2. Strategies for Creating Value

JPX’s mission is to contribute to the realization of an affluent society by promoting sustainable development of the market. In order to carry out this mission, we are working to create value by evolving into an exchange where anyone can trade any product in a secure and easy way. To this end, we are further cooperating with stakeholders and entering into new partnerships.
Introduction

JPX’s mission, as stated in our Corporate Philosophy, is to "contribute to the realization of an affluent society by promoting the sustainable 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." In the belief that our efforts help us attract the support and confidence of investors and market users and reap the rewards in the form of profits and in our capacity as the provider of Japan’s core market infrastructure, we recognize the provision of stable market operation on an ongoing basis as the most important aspect of that mission.

Our Corporate Philosophy expresses the goals and values that guide our business activities and underpins our management policies and decisions. All JPX officers and employees constantly bear this philosophy in mind in the performance of their day-to-day tasks.
Looking Back at FY2018: 2nd Medium-Term Management Plan

In our medium- to long-term vision, we aim to realize a well-balanced business portfolio that does not rely excessively on Japanese stock market conditions. To achieve this, JPX focused on four core initiatives under its 2nd Medium-Term Management Plan: (1) satisfying diverse investor needs and encouraging medium- to long-term asset building; (2) supporting listed companies in enhancing their corporate value, including by enhancing the effectiveness of their corporate governance; (3) reinforcing market infrastructure, such as by strengthening business continuity planning (BCP) and shortening the Japanese government bond (JGB) settlement cycle; and (4) creating new fields of exchange business, such as by promoting the utilization of fintech.

With regard to the first core initiative, “encouraging medium- to long-term asset building,” we made progress in efforts such as the market making incentive scheme for the development of the ETF market and successfully developed new indices, such as an index that was selected by the Government Pension Investment Fund (GPIF) as one of its Global Environmental Stock Indices. In the case of the second core initiative, “enhancing listed companies’ corporate value,” we made efforts, ranging from the formal to the substantive, such as through revisions to the Corporate Governance Code, to bring about more deep-rooted corporate governance. For the third core initiative, “reinforcing market infrastructure,” in addition to successfully achieving a shortening of the JGB settlement cycle to T+1, we made significant progress in enhancing the backup capabilities of the Tokyo and Osaka bases and believe that further improvements have been made in terms of the reliability of the Japanese market.

Lastly, with regard to the fourth core initiative, “entering new fields of exchange business,” we are conducting PoC testing of blockchain technology in a consortium with a wide range of participants from the finance and securities industries, and are advancing studies into the practical application of new technologies. As a result, JPX has made significant progress in transforming into an entity that is not heavily reliant on the market conditions in Japan and, with regard to net income, continued on from the previous fiscal year by also achieving our target for the final year of the Plan. Furthermore, on March 28, 2019, in a move cited under the 2nd Medium-Term Management Plan as one of the important issues toward the realization of a comprehensive exchange, we reached a basic agreement on a business combination with Tokyo Commodity Exchange.


The target for net income set for the last year of the plan (FY2018) was achieved in FY2018, and also ahead of schedule in FY2017.

Made great progress in transforming into an entity not heavily reliant on financial market conditions in Japan, by expanding our ETF market and developing side businesses such as index and information services, co-location, and clearing of OTC JGBs.

<table>
<thead>
<tr>
<th>Term of 2nd Medium-Term Management Plan</th>
<th>Targets in the last fiscal year of 2nd MTMP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Revenue (JPY)</td>
<td></td>
</tr>
<tr>
<td>FY2016</td>
<td>107.8 bil.</td>
</tr>
<tr>
<td>FY2017</td>
<td>120.7 bil.</td>
</tr>
<tr>
<td>FY2018</td>
<td>121.1 bil.</td>
</tr>
<tr>
<td>(attributable to owners of the parent company)</td>
<td>123.0 bil.</td>
</tr>
<tr>
<td>Net Income (JPY)</td>
<td></td>
</tr>
<tr>
<td>FY2016</td>
<td>42.1 bil.</td>
</tr>
<tr>
<td>FY2017</td>
<td>50.4 bil.</td>
</tr>
<tr>
<td>FY2018</td>
<td>49.0 bil.</td>
</tr>
<tr>
<td>ROE</td>
<td></td>
</tr>
<tr>
<td>FY2016</td>
<td>16.4%</td>
</tr>
<tr>
<td>FY2017</td>
<td>19.0%</td>
</tr>
<tr>
<td>FY2018</td>
<td>17.6%</td>
</tr>
<tr>
<td>Approx. 17%</td>
<td></td>
</tr>
</tbody>
</table>

Main Achievements

<table>
<thead>
<tr>
<th>Asset building gained momentum</th>
</tr>
</thead>
<tbody>
<tr>
<td>• More ETF holders (+129,000)</td>
</tr>
<tr>
<td>• New ETF market making incentive scheme</td>
</tr>
<tr>
<td>• New global environmental indices</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Corporate value of listed companies increased</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Revised corporate governance code</td>
</tr>
<tr>
<td>• Yearly IPO count steady: averaging 81 over past 3 years</td>
</tr>
<tr>
<td>• Expanded ETF product lineup</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reinforced market infrastructure</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Shortened JGB settlement cycle (to T+1)</td>
</tr>
<tr>
<td>• Enhanced backup capabilities in Tokyo and Osaka</td>
</tr>
<tr>
<td>• Strengthened market surveillance based on HFT registration regime</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Entered new fields of exchange business</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Advanced PoC testing for utilization of Blockchain</td>
</tr>
<tr>
<td>• Incorporated AI into market surveillance</td>
</tr>
<tr>
<td>• Listed products related to sustainability</td>
</tr>
</tbody>
</table>

JPX Report 2019 13
Significance of “Sail to the Future. Keep the Market Secure.”

In Japan, it is expected that the impact of medium- to long-term demographic and economic factors, including the falling birth rate and aging population, budget deficits and the policy of monetary easing, will rapidly become apparent. The outlook globally points to heightened political risks surrounding fiscal policy trends in the U.S. and Europe and to U.S.-China economic issues, such as trade. Furthermore, the Japanese government has expressed its intention to tackle issues surrounding financial and capital markets in its growth strategies (Future Investment Strategy 2018). These include advancing corporate governance reforms, improving the quality of information disclosure for the purpose of constructive dialogue, and boosting medium- to long-term investment by advocating for more disclosure of ESG, climate-change-related, and other topical information. Another major issue raised is generating momentum in financial and capital markets such as by encouraging stable asset building for households, providing financial services compatible with an aging society, realizing a comprehensive exchange, and shortening the stock settlement cycle to T+2.

In such an environment, and given that we recognize the provision of stable market operation on an ongoing basis as the most important aspect of our mission, in March 2019 we published the 3rd Medium-Term Management Plan (2019-2021) with the slogan of “Sail to the future. Keep the market secure.” “Sail to the future.” makes reference to that fact that it will be extremely important for us to quickly adapt to or boldly confront increasingly rapid technological change and other changes in the market environment to continue fulfilling our responsibility to the market. “Keep the market secure.” encapsulates JPX’s role as market infrastructure that provides investors with asset management opportunities and companies with opportunities to raise funds, and that also underpins society. With it, we express our intention to remain committed in the years to come to our original mission of providing a stable market that is secure and reliable.

3rd Medium-Term Management Plan (Published March 28, 2019)

Management Policy

Sail to the future.
Keep the market secure.

Under rapid innovation and global dynamics, we aim to evolve into a total smart exchange, where anyone can trade any product in a secure and easy way, by further cooperating with stakeholders and entering into new partnerships.

Four Core Strategies

I. Pursue “the shape of the market” toward the next generation

II. Launch and develop a comprehensive exchange

III. Diversify and propel data services into the next generation

IV. Develop a foundation to support the future of our business and the society
Evolution into a “Total Smart Exchange”

As our medium- to long-term vision, JPX is aiming to evolve into a “total smart exchange,” an exchange that enables anyone to trade any product safely and easily, not only stocks and related products but also similar and peripheral fields, such as commodities.

From now on, through the steady implementation of the 3rd Medium-Term Management Plan, we will be moving into a phase designed to increase medium- to long-term growth, such as in terms of trading volumes that form the basis for revenue generation. It will, however, be essential to constantly keep in mind that JPX is subject to global competition. With regard to the enormous amounts of investment funds that are constantly being moved around the world, it will also remain important for JPX to continue to function as a pivotal trading venue in the Asia-Pacific region time zone. In that sense as well, we believe that the “total smart exchange” will be an essential policy for Japan to survive as one of the key markets in the world.

For the Realization of an Affluent Society

For JPX, fulfilling our core business of stable market operation is an important social responsibility. In view of our public nature and neutrality requirements for business content, we will pay full attention to the improvement of corporate governance based on compliance, management transparency, and accountability. On that basis, we will be making full use of the management resources of our core business to contribute widely to society through a raft of activities, such as financial economic education, international cooperation with overseas exchanges, and academic research.

As we serve as core infrastructure for financial and capital markets at the heart of the Japanese economy, JPX will strive to engage and gain the understanding of our domestic and global investors, listed companies, trading participants such as securities firms, as well as of regulators and the general public as we target the country’s economic revitalization.

We deeply appreciate your continued support and ask that you walk alongside us on our journey forward.

Initiatives in Global Strategy

Aim to continue being a leading market in the world as a pivotal trading venue in the APAC region, which contributes to global wealth accumulation through further stimulating capital circulation

- Take measures to yield flow and investment in Japanese equity from global investors getting influence in the world
- Improve reputation of listed companies among investors through better corporate governance and enhancement of dialogue between investors and listed companies
- Evolve into a commodity derivative market with true pricing function via early launch of a comprehensive exchange
- Promote global cooperation with foreign exchanges (primarily in Asia) such as Japan-China ETF connectivity
- Conceptualize a next-generation platform for cash products that adapts to global trends and innovation
- Boost activity in the ETF market by improving liquidity and efficiency of settlement
- Create a lineup of listed funds based on overseas assets
- Improve connectivity of investors with arrownet global connect
- Create a platform to adapt toglobal trends and innovation
- Conduct marketing in foreign offices and develop HK office
- Support for global issuers to capitalize on Japanese markets (PRO-BOND market, crossborder listings)
- Respond appropriately to international financial regulations (i.e. those of IOSCO and EU on clearing houses and index providers)
- Support development of Myanmar’s capital market
2. Strategies for Creating Value

Message from the CEO

Financial Policies

IT Master Plan
Core Strategy

JPX Initiatives: Targeting Value Creation for Listed Companies
Self-regulatory Functions Required for JPX Value Creation

Financial Policies

Financial Targets under the 3rd Medium-Term Management Plan

JPX achieved its net income target for FY2018 of JPY 48.0 billion under the 2nd Medium-Term Management Plan, which covered the three-year period from FY2016 to FY2018. This reflects the significant strides made in transforming JPX into an entity not heavily reliant on stock market conditions in Japan, by expanding its ETF market and developing index and information services, co-location, JGB clearing, and other peripheral business segments.

In line with the slogan of the 3rd Medium-Term Management Plan, “Sail to the future. Keep the market secure,” JPX will work toward attaining operating revenue of JPY 130.0 billion, net income of JPY 50.0 billion, and an ROE of 15.0% or higher by FY2021, the final year of the plan. To this end, we will launch and develop a comprehensive exchange and diversify our data offerings as part of our efforts to steadily implement core strategies while investing in our systems and business continuity plan (BCP) to enhance the reliability of the Japanese market.

Capital Policy for Sustainable Development of the Market

JPX’s fundamental capital policy is aimed at supporting the sustainable development and evolution of the market, by making ongoing investment while striking a balance between shareholder returns and ensuring financial resilience for stable market operations. Under this policy, we seek to achieve ROE of around 10% in the medium to long term regardless of market conditions.

Specifically, we set a dividend payout ratio of approximately 60% and will flexibly consider increasing returns to shareholders as we examine future investments and other such factors as they arise. For FY2018, the total dividend payout per share was JPY 70. This amount comprises an ordinary dividend of JPY 55 based on the aforementioned payout ratio and an additional special dividend of JPY 15 on account of achieving the profit target under the 2nd Medium-Term Management Plan, as well as to commemorate 140 years of exchanges in Japan.

Financial Targets and Capital Policy

<table>
<thead>
<tr>
<th>Financial targets in the last fiscal year</th>
<th>Capital policy</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Operating Revenue</strong></td>
<td>Support the sustainable development and evolution of the market by making constant investment while keeping a balance between shareholder returns and financial resilience for stable market operations</td>
</tr>
<tr>
<td>JPY 130.0 bil.</td>
<td>Maintain ROE of 10% in the medium-to long-term, that is above capital cost, regardless of market conditions</td>
</tr>
<tr>
<td><strong>Net Income</strong> (attributable to owners of the parent company)</td>
<td>Return to shareholders</td>
</tr>
<tr>
<td>JPY 50.0 bil.</td>
<td>■ Dividend payout ratio of approx. 60%</td>
</tr>
<tr>
<td><strong>ROE</strong></td>
<td>■ Flexibly implement further shareholder returns in consideration of future investments, etc.</td>
</tr>
<tr>
<td>15.0%+</td>
<td></td>
</tr>
</tbody>
</table>

Assumptions

- Average Daily Value for cash products: JPY 3.45 tril.
- Annual Trading Volume for derivative products: 400 mil. contracts

* Deviation from the assumptions may emerge depending on external factors such as market condition
IT Master Plan

IT Strategy as the Source of Our Competitiveness

Exchanges provide venues to gather large numbers of sellers and buyers. Today, those venues are provided on systems, and the quality of these systems and their capabilities have a direct bearing on exchange competitiveness.

In order to meet the needs of increasingly sophisticated and complex market users and become their market of choice, exchanges must constantly improve systems infrastructure to enhance convenience for market users. At the same time, the most important mission for exchanges, as core financial infrastructure, must be to provide sound venues underpinned by stable systems operations.

As such, JPX formulated the IT Master Plan in line with the Medium-Term Management Plan to pursue specific IT initiatives that balance two approaches – steadily implementing initiatives focused on system reliability, efficiency and availability, and maintaining the agility required to respond to drastic changes in the external environment and technological diversification.

Pushing the Limits and Leveraging Technology to Enhance Corporate Value

In our upgrades and other system initiatives, JPX has continuously pushed the limits and worked diligently to create a highly skilled, positively charged organization. We will continue to boldly take on new challenges as we work to enhance the corporate value of JPX by positioning IT as a source of and means to sharpen our competitive edge. We will employ the latest in rapidly evolving technologies to the greatest extent possible so as to construct and provide highly reliable and convenient market infrastructure and services.

Specific Measures

<table>
<thead>
<tr>
<th>Medium-term Management Plan</th>
<th>For sustainable market operations</th>
<th>For agile responses to change</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Improve reliability and convenience via system upgrades</td>
<td>Raise the topline by building new platforms</td>
</tr>
<tr>
<td>II</td>
<td>Carry out flexible launches of new products and functions</td>
<td></td>
</tr>
<tr>
<td>III</td>
<td>Diversify and propel data services into the next generation</td>
<td>Use accumulated information resources</td>
</tr>
<tr>
<td>IV</td>
<td>Develop a foundation to support the future of our business and the society</td>
<td>Diversify channels that enable flexible information distribution</td>
</tr>
<tr>
<td></td>
<td>Improve BCP measures by building new secondary center</td>
<td>Proactively adopt advanced technology</td>
</tr>
<tr>
<td></td>
<td>Optimize operations via cloud and automation</td>
<td>Train/develop human resources to use technology</td>
</tr>
<tr>
<td></td>
<td>Enhance stability by using new technology</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Strengthen measures against more complex cyber-attacks</td>
<td></td>
</tr>
</tbody>
</table>
2. Strategies for Creating Value

Core Strategy

Pursue “the shape of the market” toward the next generation

Raise global competitiveness by pursuing “the shape of the market” toward the next generation while working on enhancing the appeal of the Japanese market in various ways, from reviewing TSE’s market structure and improving corporate governance to moving to T+2 stock settlement cycle.

Initiatives

<table>
<thead>
<tr>
<th>Number</th>
<th>Initiative</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Build market platforms that adapt to market needs and external changes</td>
<td>Replace the platform for cash product trading (arrowhead) and systems for off-auction trading and index calculation.&lt;br&gt;Develop a next-generation derivative platform that enables timely launches of new products.&lt;br&gt;Conceptualize a next-generation platform for cash products that meets diverse trading needs and adapts to global trends and innovation.</td>
</tr>
<tr>
<td>2</td>
<td>Develop TSE’s market structure &amp; enhance corporate governance at listed companies for a more appealing Japanese market</td>
<td>Aiming to enhance the investment appeal of the Japanese market and encourage listed companies to raise corporate value:&lt;br&gt;Review TSE’s market structure.&lt;br&gt;Further enhance substantial aspects of corporate governance at listed companies and cultivate an environment conducive to more dialogue between investors and listed companies.</td>
</tr>
<tr>
<td>3</td>
<td>Shorten stock settlement cycle &amp; improve clearing services for better global competitiveness</td>
<td>Shorten stock settlement cycle to T+2&lt;br&gt;Boost activity in the ETF market via introduction of creation/redemption services&lt;br&gt;Refine margin rules and framework for listed derivatives and increase the use of clearing services.</td>
</tr>
<tr>
<td>4</td>
<td>Create new communication channels with retail investors &amp; enhance support for global investors</td>
<td>Improve marketing to attract more flow from retail investors and develop a new system for trading participants.&lt;br&gt;Improve marketing and strengthen ties to attract more flow from global investors.&lt;br&gt;Revamp outreach to global investors to attract more investment in Japanese equity.</td>
</tr>
<tr>
<td>5</td>
<td>Improve rules for ETFs and promote them to boost activity &amp; take steps for a market where anyone can invest with ease</td>
<td>Boost activity in the ETF market via updates of its Market Making Incentive Scheme and investor-directed promotion.&lt;br&gt;Take steps for a market that facilitates trading for a wide-range of investors.&lt;br&gt;Boost trading of Flexible Options and such non-flagship products as TSE Mothers Index Futures.</td>
</tr>
<tr>
<td>6</td>
<td>Expand lineup of high-quality listed companies and products with high investment appeal</td>
<td>Attract a greater variety of enterprises to the market (focus on: startups at universities, regional banks as part of cooperative efforts, cross-border listings, and PRO-Market).&lt;br&gt;Create a greater variety of investible products (focus on: diversifying ETF pool and developing PRO-BOND, REIT, and infrastructure funds markets).</td>
</tr>
</tbody>
</table>

Primary Targets on Core Strategies

- Complete trading platforms for cash products in FY2019 and derivative products in FY2021
- Meet system requirements for trading platforms
- Shorten stock settlement cycle to T+2 in FY2019
- Approx. 100 IPOs/year
Launch and develop a comprehensive exchange

Evolve into a leading global derivatives market via early integration with Tokyo Commodity Exchange, generating a more vibrant market in Japan.

Initiatives

1. Expand into and develop a commodity derivatives market
   - Realize early integration with Tokyo Commodity Exchange
   - Take steps to attract global/retail investors after expansion into a commodity derivatives market

2. Adopt measures for clearing commodity derivatives to raise reliability
   - Build a commodity clearing scheme, develop and maintain systems pursuant to commodity clearing
   - Integrate with Japan Commodity Clearing House (JCCH)

3. Build surveillance & examination systems tailored to become a comprehensive exchange
   - Develop market surveillance and examination systems suitable for a comprehensive exchange
   - Offer support to potential trading participants, new partners, and stakeholders in establishing management systems

   - Drive initiatives in such areas as relationship building and R&D to evolve into an exchange where anyone can trade any product

Primary Targets on Core Strategies

- Achieve early integration with Total Commodity Exchange
- Achieve integration of clearing houses
- Raise trading volume by creating synergy
2. Strategies for Creating Value

Diversify and propel data services into the next generation

Explore our new business models as an exchange by creating highly convenient data services emerging from an open and innovative framework.

Initiatives

1. Create new information services by utilizing innovation and partnerships
   - Create new services by setting up an open and innovative framework that enables startups to capitalize on data/information
   - Research investor needs and tailor data/information services to meet those needs

2. Build a next-generation system for disseminating information that employs API* & cloud
   - Build a next-generation system for disseminating information that incorporates the use of API and cloud computing
   - Tap into new user segments with diverse services generated from next-generation systems

3. Develop indices & enhance operations in response to needs & external changes
   - Strengthen ties and partnerships and leverage TSE brand in developing indices
   - Develop indices that reflect review of TSE’s market structure and new investment needs
   - Raise robustness and efficiency of operation of an index calculation system by improving IT infrastructure for calculating indices and for managing basic data

Realizing our medium- to long-term vision

* API = Application Programming Interface.

Primary Targets on Core Strategies

- Diversify channels incorporating API, etc. in FY2020
- Create 10 new services
- Attract 150 new clients
IV Develop a foundation to support the future of our business and the society

Keep our market robust as a secure and reliable infrastructure through means such as developing and managing secure IT systems and enforcing appropriate self-regulations. Contribute to a sustainable society by raising financial literacy in an aged society, advocating for ESG investment.

Initiatives

1. Develop and manage IT systems that are secure and reliable for users
   - Launch a backup center and develop backup systems smoothly
   - Improve stability of market operations with higher quality BCP
   - Promote the use of fintech in business
   - Adopt the most advanced technologies
   - Increase efficiency/sophistication of operations by replacing information systems and incorporating the latest technologies
   - Educate/train human resources on digitalization, etc.

2. Set up a backup center to improve reliability of the market in Japan
   - Conduct listing examinations and monitor listed company compliance in ways that reflect external changes (such as a review of TSE's market structure, new business models, approach to corporate governance)
   - Promote measures to enhance self-awareness at listed companies
   - Develop a new surveillance system employing advanced methods
   - Support trading participants in improving their compliance
   - Make relevant inspections to adapt to external changes, e.g. on management systems to deal with irregular trading

3. Bolster system bases & develop highly-skilled personnel to turn IT into our source of competitiveness
   - Advance programs to increase retail investors (especially those with minimal interest in investment or no investment experience)
   - Drive efforts pursuant to educate on economics/finance and raise financial literacy in the age of the 100-year lifespan
   - Promote education on investment in derivatives for asset-building

4. Exercise optimal self-regulation that adapts to external changes
   - Instill TCFD guidance and ESG investment, as well as deliver ESG training programs directed at listed companies and investors
   - Offer support in developing and promulgating ESG-related products (indices, ETFs, Green/Social bonds, infrastructure funds)

5. Support asset building for aged population & raise financial literacy among less-experienced investors
   - Develop human resources and advance work style reforms
   - Research global regulations, regimes, and competitiveness and take strategic steps
   - Improve R&D and information dissemination functions
   - Strengthen corporate communications, PR, and IR
   - Promote cooperation with foreign exchanges and support YSX
   - Make operations efficient and sophisticated

6. Promulgate ESG investment and promote sustainability to contribute to SDGs (Sustainable Development Goals*)
   - Details in “IT Master Plan” >> P.17
   - Set up a backup center and develop backup systems smoothly
   - Improve stability of market operations with higher quality BCP
   - Develop and manage IT systems that are secure and reliable for users
   - Promote the use of fintech in business
   - Adopt the most advanced technologies
   - Increase efficiency/sophistication of operations by replacing information systems and incorporating the latest technologies
   - Educate/train human resources on digitalization, etc.

7. Strengthen business foundations
   - Bolster system bases & develop highly-skilled personnel to turn IT into our source of competitiveness
   - Exercise optimal self-regulation that adapts to external changes
   - Promulgate ESG investment and promote sustainability to contribute to SDGs (Sustainable Development Goals*)
   - Support asset building for aged population & raise financial literacy among less-experienced investors

Primary Targets on Core Strategies

Launch Kansai backup center in phases starting in FY2021

Build industry-shared Blockchain/DLT* infrastructure in FY2021

Contribute to 10% yearly increase in installment type NISA & iDeCo users through raising financial literacy

* DLT = Distributed Ledger Technology

* A collection of 17 global goals set by the UNGA for the year of 2030
** Task Force on Climate-related Financial Disclosures set by Financial Stability Board
2. Strategies for Creating Value

Special Feature 1

JPX Initiatives: Targeting Value Creation for Listed Companies

JPX’s vision of sustainable market development and the creation of an affluent society relies on two driving forces: listed companies creating medium- to long-term corporate value, and domestic and foreign investors participating actively and continuously in the market, making diverse investment decisions. From this viewpoint, JPX Group member Tokyo Stock Exchange is working to build a highly convenient, efficient and transparent market infrastructure, and to develop an environment which can support Japanese listed companies in their efforts to improve corporate value. In FY2018, in addition to revising the Corporate Governance Code, TSE started to examine the ideal future structure of the cash equity market.

Enhancing the Effectiveness of Corporate Governance

For many years, TSE has been endeavoring to enhance corporate governance in Japanese listed companies, from the perspective of creating an environment in which diverse investors can invest in stocks with confidence, while such an environment is created through appropriate consideration of the rights of minority shareholders who acquire shares through the market.

Since JPX formulated the Corporate Governance Code (CG Code) jointly with the Financial Services Agency (FSA) in 2015, not only do 91.3% of 1st Section listed companies now have more than one independent outside director, we have seen a rise in the proportion of independent outside directors on boards every year so far, along with many other significant changes. However, for such initiatives aimed at enhancing the management supervisory function of listed companies to translate to successful medium- to long-term corporate value creation, we need to continue developing an environment that can support this.

To this end, TSE revised the CG Code in June 2018, taking into account the situation review and recommendations from the “Council of Experts Concerning the Follow-up of Japan’s Stewardship Code and Japan’s Corporate Governance Code” established jointly by TSE and the FSA. Listed companies were then given until December of the same year to disclose their “comply or explain” statements based on the revised CG Code. The principles added or clarified under this revision are: (1) management with an awareness of capital cost; (2) the use of independent nomination/compensation advisory committees and ensuring board diversity; and (3) reduction of strategic cross-shareholdings based on assessments of capital cost. Each of these principles is expected to enhance the framework’s effectiveness in supporting medium- to long-term corporate value creation at listed companies. TSE will continue to follow up on the progress of efforts on the revised CG Code, and will also continue to work on the necessary development of the market environment.

Constructive Dialogue between Companies and Investors

<table>
<thead>
<tr>
<th>Stewardship Code</th>
<th>Corporate Governance Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>End Investors (Individuals, recipients of state pension, insurance policyholders, etc.)</td>
<td>Various Stakeholders (Shareholders, employees, creditors, customers, etc.)</td>
</tr>
<tr>
<td>Institutional Investors</td>
<td>Investment</td>
</tr>
<tr>
<td>Constructive Dialogue</td>
<td>Listed Companies</td>
</tr>
<tr>
<td>Enhancement of Medium- to Long-Term Returns</td>
<td>Virtuous Circle Created</td>
</tr>
<tr>
<td>Medium- to Long-Term Corporate Value Creation</td>
<td>Economy-wide Growth</td>
</tr>
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TSE has actively contributed to the sustainable growth of Japan’s industry and economy through the smooth supply of risk money in the cash equity market, and from this perspective, has provided listing opportunities to a wide range of companies. To create an environment conducive to investment, the market is divided into segments according to the characteristics of those companies.

In the cash equity market aimed at all investors, we currently have four market segments in place: First Section, Second Section, Mothers, and JASDAQ. These market segments were created when the Tokyo and Osaka stock exchanges combined in January 2013, and integrated their cash equity markets at TSE in July of the same year. When creating standards for each market segment, to avoid any confusion among listed companies and companies preparing to list as well as their shareholders and investors, we took the decision to maintain in principle the listing rules of the two exchanges as they were.

However, from the perspective of TSE’s role in contributing to the sustainable growth of the Japanese economy through the management of the cash equity market, TSE needs to continue to provide listing opportunities for a wide range of companies, and incentivize medium- to long-term corporate value creation after listing. To achieve this, and gain greater support from diverse investors at home and abroad, there is a need to take appropriate measures to solve problems in the market structure.

With this in mind, in the fall of 2018, TSE began to review concrete options for how the cash equity market should be structured in the future. In December 2018, TSE announced the main points that had arisen from the review, carried out a broad public consultation and conducted interviews. In March 2019, the main issues and areas for improvement based on the comments received were collated and published along with said comments in the “Comments Received from Market Participants in Response to the Review of the TSE Cash Equity Market Structure”.

Discussions on the cash equity market structure are now being conducted by the FSA’s Financial System Council under the Working Group on Market Structure. Taking these into account, TSE will continue to endeavor to create listing rules and a cash equity market structure which fits with changes in the market environment for companies and investors.

Current Issues Regarding TSE Cash Equity Market Structure

**1st Section**

1. Segment concepts unclear
2. Insufficient incentives for sustainable growth
3. No functioning benchmark

**2nd Section**

1. Segment concepts unclear

**Mothers**

1. Segment concepts unclear

**JASDAQ**

The concepts of each market segment are unclear, which impairs the convenience of the market for investors.

2. The structure does not fully fulfil its expected role in providing incentives for listed companies to sustainably increase corporate value.

3. There is no index functioning properly as an investable benchmark of the market.
2. Strategies for Creating Value

Application of Artificial Intelligence to Market Surveillance and Compliance Operations

In order to address the increase in high-frequency trading (HFT) in equities and other asset classes, and the consequent drastic increase in the number of trading orders, JPX-R had to improve the market surveillance function to protect the fairness and reliability of the markets. From this viewpoint, we introduced artificial intelligence (AI) technology to the cash equity market surveillance and compliance operations in March 2018. Since then, we have been working to improve the accuracy of AI through, for example, ongoing verifications of the calculation results obtained by AI and the introduction of new models.

The AI we use is taught the knowledge of surveillance personnel for preliminary evaluations of unnatural trading execution patterns. By utilizing this AI in market surveillance and compliance operations, surveillance personnel can expedite the preliminary investigation process, and this allows them to focus on detailed, full-scale investigations. In this way, AI has enabled more detailed and in-depth market surveillance.

Response to Introduction of Registration System for High-Frequency Traders

Recently, in response to the increasing influence of HFT in equities and other asset classes, the revision of the Financial Instruments and Exchange Law in 2018 newly introduced a registration system for HFT practitioners. In response to this, we added a provision that requires HFT practitioners to submit some necessary documents and explain the details of a trade when considered necessary for market surveillance and compliance. In addition, we carried out functional improvements to the market surveillance and compliance system to apply the HFT strategy trade flags and other functions that are now required for disclosure of HFT activity. This has enabled us to identify investors who engage in HFT activities and to ascertain the status of their trading more quickly and efficiently.

In addition, as well as adding “Management Systems pertaining to High-Frequency Trading” to our focus areas for inspections from FY2018, we are also conducting confirmations of the maintenance of management systems, etc. at trading participants who receive HFT client orders, and at trading participants who engage in HFT on their own account.
Identifying Problems on the Front Line of Trading Participants’ Trade Management

To ensure the fairness and reliability of the market, it is essential for trading participants, acting as gatekeepers of access to the market, to carry out highly effective trading management.

JPX-R visited many trading participants individually to exchange views on the current situation on the front line of trade management. We then summarized the common issues that were brought up, and communicated these to all trading participants, with the purpose of having each company confirm the condition of their trading management systems.

Activities Designed to Spread and Embed "Principles for Preventing Corporate Scandals"

Following the many scandals that have come to light at listed companies in recent years, such as fraudulent accounting and the falsification of product performance, to ensure the credibility of the capital markets, we formulated behavioral standards called the “Principles for Preventing Corporate Scandals” in March 2018. We hope that this will enhance the effectiveness of preventative measures against scandals at listed companies, and circumvent the loss of corporate value.

To support the spread of the Principles and the specific efforts made at listed companies, we spoke at external seminars and contributed articles to specialist journals, while also holding seminars for executives who are in a position to encourage anti-corruption efforts. In addition, we have added the content of the Principles to the e-learning content that executives of companies intending to list are required to study prior to listing.

It is hoped that these efforts will raise awareness of the need to prevent scandals at listed companies, and that efforts to prevent misconduct will be introduced and improved.

Message from the President

As part of JPX Group, Japan Exchange Regulation (JPX-R) strives on a daily basis to maintain and control the quality of the exchange market, which in turn guarantees the market’s fairness and reliability. This includes maintaining the eligibility of listed companies, preventing unfair trading in the market, and maintaining the soundness of trading participants such as securities companies. Positioned as a fundamental function of the market operator, JPX-R plays an important role in creating corporate value for JPX.

To properly carry out its self-regulatory operations, it is essential that JPX-R has an organizational system that can maintain a high degree of autonomy and can be managed and administered from a neutral standpoint. Also needed are high levels of expertise to fully understand the functions and characteristics of the market so that appropriate responses can be made to events that occur on a daily basis. It is also crucial to exert appropriate self-regulatory functions in line with environmental changes, amid the progress being made in the market structure reform, the emergence of new business models, and corporate governance reform.

Under these circumstances, despite being part of JPX Group, JPX-R also specializes in self-regulation operations as a separate entity from JPX the exchange operator. The Board of Governors, the highest decision-making body in JPX-R’s business operations, is composed of a majority of Outside Governors, and this independent governance system functions in decision making. We also listen to a wide range of opinions from outside experts: as an advisory body to the Board of Governors, we have established a Disciplinary Committee to deliberate on the details of disciplinary action against trading participants.

Through the establishment of such systems, we demonstrate a high level of expertise while carrying out highly effective self-regulatory operations from a neutral position that is independent from the exchange.