



JPX
JAPAN EXCHANGE
GROUP

3rd Medium-Term Management Plan

Update for FY2021

FY2019 ► FY2021

April 28, 2021

Japan Exchange Group, Inc.



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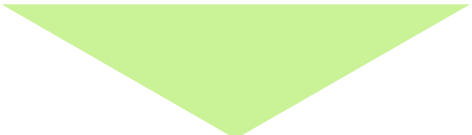
These materials are not an offer for sale of our securities in the United States or anywhere else. Our securities have not been registered under the U.S. Securities Act of 1933, as amended ("the Securities Act") and may not be sold in the United States absent registration or an exemption from registration under the Securities Act.

Review of FY2020 (Responses to System Failure)

The arrowhead system failure on October 1, 2020 re-emphasized the heavy responsibility of stable market operations

Recurrence prevention measures are being implemented as and when they are ready

Measure	Contents	Status
System responses and comprehensive checks	<ul style="list-style-type: none"> • Corrections to and comprehensive checks of switchover settings for the Shared Disk Device • Development of procedures for forced switchovers of other hardware • Checks of other key systems • Switchover tests and drills 	<p>Complete</p> <p>Tests/drills to be carried out on an ongoing basis</p>
Enhancement of procedures for failsafe trading suspensions	<ul style="list-style-type: none"> • Confirmation of cases in which a trading halt could fail • Development of a function that halts trading without using the Shared Disk Device 	<p>Complete</p>
Development of rules for trading suspensions and resumptions	<p>Establishment of a "Council for Recurrence Prevention Measures" comprised of trading participants, investors, system vendors, etc., and development of rules, etc. based on its discussions</p> <ul style="list-style-type: none"> • Development of rules/procedures for trading suspensions/resumptions, etc. • Clarification of standards/processes for trading resumptions, etc. • Strengthening of information provision 	<p>Report published on March 25, 2021</p>



Beginning from now, we will be working with trading participants and other market users to enable the necessary responses for a smooth and effective trading resumption, by checking the processes and verifying the effectiveness of the proposed rules and procedures through system failure drills and other means, and carrying out constant revisions.

Through this, we aim to improve the resilience of and restore confidence in the market.

Through the implementation of measures emphasizing the durability of market operations and the health and safety of employees, etc., we advanced and completed measures based on the four core strategies even during the Covid-19 pandemic, such as the product transfer and clearing house integration

Pursue "the shape of the market" toward the next generation



- ✓ Published outlines of listing rules for the new market segments and a framework for the transition process
- ✓ IPO count was stable (94 in FY2019, 99 in FY2020)
- ✓ Started clearing service for ETF creation/redemption

Launch, invigorate and develop a comprehensive exchange



- ✓ Completed product transfer of precious metals futures, etc. and integration of clearing houses
- ✓ Announced the outline of the plan for holiday trading, including the schedule and eligible products
- ✓ Carried out proactive initiatives to diversify products and participants

Diversify and propel data services into the next generation



- ✓ Launched new data services utilizing collaborations with external partners
- ✓ Announced gradual transition process for TOPIX
- ✓ Launched API-format distribution of timely disclosure information and stock prices

Develop a foundation to support the future of our business and the society



- ✓ Implemented/maintained various Covid-19 response policies, including promotion of remote work and splitting employees into groups
- ✓ Launched a website which collates information on ESG disclosure and ESG investment
- ✓ Practical Handbook for ESG Disclosure was recipient of "ISAR Honours" from UNCTAD

Progress Made in First Two Years

In the two years since the plan was launched, we have steadily progressed towards achieving primary targets based on core strategies, for the most part

<p>I</p>	<p>Pursue "the shape of the market" toward the next generation</p>	<ul style="list-style-type: none"> Next-generation cash trading platform Implement reforms of cash equity market structure Aim for IPO count of approx. 100/year 	<p>Finalize concept in FY2020 In Progress Start development in FY2021 In Progress Phased implementation in FY2020 Achieved</p>
<p>II</p>	<p>Launch, invigorate and develop a comprehensive exchange</p>	<ul style="list-style-type: none"> Launch the comprehensive exchange through smooth product transfer and clearing house integration Boost the commodity derivatives market through synergies Next-generation derivatives trading platform J-GATE3.0 	<p>Complete in FY2020 Achieved Raise trading volume In Progress Launch in FY2021 In Progress</p>
<p>III</p>	<p>Diversify and propel data services into the next generation</p>	<ul style="list-style-type: none"> Diversify channels incorporating API, etc. Create 10 new services and attract 150 new clients (by end of FY2021) 	<p>Complete in FY2020 Achieved In Progress</p>
<p>IV</p>	<p>Develop a foundation to support the future of our business and the society</p>	<ul style="list-style-type: none"> Launch Kansai backup center in phases starting in FY2021 Contribute to 10% annual increase in the number of users of Tsumitate (installment-type) NISA & iDeCo via initiatives to raise financial literacy 	<p>In Progress Achieved</p>

3rd Medium-Term Management Plan (2019-2021)

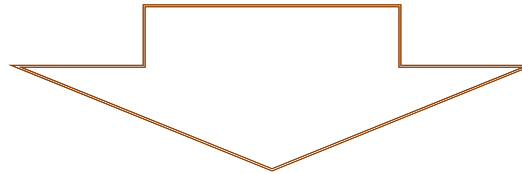
Basic Policy for Updates and Core Strategies



Policy for Updates Moving Into the Final Year

We must renew our awareness of the heavy responsibility of being a market operator, after trading on all securities was halted for the entire day after the system failure on October 1, 2020

Moving into the final year of the Plan, as well as completing our initiatives based on the core strategies, we must also continue to prepare for mid- to long-term environmental changes



While maintaining the overall framework of the 3rd Medium-Term Management Plan, we will:

- Renew our awareness of the heavy responsibility of a market operator, and put all the Group’s efforts into strengthening market function and regaining trust
- Aiming for improved "Resilience" as well as the "Never Stop" ideal, soundly implement the urgent recurrence prevention measures. In addition, in the mid to long term, fulfil the exchange’s main mission of stable market operations by promoting exploration of better IT functionality and personnel and the establishment of a research department, for example, on top of the current digital transformation (DX) initiatives.
- As well as finishing implementation of important initiatives such as the market restructure, continue preparation to enable responses to changes in the way capital is raised and invested, such as ESG investment.

-We will also implement the measures necessary to ensure improved stability, durability and effectiveness of market operations in the mid- and post-pandemic environments.

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 new partnerships. We will also make a more active contribution to building a "sustainable society" in our role as a responsible infrastructure operator.

Four Core Strategies

I Pursue "the shape of the market" toward the next generation

Raise global competitiveness while working on enhancing the appeal of the Japanese market in the pursuit of "the shape of the market" toward the next generation.

III Diversify and propel data services into the next generation

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

II Invigorate and develop the comprehensive exchange

UPDATED

Invigorate the Japanese derivatives market and evolve it into a leading global derivatives market, while swiftly generating synergies from the product transfer and clearing house integration.

IV Develop a foundation to support the future of our business and the society

Keep our markets robust as a market infrastructure by means such as developing and managing reliable IT systems and enforcing appropriate self-regulations. Strengthen cyber security measures and improve preparedness for the risk of natural disasters.

Action in Response to the Recommendations of the Investigation Committee of Independent Outside Directors in Relation to the System Failure

- Advance initiatives aimed at improving resilience for stable market operations, including system failure recurrence prevention measures
- Consider initiatives in phases, especially those in the mid to long term, taking into account the "Proposals aimed at the future" set out by the Investigation Committee in its Investigation Report
- As part of this, establish a Center for Advanced Research and Development (DigiMa Lab.) in April 2021

Mission

- Missions 2 and 3 below will be added to the base of DX promotion activities that began in FY2020.
- We will carry out wide-ranging activities in the form of building a new "Concept Market" which will be created along with users, and research into a "Grand Design" for systems that can help maintain/improve the competitiveness of JPX's business.

1. DX promotion

Continued promotion for DX initiatives

Strengthening current IT and business

- Further promoting company-wide DX initiatives since April 2020
- Verifying technology for improving resilience of the current system also in progress

2. Concept Market

In FY2021

Incorporating External (Non-financial) IT and business

- To challenge the business and system which are free from existing limitations, creating a "concept market", much like a concept car for automobiles which users can experience.
- Attempting various approaches to resilience in reference to non-financial services
- Improving the in-house ratio

3. Grand Design(Overall System Design)

From FY2021

Considering a long-term view

Considering an overall system design that enhances and maintains JPX business competitiveness by leveraging input from 1) and 2)

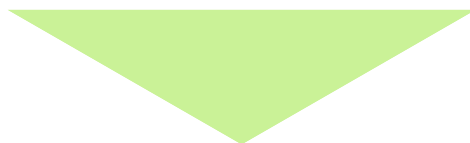
Further Advancing Sustainability

Our activities until now

Activities such as supporting listed companies' ESG disclosure and providing ESG-related products to investors.

Changes in the environment

The trend towards transition to a zero-carbon economy is gathering momentum, with European countries stepping up their efforts to achieve net zero and Japan also committing to "carbon neutral by 2050" last October.



Although there are many ESG issues, from this fiscal year we must consciously build up our efforts in the area of climate change, which is now considered by society as the most pressing among those issues.

Planned activities

As a listed company

- Strengthening ESG-related information disclosure
- Looking into the creation of structures for governance of ESG issues
- Research into achieving carbon neutrality

As a market operator

- Support to encourage listed companies to proactively disclose ESG information
- Strengthening the ESG-related product lineup
- Provision of training programs for listed companies
- Research into the current situation of listed companies' ESG disclosure and consideration of wide-ranging information provision regarding this

Core Strategy I

Pursue "the shape of the market"
toward the next generation

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Raise global competitiveness while working on enhancing the appeal of the Japanese market in the pursuit of "the shape of the market" toward the next generation.



Core Strategy I - Initiatives

- In response to the system failure, advance initiatives to improve the reliability and resilience of both rules and systems
- Act proactively to provide information as we move towards the transition to the new market structure planned for April 2022

1 Strengthen the functions of the cash equity market and work to develop a next-generation cash equity platform

UPDATED

- Strengthen IT/market infrastructure through improved resilience, etc. of rules and systems
- Advance the Action Program for Strengthening the Functions of the Cash Equity Market (introduce market access rule, optimize tick sizes, etc.)
- Start the development of a next-generation cash equity platform

3 Improve clearing services for better global competitiveness

- Refine margin rules and framework for listed derivatives
- Improve OTC clearing services to encourage more usage
- Prepare for global interest rate benchmark reforms, review the loss compensation rules and systems for listed derivatives, and renovate the system and increase the convenience of clearing services for OTC JGB transactions

5 Boost ETF market activity and develop new methods or channels for new investors

UPDATED

- Consider and implement initiatives to improve the market making scheme and increase use of the RFQ platform to aim for even higher ETF liquidity
- Look at ways to provide an environment which would attract new investors, through diversification of trading participants, etc.

2 Develop TSE's market structure and enhance corporate governance at listed companies for a more appealing Japanese market

UPDATED

To enhance the investment appeal of the Japanese market and encourage listed companies to raise corporate value:

- Support listed companies in making their choices of new listing segments and act to provide information on the market restructure to aim for a smooth transition
- Enhance substantial aspects of corporate governance and cultivate an environment for dialogue between companies and investors

4 Create new communication channels with retail investors and enhance support for global investors

- Improve marketing to attract more retail investors
- Improve marketing and strengthen ties to attract more global investors
- Revamp outreach to global investors to attract more investment in Japanese equities

6 Expand lineup of high-quality listed companies and products with high investment appeal

- Attract a greater variety of enterprises to the market
- Boost support for IPOs with mind to the market structure reforms
- Create a greater variety of investable products such as ETFs and ETNs

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Core Strategy II

Invigorate and develop
the comprehensive exchange

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Invigorate the Japanese derivatives market and evolve it into a leading global derivatives market, while swiftly generating synergies from the product transfer and clearing house integration.



- Aim for a globally competitive derivatives market through listing new products and attracting new entrants, among other things

1 Invigorate the comprehensive exchange

UPDATED

- Swiftly generate synergies from the product transfer and clearing house integration
- Enhance market operations to be fit for the comprehensive exchange and strengthen BCP structures in the Tokyo and Osaka bases

3 Invigorate the derivatives market by attracting diverse investment flows

- Invigorate the markets through reinforcing sales and promotion activities
 - ◆ Attract more flow from retail investors and global investors
 - ◆ Boost trading of Flexible Options and non-flagship products such as TSE Mothers Index Futures
 - ◆ Attract flow to the commodity market from financial institutions and maintain existing flow

2 Develop the next generation derivatives platform "J-GATE3.0"

- Develop trading rules and frameworks and consider creation of new products in connection with J-GATE3.0
- Construct a system that enables timely addition of new products with the primary concept of "Launch Timely"
- Work to enhance information services
- Attract flow from the OTC market by utilizing and improving the J-NET Portal

4 Drive new initiatives to enhance the derivatives market

UPDATED

- Develop rules and frameworks for derivatives holiday trading
- Work on broadening the investor base for the electricity futures market, promote market entry, and prepare for the market's application for full listing
- Develop rules and frameworks for listing LNG futures
- List CME Group Petroleum Index Futures

Realizing our medium- to long-term vision

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

Core Strategy III

Diversify and propel data services
into the next generation

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



● **Soundly implement the gradual transition of TOPIX**

1 Create new information services by utilizing innovations and partnerships

- Create new services and develop new customer bases by utilizing open and innovative frameworks
 - ◆ A Proof of Concept program with the aim of providing new contents (from Apr. 2019)
 - ◆ A data sandbox program to develop new customer bases (from Aug. 2019)
- Research investor needs and tailor data/information services to meet the needs

2 Build a next-generation system for disseminating information that employs API* & the 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

* API = Application Programming Interface

3 Develop indices & enhance operations in response to needs & external changes

- Strengthen ties and partnerships and leverage TSE brand in developing indices
- Raise robustness and efficiency of operation of an index calculation system by improving IT infrastructure for calculating indices and for managing basic data

4 Renovate TOPIX into properly functioning investable index

UPDATED

- Gradually transition TOPIX into an index which both functions as an investable index and represents the market



Realizing our medium- to long-term vision

- Drive initiatives in such areas as relationship building and R&D to evolve into an exchange where anyone can trade in a secure and easy way

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Core Strategy IV

Develop a foundation to support the future of our business and the society

Keep our markets robust as a market infrastructure by means such as developing and managing reliable IT systems and enforcing appropriate self-regulations. Strengthen cyber security measures and improve preparedness for the risk of natural disasters.



Core Strategy IV - Initiatives

- Strengthen internally sourced system abilities centered on the Center for Advanced Research and Development
- Further enhance sustainability-related initiatives

1 Bolster system bases, promote digital transformation, and develop highly-skilled IT personnel UPDATED

- Develop and manage IT systems that are secure and reliable for users (IT Master Plan)
- Promote digital transformation (DX), etc. utilizing the Center for Advanced Research and Development
- Develop IT personnel through promoting education on digitalization and specialist technology
- Consider better IT personnel/functions in the mid to long term
- Increase efficiency/sophistication of operations by replacing information systems and incorporating the latest technologies

3 Strengthen cyber security measures and launch the Kansai backup center in preparation for the risk of natural disasters

- Strengthen cyber security measures
- Advance construction of the Kansai backup center
- Improve stability of market operations with higher quality BCP

5 Raise financial literacy to achieve stable asset building and strengthening of market functions

- Implement more active efforts toward promoting the appeal of investment in individual stocks to retail investors
- Raise financial literacy and enhance education on economics/finance in response to aging population
- Promote education on investment in derivatives for asset-building

2 Further advance sustainability UPDATED

- Strengthen ESG-related information disclosure
- Look into the creation of structures for governance of ESG issues
- Research how to achieve carbon neutrality
- Support listed companies to proactively disclose ESG information
- Strengthen the ESG-related product lineup
- Provide training programs for listed companies
- Research the current situation of listed companies' ESG disclosure and consider wide-ranging information provision regarding this

4 Exercise optimal self-regulation that adapts to external changes UPDATED

- Conduct appropriate listing examinations in ways that reflect external changes and maintain/improve the depth of such examinations
- Review listing operations and soundly implement the changes in line with the market restructure, etc.
- Make market surveillance more sophisticated through strengthening system functions and adopting advanced methods
- Implement appropriate trading participant inspections and market surveillance to suit a comprehensive exchange

6 Strengthen business foundations UPDATED

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|---|--|
| <ul style="list-style-type: none"> ■ Develop human resources and advance work style reforms ■ Research global trends of regulations, etc. and take strategic steps ■ Improve R&D, etc. ■ <u>Improve the durability, etc. of market operations in the mid-/post-pandemic environment</u> | <ul style="list-style-type: none"> ■ Strengthen corporate communications, PR, and IR ■ Promote cooperation with foreign markets ■ Support Yangon Stock Exchange |
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Initiatives in Global Strategy

- Promote initiatives aiming for a more appealing Japanese market and better global competitiveness in all business areas
 - Reaffirm promoting ESG investment, etc. as a pillar of global strategy, as movement towards a low-carbon economy gathers pace worldwide
- Aim to continue being a leading market in the world as a pivotal trading venue in the APAC region

- 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
- Promote ESG investment and work towards achieving carbon neutrality

- Promote global cooperation with foreign exchanges, primarily in Asia, such as Japan-China ETF connectivity
- Advance the development of a next-generation cash trading platform that adapts to global trends and innovation
- Improve clearing services for better global competitiveness

■ Develop Japan's derivatives market into a globally competitive one through invigorating the comprehensive exchange

■ Improve connectivity of investors with arrownet global connect

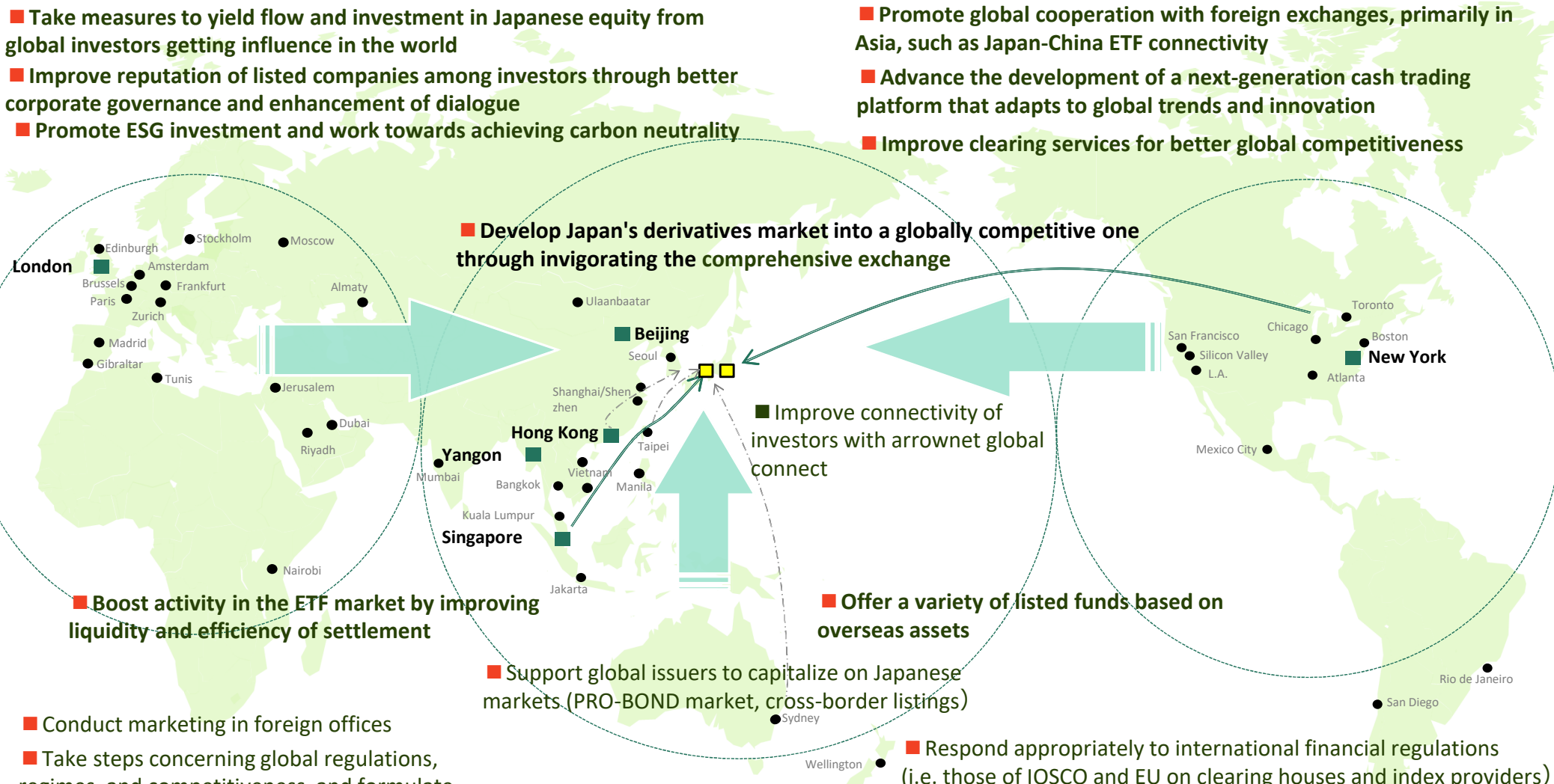
■ Offer a variety of listed funds based on overseas assets

■ Support global issuers to capitalize on Japanese markets (PRO-BOND market, cross-border 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*

■ Boost activity in the ETF market by improving liquidity and efficiency of settlement

- Conduct marketing in foreign offices
- Take steps concerning global regulations, regimes, and competitiveness, and formulate strategic measures on them



3rd Medium-Term Management Plan (2019-2021)

Financial Policies



Financial Targets and Capital Policy

- Achieve financial targets early without waiting for the final year
 - Increase investment into initiatives which take on future challenges, improve resilience, and fully implement stable market operations
- CAPEXs for the 3 years of the plan will be increased from approx.45.0 billion to approx. 50 billion**

Financial targets for the final fiscal year

	Financial targets	FY2020 results
Operating Revenue	JPY 130.0 bil.	JPY 133.3 bil.
Net Income <small>(attributable to owners of the parent company)</small>	JPY 50.0 bil.	JPY 51.3 bil.
ROE	15.0%+	16.6%

CAPEX

Total CAPEXs for 3 years **Approx. JPY 50 bil.**

Capital policy

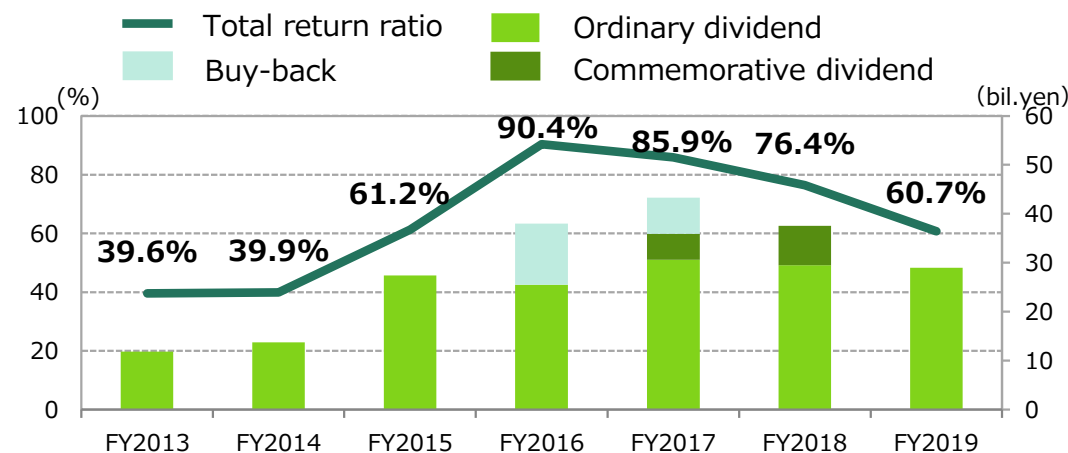
Support the sustainable development and evolution of the market by making constant investment while keeping a balance between shareholder returns and financial resilience for stable market operations

Maintain ROE of 10% in the mid- to long-term, that is above capital cost, regardless of market conditions

Return to shareholders

- Dividend payout ratio of approx. 60%
- Flexibly implement further shareholder returns in consideration of future investments, etc.

[Ref.] Historical records of total return ratios & value of return to shareholders



(Ref.) Financial Results during 3rd Medium-Term Management Plan

Financial Results during 3rd Medium-Term Management Plan

	FY2019 Results	FY2020 Results	FY2021 Forecast※
Operating Revenue	JPY 123.6 bil.	JPY 133.3 bil.	JPY 130.0 bil.
Net Income <small>(attributable to owners of the parent company)</small>	JPY 47.6 bil.	JPY 51.3 bil.	JPY 45.5 bil.
ROE	16.3%	16.6%	Approx. 14%

Market conditions

	Results	Results	Assumptions for Forecast
Cash Equity Products <small>(Average Daily Trading Value)</small>	JPY 3.08 tril.	JPY 3.48 tril.	JPY 3.45 tril.
Derivative Products <small>(Annual Trading Volume)</small>	433 mil. contracts	382 mil. contracts	400 mil. contracts

※ Deviation from FY 2021 forecast may emerge depending on external factors such as market conditions



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