,500</td>
</tr>
<tr>
<td>Clearing business financial liabilities</td>
<td>26,395,558</td>
<td>37,555,555</td>
</tr>
<tr>
<td>Deposits from clearing participants</td>
<td>2,809,433</td>
<td>3,374,863</td>
</tr>
<tr>
<td>Legal guarantee funds</td>
<td>483</td>
<td>474</td>
</tr>
<tr>
<td>Trading participant security money</td>
<td>7,429</td>
<td>8,142</td>
</tr>
<tr>
<td>Income tax payables</td>
<td>10,714</td>
<td>9,210</td>
</tr>
<tr>
<td>Other current liabilities</td>
<td>6,403</td>
<td>5,339</td>
</tr>
<tr>
<td>Total current liabilities</td>
<td>29,256,937</td>
<td>40,979,276</td>
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<tr>
<td>Non-current liabilities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loans payable</td>
<td>10,000</td>
<td>29,933</td>
</tr>
<tr>
<td>Retirement benefit liabilities</td>
<td>7,352</td>
<td>7,357</td>
</tr>
<tr>
<td>Other non-current liabilities</td>
<td>3,924</td>
<td>3,693</td>
</tr>
<tr>
<td>Deferred tax liabilities</td>
<td>5,650</td>
<td>4,900</td>
</tr>
<tr>
<td>Total non-current liabilities</td>
<td>26,926</td>
<td>45,884</td>
</tr>
<tr>
<td>Total liabilities</td>
<td>29,283,864</td>
<td>41,025,161</td>
</tr>
<tr>
<td>Equity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Share capital</td>
<td>11,500</td>
<td>11,500</td>
</tr>
<tr>
<td>Capital surplus</td>
<td>59,726</td>
<td>59,722</td>
</tr>
<tr>
<td>Treasury shares (9)</td>
<td>(13,506)</td>
<td></td>
</tr>
<tr>
<td>Other components of equity</td>
<td>13,321</td>
<td>11,604</td>
</tr>
<tr>
<td>Retained earnings</td>
<td>172,656</td>
<td>188,634</td>
</tr>
<tr>
<td>Total equity attributable to owners of the parent company</td>
<td>257,194</td>
<td>257,955</td>
</tr>
<tr>
<td>Non-controlling interests</td>
<td>5,717</td>
<td>5,815</td>
</tr>
<tr>
<td>Total equity</td>
<td>262,912</td>
<td>263,770</td>
</tr>
<tr>
<td>Total liabilities and equity</td>
<td>29,546,776</td>
<td>41,288,932</td>
</tr>
</tbody>
</table>

**The clearing business financial assets/liabilities pertaining to derivative transactions, etc. as of the term end of Japan Securities Clearing Corporation (JSCC), the financial instruments clearing organization.**

**Collateral that JSCC requires clearing participants to deposit to cover any loss JSCC incurs in the event a clearing participant defaults.**

**Collateral that TSE and OSE requires trading participants to deposit to cover any loss incurred by an entrustor of securities trading, etc. in the event a trading participant defaults.**

**Collateral that TSE and OSE requires trading participants to deposit to cover any loss TSE and OSE incur in the event a trading participant defaults.**

**Reserve funds to cover losses resulting from the clearing business.**

**This figure includes the amount of reserve funds in the above 5.**
## Consolidated Statement of Income

<table>
<thead>
<tr>
<th></th>
<th>Fiscal year ended March 31, 2016 (JPY mil.)</th>
<th>Fiscal year ended March 31, 2017 (JPY mil.)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Revenue</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating revenue</td>
<td>114,776</td>
<td>107,885</td>
</tr>
<tr>
<td>Other revenue</td>
<td>2,137</td>
<td>161</td>
</tr>
<tr>
<td><strong>Total revenue</strong></td>
<td>116,914</td>
<td>108,047</td>
</tr>
<tr>
<td><strong>Expenses</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating expenses</td>
<td>50,925</td>
<td>50,185</td>
</tr>
<tr>
<td>Other expenses</td>
<td>466</td>
<td>9</td>
</tr>
<tr>
<td><strong>Total expenses</strong></td>
<td>51,392</td>
<td>50,195</td>
</tr>
<tr>
<td>Share of income of investments accounted for using the equity method</td>
<td>749</td>
<td>1,525</td>
</tr>
<tr>
<td>Operating income</td>
<td>66,271</td>
<td>59,377</td>
</tr>
<tr>
<td>Financial income</td>
<td>1,540</td>
<td>1,235</td>
</tr>
<tr>
<td>Financial expenses</td>
<td>36</td>
<td>8</td>
</tr>
<tr>
<td>Income before income tax</td>
<td>67,774</td>
<td>60,604</td>
</tr>
<tr>
<td>Income tax expense</td>
<td>22,599</td>
<td>18,240</td>
</tr>
<tr>
<td>Net income</td>
<td>45,175</td>
<td>42,363</td>
</tr>
</tbody>
</table>

### Net income attributable to

<table>
<thead>
<tr>
<th></th>
<th>Fiscal year ended March 31, 2016 (JPY mil.)</th>
<th>Fiscal year ended March 31, 2017 (JPY mil.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Owners of the parent company</td>
<td>44,877</td>
<td>42,124</td>
</tr>
<tr>
<td>Non-controlling interests</td>
<td>297</td>
<td>238</td>
</tr>
<tr>
<td><strong>Net income</strong></td>
<td>45,175</td>
<td>42,363</td>
</tr>
</tbody>
</table>

### Earnings per share

<table>
<thead>
<tr>
<th></th>
<th>Basic (Yen)</th>
<th>Diluted (Yen)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Basic (Yen)</strong></td>
<td>81.74</td>
<td>—</td>
</tr>
<tr>
<td><strong>Diluted (Yen)</strong></td>
<td>—</td>
<td>—</td>
</tr>
</tbody>
</table>

## Consolidated Statement of Comprehensive Income

<table>
<thead>
<tr>
<th></th>
<th>Fiscal year ended March 31, 2016 (JPY mil.)</th>
<th>Fiscal year ended March 31, 2017 (JPY mil.)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Net income</strong></td>
<td>45,175</td>
<td>42,363</td>
</tr>
<tr>
<td><strong>Other comprehensive income</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Items that will not be reclassified to profit or loss</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net gain (loss) on revaluation of financial assets measured at fair value through other comprehensive income</td>
<td>(1,491)</td>
<td>(1,717)</td>
</tr>
<tr>
<td>Remeasurements of defined benefit plan</td>
<td>1,484</td>
<td>1,268</td>
</tr>
<tr>
<td>Share of other comprehensive income of investments accounted for using the equity method</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Other comprehensive income, net of tax</strong></td>
<td>(2,975)</td>
<td>(448)</td>
</tr>
<tr>
<td><strong>Comprehensive income</strong></td>
<td>42,199</td>
<td>41,914</td>
</tr>
</tbody>
</table>

### Comprehensive income attributable to

<table>
<thead>
<tr>
<th></th>
<th>Fiscal year ended March 31, 2016 (JPY mil.)</th>
<th>Fiscal year ended March 31, 2017 (JPY mil.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Owners of the parent company</td>
<td>41,902</td>
<td>41,676</td>
</tr>
<tr>
<td>Non-controlling interests</td>
<td>297</td>
<td>238</td>
</tr>
<tr>
<td><strong>Comprehensive income</strong></td>
<td>42,199</td>
<td>41,914</td>
</tr>
</tbody>
</table>
## Consolidated Statement of Changes in Equity (IFRS)

<table>
<thead>
<tr>
<th></th>
<th>Share capital</th>
<th>Capital surplus</th>
<th>Treasury shares</th>
<th>Equity attributable to owners of the parent company</th>
<th>Other components of equity</th>
<th>Retained earnings</th>
<th>Total</th>
<th>Non-controlling interests</th>
<th>Total equity</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Balance as of April 1, 2015</strong></td>
<td>11,500</td>
<td>59,726</td>
<td>(5)</td>
<td>14,828</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Net income</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>—</td>
<td>—</td>
<td>—</td>
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</tr>
<tr>
<td>Other comprehensive income, net of tax</td>
<td></td>
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<td></td>
<td></td>
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<td>—</td>
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<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Total comprehensive income</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Acquisitions of treasury shares</td>
<td></td>
<td></td>
<td>(3)</td>
<td></td>
<td></td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Dividends paid</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>—</td>
<td>—</td>
<td>—</td>
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</tr>
<tr>
<td>Changes of interests in subsidiaries without losing control</td>
<td></td>
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<td></td>
<td></td>
<td>—</td>
<td>—</td>
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</tr>
<tr>
<td>Transfer from other components of equity to retained earnings</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Total transactions with the owners</td>
<td></td>
<td></td>
<td>(3)</td>
<td></td>
<td></td>
<td>(15)</td>
<td>1,484</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td><strong>Balance as of March 31, 2016</strong></td>
<td>11,500</td>
<td>59,726</td>
<td>(9)</td>
<td>13,321</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Net income</td>
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</tr>
<tr>
<td>Other comprehensive income, net of tax</td>
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</tr>
<tr>
<td>Total comprehensive income</td>
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<td>—</td>
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<td>—</td>
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</tr>
<tr>
<td>Acquisitions of treasury shares</td>
<td></td>
<td></td>
<td>(3)</td>
<td></td>
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</tr>
<tr>
<td>Dividends paid</td>
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<tr>
<td>Changes of interests in subsidiaries without losing control</td>
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<tr>
<td>Transfer from other components of equity to retained earnings</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td>—</td>
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</tr>
<tr>
<td>Total transactions with the owners</td>
<td></td>
<td></td>
<td>(3)</td>
<td></td>
<td></td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td><strong>Balance as of March 31, 2017</strong></td>
<td>11,500</td>
<td>59,722</td>
<td>(13,506)</td>
<td>11,604</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Net income</td>
<td></td>
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<td></td>
<td>—</td>
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<td>—</td>
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</tr>
<tr>
<td>Other comprehensive income, net of tax</td>
<td></td>
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<tr>
<td>Total comprehensive income</td>
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<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Acquisitions of treasury shares</td>
<td></td>
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<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Dividends paid</td>
<td></td>
<td></td>
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<td>—</td>
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<td>—</td>
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<tr>
<td>Changes of interests in subsidiaries without losing control</td>
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</tr>
<tr>
<td>Transfer from other components of equity to retained earnings</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Total transactions with the owners</td>
<td></td>
<td></td>
<td>(1,268)</td>
<td></td>
<td></td>
<td>(140)</td>
<td>(41,056)</td>
<td>(140)</td>
<td>263,770</td>
</tr>
</tbody>
</table>
## Consolidated Statement of Cash Flows (IFRS)

<table>
<thead>
<tr>
<th>Cash flows from operating activities</th>
<th>Fiscal year ended March 31, 2016</th>
<th>Fiscal year ended March 31, 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income before income tax</td>
<td>67,774</td>
<td>60,604</td>
</tr>
<tr>
<td>Depreciation and amortization</td>
<td>10,727</td>
<td>11,784</td>
</tr>
<tr>
<td>Financial income</td>
<td>(1,540)</td>
<td>(1,235)</td>
</tr>
<tr>
<td>Financial expenses</td>
<td>36</td>
<td>8</td>
</tr>
<tr>
<td>Share of income of investments accounted for using the equity method</td>
<td>(749)</td>
<td>(1,525)</td>
</tr>
<tr>
<td>Gains on sale of property and equipment</td>
<td>(1,853)</td>
<td>—</td>
</tr>
<tr>
<td>(Increase) decrease in trade and other receivables</td>
<td>203</td>
<td>306</td>
</tr>
<tr>
<td>Increase (decrease) in trade and other payables</td>
<td>210</td>
<td>(498)</td>
</tr>
<tr>
<td>(Increase) decrease in retirement benefit assets</td>
<td>1,797</td>
<td>(1,575)</td>
</tr>
<tr>
<td>Increase (decrease) in retirement benefit liabilities</td>
<td>313</td>
<td>4</td>
</tr>
<tr>
<td>Other</td>
<td>(247)</td>
<td>1,492</td>
</tr>
<tr>
<td>Subtotal</td>
<td>76,673</td>
<td>69,364</td>
</tr>
<tr>
<td>Interest and dividends received</td>
<td>1,678</td>
<td>1,575</td>
</tr>
<tr>
<td>Interest paid</td>
<td>(38)</td>
<td>(5)</td>
</tr>
<tr>
<td>Income taxes paid</td>
<td>(17,243)</td>
<td>(23,473)</td>
</tr>
<tr>
<td>Cash flows generated from operating activities</td>
<td>61,069</td>
<td>47,462</td>
</tr>
</tbody>
</table>

| Cash flows from investing activities                                       |                                   |                                  |
| Payments into time deposits                                               | (70,600)                         | (83,100)                         |
| Proceeds from withdrawal of time deposits                                 | 47,100                           | 74,900                           |
| Purchase of property and equipment                                        | (1,624)                          | (1,111)                          |
| Proceeds from sale of property and equipment                              | 3,660                            | —                                |
| Purchase of intangible assets                                             | (11,934)                         | (9,970)                          |
| Purchase of investment securities                                         | (1,000)                          | (127)                            |
| Other                                                                     | 807                              | 79                               |
| Cash flows generated from (used in) investing activities                  | (33,591)                         | (19,330)                         |

| Cash flows from financing activities                                       |                                   |                                  |
| Proceeds from loans payable                                               | 10,000                           | 10,000                           |
| Repayments of loans payable                                               | (10,000)                         | (10,000)                         |
| Proceeds from issuance of bonds                                           | —                                | 19,932                           |
| Dividends paid                                                            | (20,315)                         | (27,414)                         |
| Purchase of treasury shares                                               | (0)                              | (13,501)                         |
| Other                                                                     | (711)                            | (136)                            |
| Cash flows used in financing activities                                    | (21,030)                         | (21,119)                         |

Net increase (decrease) in cash and cash equivalents                        | 6,447                            | 7,011                            |

Cash and cash equivalents at the beginning of the year                      | 60,114                           | 66,547                           |

Effect of changes in exchange rate on cash and cash equivalents             | (13)                             | (6)                              |

Cash and cash equivalents at the end of the year                            | 66,547                           | 73,553                           |
Financial/Corporate Data

Economic Data/Market Data

Stock Market Trend

- Bubble peak: JPY 38,915 (Dec. 29, 1989)
- ADTV during IT bubble: JPY 0.9 tril. (Jan. 1999-Nov. 2000)
- IT bubble peak: JPY 20,833 (Apr. 12, 2000)

Note: The highest and lowest prices of the Nikkei 225 are based on closing prices.

Derivatives Trading Volume and Ratio of Night Session Trading

- Monthly trading volume (left axis)
- Ratio of night session trading (right axis)

- Jul. 2006: Nikkei 225mini launched
- Oct. 2008: Night sessions launched (until 3:00 JST the next day)
- Jul. 2010: Night sessions launched (until 5:30 JST the next day)
- Oct. 2008: Trading hours extended (until 20:00 JST)
- Jul. 2011: Trading hours extended (until 23:30 JST)
- Jul. 2016: Night sessions launched (until 3:00 JST)

Note: Total trading volume for all derivatives
FY2009 and FY2010 saw an increase in large financing deals by financial institutions looking to strengthen their capital bases.

Note: Excluding straight bonds (domestic and foreign)
### Financial/Corporate Data

#### Domestic Market Capitalization, Stock Trading Value Rankings

<table>
<thead>
<tr>
<th>Stock Exchange</th>
<th>Domestic Market Capitalization</th>
<th>Trading Value of Cash Equities</th>
</tr>
</thead>
<tbody>
<tr>
<td>New York Stock Exchange</td>
<td>20.0</td>
<td>16.2</td>
</tr>
<tr>
<td>Nasdaq</td>
<td>8.4</td>
<td>9.6</td>
</tr>
<tr>
<td>Japan Exchange Group</td>
<td>5.1</td>
<td>5.3</td>
</tr>
<tr>
<td>Shanghai Stock Exchange</td>
<td>4.4</td>
<td>7.1</td>
</tr>
<tr>
<td>London Stock Exchange</td>
<td>2.0</td>
<td>3.7</td>
</tr>
<tr>
<td>Euroclear</td>
<td>1.6</td>
<td>3.7</td>
</tr>
<tr>
<td>Hong Kong Exchanges &amp; Clearing</td>
<td>1.3</td>
<td>3.5</td>
</tr>
<tr>
<td>Schroder Stock Exchange</td>
<td>3.4</td>
<td>11.1</td>
</tr>
<tr>
<td>TMX Group</td>
<td>2.1</td>
<td>1.1</td>
</tr>
<tr>
<td>Bombay Stock Exchange</td>
<td>0.1</td>
<td>1.8</td>
</tr>
</tbody>
</table>

Note: Market capitalization of domestic stocks as of Mar. 31, 2017. Stock trading value includes only auction and electronic trades in FY2016. Source: WFE statistics

#### Derivatives Volume Rankings

<table>
<thead>
<tr>
<th>Exchange</th>
<th>Nikkei 225 futures trading volume in FY2016</th>
<th>CME Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tokyo Stock Exchange</td>
<td>89.7%</td>
<td>3.9</td>
</tr>
<tr>
<td>Osaka Exchange (OSE)</td>
<td>70.2%</td>
<td>2.1</td>
</tr>
<tr>
<td>Singapore Exchange (SGX)</td>
<td>16.8%</td>
<td>2.0</td>
</tr>
<tr>
<td>Seoul</td>
<td>13.0%</td>
<td>1.9</td>
</tr>
<tr>
<td>HKEX</td>
<td>0.9%</td>
<td>1.7</td>
</tr>
<tr>
<td>BMGF</td>
<td>0.3%</td>
<td>1.6</td>
</tr>
<tr>
<td>Eurex</td>
<td>0.3%</td>
<td>1.5</td>
</tr>
<tr>
<td>CBDE Holdings</td>
<td>0.2%</td>
<td>1.5</td>
</tr>
<tr>
<td>JSE</td>
<td>0.1%</td>
<td>1.4</td>
</tr>
<tr>
<td>SBI Japannext</td>
<td>0.1%</td>
<td>1.4</td>
</tr>
<tr>
<td>Chi-X</td>
<td>0.1%</td>
<td>1.3</td>
</tr>
<tr>
<td>BSE</td>
<td>0.1%</td>
<td>0.9</td>
</tr>
<tr>
<td>Korea Exchange</td>
<td>0.1%</td>
<td>0.8</td>
</tr>
</tbody>
</table>

Source: Futures Industry Association, Trading Volume in 2016

#### Competitive Landscape of Main Products

- Cash equity trading value in FY2016
  - Chicago Mercantile Exchange (CME) 13.0%
  - Singapore Exchange (SGX) 11.1%
  - Osaka Exchange (OSE) 70.2%

Notes: 1. Total value of auction and off-auction trading of common stocks on TSE 1st/2nd Sections, Mothers, JASDAQ, TOKYO PRO Market, and ETFs/ETNs, REITs, etc.
2. The figure for PTS is the total of figures for SBI Japannext and Chi-X Japan.
Sources: TSE, SBI Japannext, Chi-X, and JSQA statistics

### Notes

- Conversion factors of 1/10 for OSE mini; 1/2 for SGX large (incl. USD-denominated); 1/10 for SGX mini; and 1/2 for CME USD- and JPY-denominated contracts have been used in calculations.
- Source: Statistics from each exchange
Financial/Corporate Data

TOPIX OHLC Prices (Apr. 1, 2016—Mar. 31, 2017) (points)

<table>
<thead>
<tr>
<th></th>
<th>Open</th>
<th>High</th>
<th>Low</th>
<th>Close</th>
</tr>
</thead>
</table>

Note: Based on closing price of each trading day

Trading Value/Volume

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash Equities Trading Value (JPY mil.)</td>
<td>714,126,887</td>
<td>149,927,942</td>
<td>151,897,987</td>
<td>169,767,175</td>
<td>158,600,881</td>
<td>630,193,987</td>
</tr>
<tr>
<td>TSE 1st/2nd Sections</td>
<td>23,988,944</td>
<td>12,553,461</td>
<td>5,481,621</td>
<td>5,285,439</td>
<td>6,691,962</td>
<td>30,012,485</td>
</tr>
<tr>
<td>Mothers</td>
<td>17,232,911</td>
<td>3,007,765</td>
<td>2,360,710</td>
<td>2,892,175</td>
<td>3,364,573</td>
<td>11,625,223</td>
</tr>
<tr>
<td>JASDAQ</td>
<td>80,746,042</td>
<td>20,067,756</td>
<td>15,399,947</td>
<td>14,794,360</td>
<td>12,560,957</td>
<td>62,823,022</td>
</tr>
<tr>
<td>ETFs/ETNs, REITs, etc.</td>
<td>22,986,847</td>
<td>5,356,506</td>
<td>5,042,339</td>
<td>5,914,516</td>
<td>5,728,191</td>
<td>22,041,552</td>
</tr>
<tr>
<td>TOPIX Futures</td>
<td>56,456,691</td>
<td>12,015,630</td>
<td>10,163,636</td>
<td>11,658,150</td>
<td>11,303,925</td>
<td>45,141,341</td>
</tr>
<tr>
<td>Total Nikkei 225 Futures</td>
<td>29,487,683</td>
<td>6,442,034</td>
<td>5,454,262</td>
<td>6,403,675</td>
<td>5,741,396</td>
<td>24,041,367</td>
</tr>
<tr>
<td>Nikkei 225 mini</td>
<td>269,690,101</td>
<td>55,735,969</td>
<td>47,093,746</td>
<td>52,544,759</td>
<td>55,625,293</td>
<td>210,999,767</td>
</tr>
<tr>
<td>Nikkei 225 Options</td>
<td>7,519,072</td>
<td>1,751,195</td>
<td>1,258,955</td>
<td>1,743,221</td>
<td>1,328,324</td>
<td>6,081,697</td>
</tr>
<tr>
<td>10-year JGB Futures</td>
<td>8,491,325</td>
<td>1,744,496</td>
<td>1,741,404</td>
<td>1,719,661</td>
<td>1,793,935</td>
<td>6,999,496</td>
</tr>
</tbody>
</table>

Notes: 1. Trading value of common stocks in the auction and off-auction trading
2. Trading value in the auction and off-auction trading
3. Contracts of Nikkei 225 mini are calculated using a conversion factor of 1/10.
4. Excluding weekly options
5. Average daily trading value of common stocks on TSE 1st/2nd Sections, Mothers, JASDAQ, TOKYO PRO Market, and ETFs/ETNs, REITs, etc. in the auction and off-auction trading.
The Tokyo and Osaka exchanges were established in 1878, soon after the Meiji Restoration and the start of Japan’s modern era. Constantly changing with the times and serving as the engine of the Japanese economy, JPX will continue to drive sustainable economic growth in Japan and contribute to the global economy.

Key Economic Events

- **1878**: TSE and OSE begin trading.
- **1882**: The Bank of Japan is founded.
- **1929**: The Great Depression.
- **1952**: Japan joins the IMF.
- **1965**: First deficit-financing bonds are issued.
- **1969**: Foreign stocks are listed in response to internationalization.
- **1971**: Nixon shock.
- **1973**: Yen transitions to floating exchange rate.
- **1974**: TSE begins trading of TOPIX Futures and OSE begins trading of Nikkei Stock Average (Nikkei 225) Futures.
- **1979**: 2nd oil crisis.

Key Historical Events

- **1878**: TSE and OSE begin trading.
- **1882**: The Bank of Japan is founded.
- **1914**: World War I.
- **1939**: World War II.
- **1944**: The Great Depression.
- **1945**: The end of World War II.
- **1949**: Japan joins the UN.
- **1964**: Tokyo Olympics.
- **1971**: Nixon shock.
- **1973**: Yen transitions to floating exchange rate.
- **1974**: TSE begins trading of TOPIX Futures and OSE begins trading of Nikkei Stock Average (Nikkei 225) Futures.
- **1979**: 2nd oil crisis.
- **1980**: Iran-Iraq War.

Modernization of Japan and Recovery of the Economy

- **1878**: A group including Eiichi Shibusawa, who is known as the father of capitalism in Japan, established Tokyo Stock Exchange. That same year, a group including Tomoatsu Godai, a businessman who is instrumental in the economic development of Osaka, established Osaka Stock Exchange.
- **1949**: Tokyo Stock Exchange (TSE) and Osaka Securities Exchange (OSE) are established as membership organizations and begin equity trading in May of that year.

Era of High Growth and Globalization

- **1969**: Calculation of Tokyo Stock Price Index (TOPIX) begins.
- **1973**: Foreign stocks are listed in response to internationalization.
- **1974**: Market Information System goes into operation to transmit the latest market information. In 1982, the Second Section Trading System goes into operation, marking progress in computerization of securities markets.
- **1985**: TSE begins trading of government bonds futures.
- **1988**: TSE begins trading of TOPIX Futures and OSE begins trading of Nikkei Stock Average (Nikkei 225) Futures.

OSE begins trading in Nikkei 225 Futures.
**Building the Foundations for Growth and the New Era**

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>TSE launches Mothers, a market for new emerging companies, with OSE following suit in 2000 in the form of Nasdaq Japan (now integrated into JASDAQ). The trading floors at both TSE and OSE are closed. After this, trading of stocks and other listed issues becomes computerized. Amid increasing global market competition, TSE and OSE are demutualized. ETF and J-REIT markets are established.</td>
</tr>
</tbody>
</table>
| 1991 | Nikkei 225 Futures on a trading value basis rises to the highest in the world. The Soviet Union collapses. 
German reunification. |
| 1995 | Great Hanshin-Awaji Earthquake. |
| 1999 | Bank of Japan’s zero interest rate policy. |
| 2000 | Euro goes into circulation. |
| 2001 | War in Iraq begins. 9/11 terrorist attacks in the U.S. |
| 2003 | War in Iraq begins. |
| 2011 | Great East Japan Earthquake. |

**Birth of JPX**

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999</td>
<td>Japan Exchange Group is formed through the merger between TSE Group and OSE. The OSE cash equities market is integrated into the TSE cash equities market. OSE derivatives clearing functions are integrated into Japan Securities Clearing Corporation. Japan Securities Clearing Corporation merges with Japanese Government Bond Clearing Corporation.</td>
</tr>
<tr>
<td>2001</td>
<td>Japan Securities Clearing Corporation goes into operation.</td>
</tr>
<tr>
<td>2003</td>
<td>OSE lists on OSE-Hercules to become Japan’s first public exchange.</td>
</tr>
<tr>
<td>2004</td>
<td>OSE Hercules goes into operation.</td>
</tr>
<tr>
<td>2013</td>
<td>OSE changes its name from Osaka Securities Exchange to Osaka Exchange. The TSE derivatives market is integrated into the OSE derivatives market. Name of TSE Regulation is changed to Japan Exchange Regulation. Calculation of JPX-Nikkei Index 400 and trading of futures on the index begin.</td>
</tr>
<tr>
<td>2014</td>
<td>OSE changes its name from Osaka Securities Exchange to Osaka Exchange. The TSE derivatives market is integrated into the OSE derivatives market. Name of TSE Regulation is changed to Japan Exchange Regulation. Calculation of JPX-Nikkei Index 400 and trading of futures on the index begin.</td>
</tr>
<tr>
<td>2015</td>
<td>Arrowhead cash equity trading system is renewed.</td>
</tr>
<tr>
<td>2016</td>
<td>New J-GATE derivatives trading system is launched.</td>
</tr>
</tbody>
</table>

---

**Financial/Corporate Data**

- **1988**: Trading value and market capitalization of TSE rises to the highest level in the world.
- **1989**: Nikkei Stock Average reaches record high of JPY 38,915.87.
- **1990**: Great Hanshin-Awaji Earthquake.
- **1991**: Nikkei 225 Futures on a trading value basis rises to the highest in the world. The Soviet Union collapses. 
German reunification. 
Asian currency crisis.
- **1992**: Japan Exchange Group is formed through the merger between TSE Group and OSE. The OSE cash equities market is integrated into the TSE cash equities market. OSE derivatives clearing functions are integrated into Japan Securities Clearing Corporation. Japan Securities Clearing Corporation merges with Japanese Government Bond Clearing Corporation.
- **1993**: Nikkei 225 Futures on a trading value basis rises to the highest in the world. The Soviet Union collapses. 
German reunification. 
Asian currency crisis.
- **1994**: Great Hanshin-Awaji Earthquake.
- **1995**: Great Hanshin-Awaji Earthquake.
- **1996**: Nikkei Stock Average reaches record high of JPY 38,915.87.
- **1997**: Nikkei 225 Futures on a trading value basis rises to the highest in the world. The Soviet Union collapses. 
German reunification. 
Asian currency crisis.
- **1998**: Great Hanshin-Awaji Earthquake.
- **1999**: Bank of Japan’s zero interest rate policy. Euro goes into circulation. 
Global financial crisis.
- **2000**: War in Iraq begins. 9/11 terrorist attacks in the U.S.
- **2001**: War in Iraq begins. 
Global financial crisis.
- **2002**: War in Iraq begins. 9/11 terrorist attacks in the U.S.
- **2003**: War in Iraq begins. 
Global financial crisis.
- **2004**: War in Iraq begins. 9/11 terrorist attacks in the U.S.
- **2005**: War in Iraq begins. 
Global financial crisis.
- **2006**: War in Iraq begins. 9/11 terrorist attacks in the U.S.
- **2007**: War in Iraq begins. 
Global financial crisis.
- **2008**: War in Iraq begins. 9/11 terrorist attacks in the U.S.
- **2009**: War in Iraq begins. 
Global financial crisis.
- **2010**: War in Iraq begins. 9/11 terrorist attacks in the U.S.
- **2011**: War in Iraq begins. 
Global financial crisis.
- **2012**: War in Iraq begins. 9/11 terrorist attacks in the U.S.
- **2013**: War in Iraq begins. 
Global financial crisis.
- **2014**: War in Iraq begins. 9/11 terrorist attacks in the U.S.
- **2015**: War in Iraq begins. 
Global financial crisis.
- **2016**: War in Iraq begins. 9/11 terrorist attacks in the U.S.
Financial/Corporate Data

Corporate Information

Company Name: Japan Exchange Group, Inc.
Number of Directors: 13 directors, 10 executive officers (as of June 16, 2017)
Location of Head Office: 2-1 Nihombashi-kabuto-cho, Chuo-ku, Tokyo 103-8224, Japan
Foundation: April 1, 1949
Amount of Capital: JPY 11,500 million
Number of Employees: 1,085 (consolidated)

Business Description: Management of financial instruments exchanges and other business incidental thereto

Information Regarding Corporate Group

JPX Group comprises five subsidiaries and three companies accounted for under the equity method, and its primary operations are the provision and operation of markets for exchange-traded financial instruments. Specifically, these include operations such as (i) providing market facilities for securities trading, securities index futures trading, and securities options trading, (ii) publicizing market quotations and ensuring fairness of securities trading, and (iii) providing financial instruments obligation assumption services.

For further details, please access our website.

Website

About JPX

http://www.jpx.co.jp/ (Japanese)
http://www.jpx.co.jp/english/ (English)

Investor Relations

http://www.jpx.co.jp/corporate/investor-relations/index.html (Japanese)
http://www.jpx.co.jp/english/corporate/investorrelations/index.html (English)
Financial/Corporate Data

(as of March 31, 2017)

Stock Information

<table>
<thead>
<tr>
<th>No. of Shares Held</th>
<th>Shareholding Ratio (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan Trustee Services Bank, Ltd. (Trust Account)</td>
<td>18,469,000</td>
</tr>
<tr>
<td>The Master Trust Bank of Japan, Ltd. (Trust Account)</td>
<td>16,168,600</td>
</tr>
<tr>
<td>SMBC Friend Securities Co., Ltd.</td>
<td>15,118,000</td>
</tr>
<tr>
<td>Japan Trustee Services Bank, Ltd. (Trust Account 5)</td>
<td>11,274,100</td>
</tr>
<tr>
<td>THE BANK OF NEW YORK MELLON</td>
<td>140044</td>
</tr>
<tr>
<td>Mizuho Securities Co., Ltd.</td>
<td>9,600,200</td>
</tr>
<tr>
<td>NORTHERN TRUST CO. (AVFC) SUB A/C NON TREATY</td>
<td>9,248,609</td>
</tr>
<tr>
<td>Japan Trustee Services Bank, Ltd. (Trust Account 1)</td>
<td>8,276,700</td>
</tr>
<tr>
<td>Japan Trustee Services Bank, Ltd. (Trust Account 2)</td>
<td>8,271,500</td>
</tr>
<tr>
<td>Japan Trustee Services Bank, Ltd. (Trust Account 7)</td>
<td>8,018,800</td>
</tr>
<tr>
<td>Treasury Shares</td>
<td>549,069,100 shares issued</td>
</tr>
<tr>
<td>Individuals and Others</td>
<td>3.70%</td>
</tr>
<tr>
<td>Foreign Corporations and Others</td>
<td>41.64%</td>
</tr>
<tr>
<td>Other Corporations in Japan</td>
<td>3.96%</td>
</tr>
<tr>
<td>Financial Institutions</td>
<td>23.34%</td>
</tr>
<tr>
<td>Securities Companies and Others</td>
<td>26.00%</td>
</tr>
</tbody>
</table>

Number of Shares per Share Unit: 100 shares
Number of Shares: 549,069,100 shares (including 8,049,252 treasury shares)
Number of Shareholders: 52,560

JPX’s Shareholders

Distribution of Shareholders

Major Shareholders

<table>
<thead>
<tr>
<th>Company Name</th>
<th>No. of Shares Held</th>
<th>Shareholding Ratio (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan Trustee Services Bank, Ltd. (Trust Account)</td>
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<td>3.41</td>
</tr>
<tr>
<td>The Master Trust Bank of Japan, Ltd. (Trust Account)</td>
<td>16,168,600</td>
<td>2.99</td>
</tr>
<tr>
<td>SMBC Friend Securities Co., Ltd.</td>
<td>15,118,000</td>
<td>2.79</td>
</tr>
<tr>
<td>Japan Trustee Services Bank, Ltd. (Trust Account 5)</td>
<td>11,274,100</td>
<td>2.08</td>
</tr>
<tr>
<td>THE BANK OF NEW YORK MELLON</td>
<td>140044</td>
<td>10,748,028</td>
</tr>
<tr>
<td>Mizuho Securities Co., Ltd.</td>
<td>9,600,200</td>
<td>1.77</td>
</tr>
<tr>
<td>NORTHERN TRUST CO. (AVFC) SUB A/C NON TREATY</td>
<td>9,248,609</td>
<td>1.71</td>
</tr>
<tr>
<td>Japan Trustee Services Bank, Ltd. (Trust Account 1)</td>
<td>8,276,700</td>
<td>1.53</td>
</tr>
<tr>
<td>Japan Trustee Services Bank, Ltd. (Trust Account 2)</td>
<td>8,271,500</td>
<td>1.53</td>
</tr>
<tr>
<td>Japan Trustee Services Bank, Ltd. (Trust Account 7)</td>
<td>8,018,800</td>
<td>1.48</td>
</tr>
</tbody>
</table>

Note: Shareholding ratios are calculated after deducting treasury shares (8,049,252 shares).

JPX Stock Price (rebased to 100 on April 1, 2016)

About JPX Logo

The logo expresses our aspirations toward dynamic and international growth in our ambition to become Asia’s No. 1 market.

The four rising bars represent the 4 C’s of our creed—adopting a “Customer First” approach of prioritizing customer needs, building “Credibility” and public confidence, pursuing “Creativity” in innovative solutions, and achieving “Competency” by harnessing employee potential.