



JPX
JAPAN EXCHANGE
GROUP

3rd Medium-Term Management Plan

FY2019 ▶ FY2021

March 28, 2019
Japan Exchange Group, Inc.



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(Forward-Looking Statements)

These materials contain statements that constitute forward-looking statements. Some of these statements express, for general management purposes only, group performance targets. Forward-looking statements are not a guarantee of future performance. These statements are based on assumptions, which may prove incorrect, and reflect our management’s current views or expectations with respect to future events or results rather than historical facts. These forward-looking statements involve risks and uncertainties that could cause our actual results to differ materially from those we currently anticipate. Potential risks and uncertainties include, without limitation, that: (1) because our operations are restricted by law, we may experience competitive disadvantages if we are unable to receive in a timely manner or at all regulatory approvals necessary to pursue new business opportunities and new regulations or the manner of application or interpretation of existing regulations could restrict our current business or limit future business opportunities; and (2) because our group revenues are significantly affected by the level of market activity, they could be materially adversely affected by a general economic downturn, particularly in Japan, resulting in a reduction in trading volumes and liquidity of TSE-listed products.

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Review of 2nd Medium-Term Management Plan(2016-2018)

- Expect to meet the target on net income in the last fiscal year (FY2018). Met the target in advance 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 new fields such as index and information services, co-location, and clearing of OTC JGBs.

Term for 2nd Medium-Term Management Plan				Targets in the last fiscal year of 2nd MTMP
FY2016	FY2017	FY2018 earnings forecast		
Operating Revenue (JPY)	107.8 bil.	120.7 bil.	120.0 bil.	123.0 bil.
Net Income* (JPY)	42.1 bil.	50.4 bil.	48.0 bil.	48.0 bil.
ROE	16.4%	19.0%	17.2%	Approx. 17%

*attributable to owners of the parent company

Main Achievements

Asset building gained momentum



- More ETF holders (+129,000)
- New ETF market making incentive scheme
- New global environmental indices

Corporate value of listed companies increased



- Revised corporate governance code
- Yearly IPOs count steady at 80s to 90s
- 43 new ETFs

Reinforced market structure



- Shortened JGB settlement cycle(to T+1)
- Enhanced backup capabilities in Tokyo and Osaka
- Strengthened market surveillance based on HFT registration regime

Entered new fields of exchange business



- Advanced POC testing for utilization of Blockchain
- Incorporated AI into market surveillance
- Listed products related to sustainability

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

Management Policy and Four Core Strategies

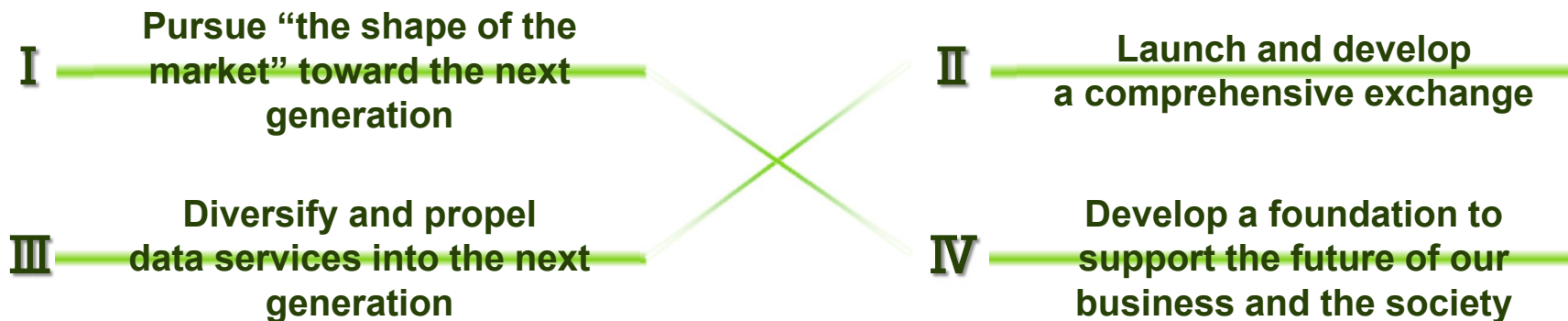


Sail to the future. Keep the market secure.

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.

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

Four Core Strategies



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 various ways, from reviewing TSE’s market structure and improving corporate governance to moving to T+2 stock settlement cycle.



Core Strategy I – Initiatives

1 Build market platforms that adapt to market needs and external changes

- Replace the platform for cash product trading (arrowhead) and systems for off-auction trading and index calculation
- Develop a next-generation derivative platform that enables timely launch new products
- Conceptualize a next-generation platform for cash products that meets diverse trading needs and adapts to global trends and innovation

3 Shorten stock settlement cycle & improve clearing services for better global competitiveness

- Shorten stock settlement cycle to T+2
- Boost activity in the ETF market via introduction of creation/redemption services
- Refine margin rules and framework for listed derivatives and increase the use of clearing services

5 Improve rules for ETFs and promote them to boost activity & take steps for a market where anyone can invest with ease

- Boost activity in the ETF market via updates of its Market Making Incentive Scheme and investor-directed promotion
- Take steps for a market that facilitates trading for a wide-range of investors
- Boost trading of Flexible Options and such non-flagship products as TSE Mothers Index Futures

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

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

- Review TSE's market structure
- Further enhance substantial aspects of corporate governance at listed companies and cultivate an environment conducive to more dialogue between investors and listed companies

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

- Improve marketing to attract more flow from retail investors and develop a new system for trading participants
- Improve marketing and strengthen ties to attract more flow from global investors
- Revamp outreach to global investors to attract more investment in Japanese equity

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

- 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)
- Create a greater variety of investible products (focus on: diversifying ETF pool and developing PRO-BOND, REIT, and infrastructure funds markets)

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Core Strategy II

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.



Core Strategy II – 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



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



Core Strategy III – 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 the 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

* 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
- 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

- 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 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.

1 Develop and manage IT systems that are secure and reliable for users

* Details in "IT Master Plan"

2 Set up a backup center to improve reliability of the market in Japan

- Launch a backup center and develop backup systems smoothly
- Improve stability of market operations with higher quality BCP

4 Exercise optimal self-regulation that adapts to external changes

- Conduct listing examinations and monitor listed company compliance in ways that reflect external changes (such as review 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
- Inspect trading participants optimally to reflect external changes

6 Promulgate ESG investment and promote sustainability to contribute to SDGs (Social Development Goals*)

- 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)

* 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

3 Bolster system bases & develop highly-skilled personnel to turn IT into our source of competitiveness

- 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.

5 Support asset building for aged population & raise financial literacy among less-experienced investors

- 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

7 Strengthen business foundations

- | | |
|---|--|
| <ul style="list-style-type: none"> ■ Develop human resources and advance work style reforms ■ Research global regulations, regimes, and competitiveness and take strategic steps ■ Improve R&D, etc. | <ul style="list-style-type: none"> ■ Strengthen corporate communications, PR, and IR ■ Promote cooperation with foreign exchanges and support YSX ■ Make operations efficient and sophisticated |
|---|--|

Primary Targets on Core Strategies

I

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

- 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**
- Aim for **IPO** count of approx. **100/year**

II

Launch and develop a comprehensive exchange

- Achieve early **integration with TOCOM**
- Achieve **integration of clearing houses**
- Raise **trading volume** by synergy

III

Diversify and propel data services into the next generation

- Diversify channels incorporating **API, etc. in FY2020**
- Create **10 new services** and attract **150 new clients**

IV

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

- Launch **Kansai backup center** in phases **starting in FY2021**
- Build industry-shared **Blockchain/DLT* infrastructure in FY2021**
- Contribute to **10% annual increase** in the number of users of **Tsumitate NISA & iDeCo** via initiatives to raise financial literacy

* Distributed Ledger Technology

Initiatives in Global Strategy

Aim to continue being a leading market in the world as a pivotal trading venue in the APAC region where global wealth is accumulated via vital 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

- 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
- Raise competitiveness by shortening stock settlement cycle (to T+2)

■ Evolve into a commodity derivative market with true pricing function via early launch of a comprehensive exchange

■ Improve connectivity of investors with arrownet global connect

■ Promote the variety of listed funds underlying foreign assets

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

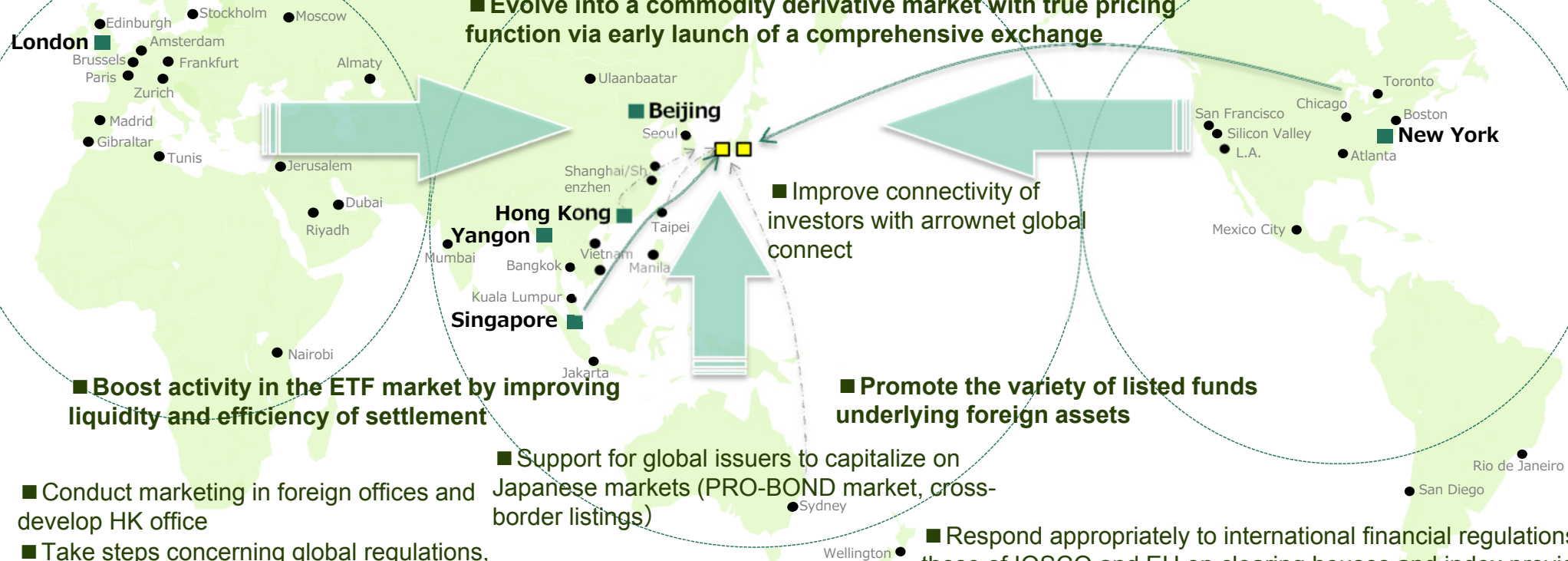
■ Conduct marketing in foreign offices and develop HK office

■ Take steps concerning global regulations, regimes, and competitiveness, and formulate strategic measures on them

■ Support for 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



大阪取引所

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

Financial Policies



Financial Targets and Capital Policy

- Implement forward-looking measures while investing in IT and BCP to fulfil our responsibility to the market.
- By implementing our core strategies, aim to increase bases for revenue generation such as trading volumes in the mid- to long-term.

Fiscal targets in the last fiscal year

Operating Revenue	JPY 130.0 bil.
Net Income (attributable to owners of the parent company)	JPY 50.0 bil.
ROE	15.0%+

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

CAPEX

For replacing core systems, building a Kansai backup center, and taking forward-looking measures

Total CAPEXs for 3 years **Approx. JPY 45.0 bil.**

Capital policy

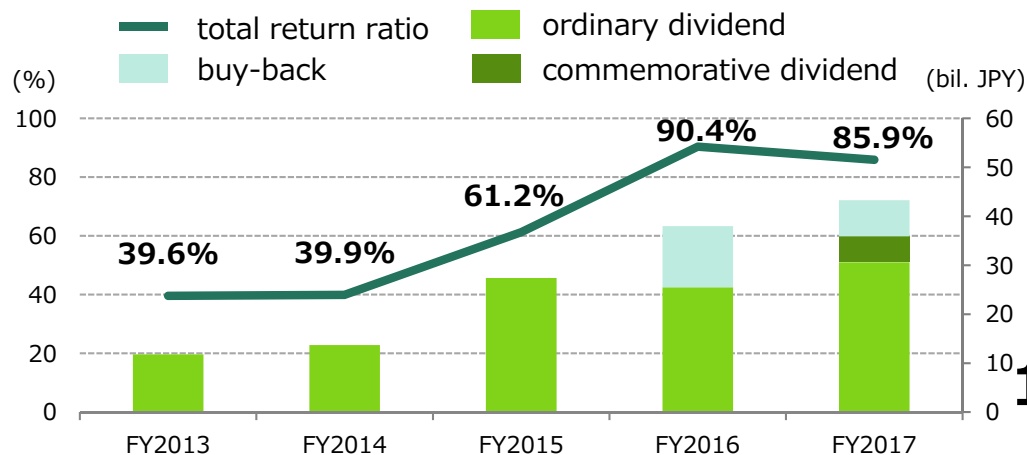
Support sustainable development and evolution of the market with constant investment while keeping balance between return to shareholders and fiscal robustness for stable management of the market

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

Return to shareholders

- Dividend payout ratio of approx. 60%
- Implement further return to shareholders flexibly in consideration of future investments, etc.

Historical records of total return ratios & value of return to shareholders (for reference)





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Objective of IT Master Plan

The IT Master Plan is, as an accompaniment to the Medium-Term Management Plan, formulated to clearly communicate JPX's direction and strategy on IT internally and externally and drive business by aligning management and IT policies for achieving business targets set in the Medium-Term Management Plan.

Basic Concept of IT Master Plan

We design the vision for JPX's IT divisions looking ahead 10 years into the future. Based on such mid- to long-term vision, we formulate and advance measures that contribute to achieving the targets in the 3rd Medium-Term Management Plan.

JPX IT Divisions' 10-Year Vision

1.

IT as source of competitiveness and key to maintaining industrial edge

The exchange is a systems infrastructure, and IT lies at the foundation for driving our business forward and creating new business. Thus, **JPX identifies IT as its source of competitiveness and the key to maintaining its edge in the industry. We incorporate the latest in IT to provide highly reliable and convenient market infrastructure and services.**

2.

Maximal use of rapidly evolving technology

Aiming for stable market operations and apt response to changes in the market environment, **business administration and IT collaborate closely in market operations. As a market infrastructure provider, JPX makes maximal use of evolving technology at an accelerated pace and supports market operations via the use of technology.**

Approach for Building IT Strategy

IT divisions need to stably operate markets while responding to changes based on the basic policy of 3rd Medium-Term Management Plan.

Core Strategies in 3rd MTMP

**"Sail to the future.
Keep the market secure."**



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

Approach for Building IT Strategy

With JPX running various systems and businesses, IT divisions will prepare themselves to respond to diverse changes.

Sustainable
market
operations

- ✓ Steady implementation of existing development/project
- ✓ Reliability, efficiency, and availability

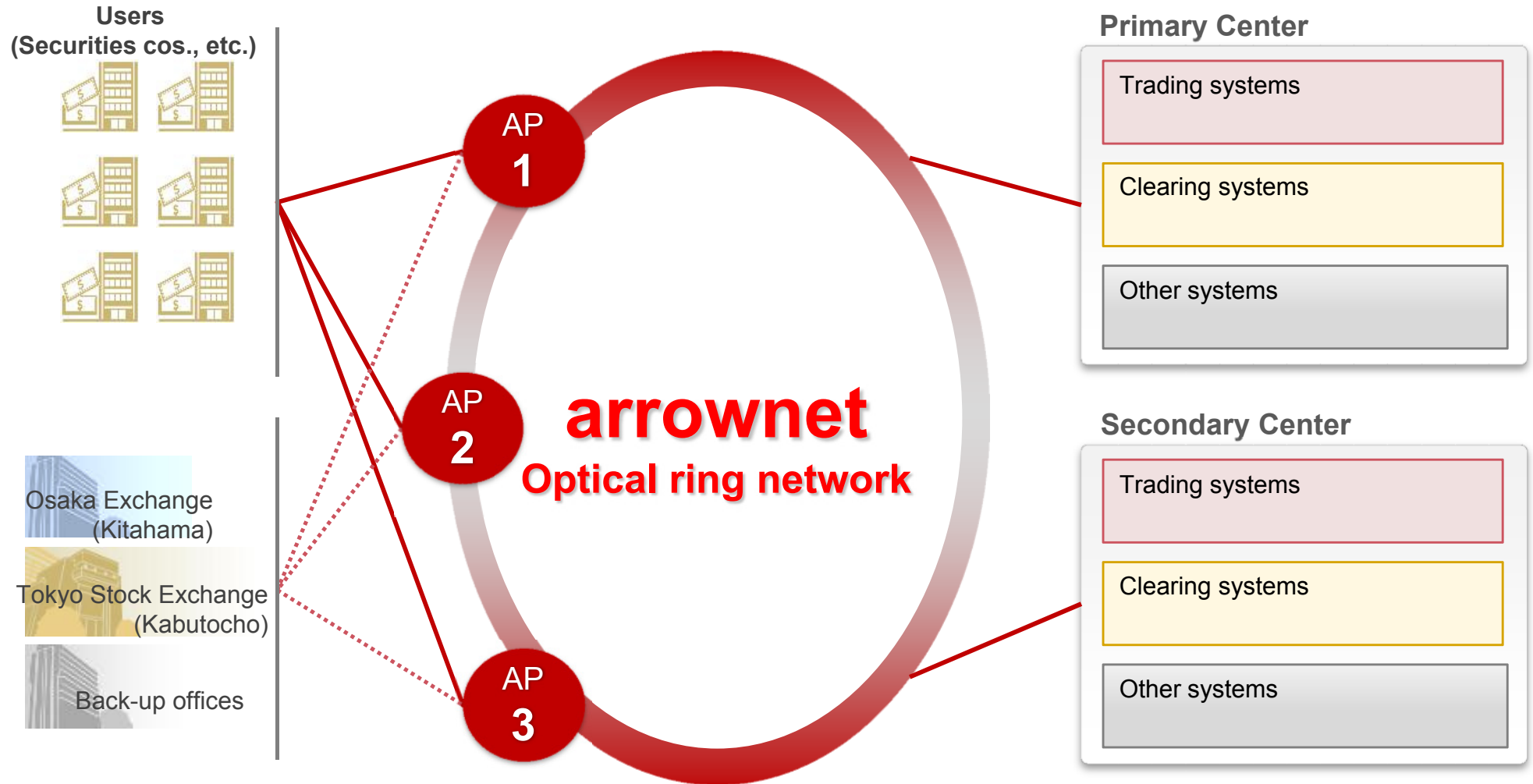
IT agility
amid
changes

- ✓ Adapt to drastic changes in the external environment
- ✓ Catch up with technology diversifications and commoditization

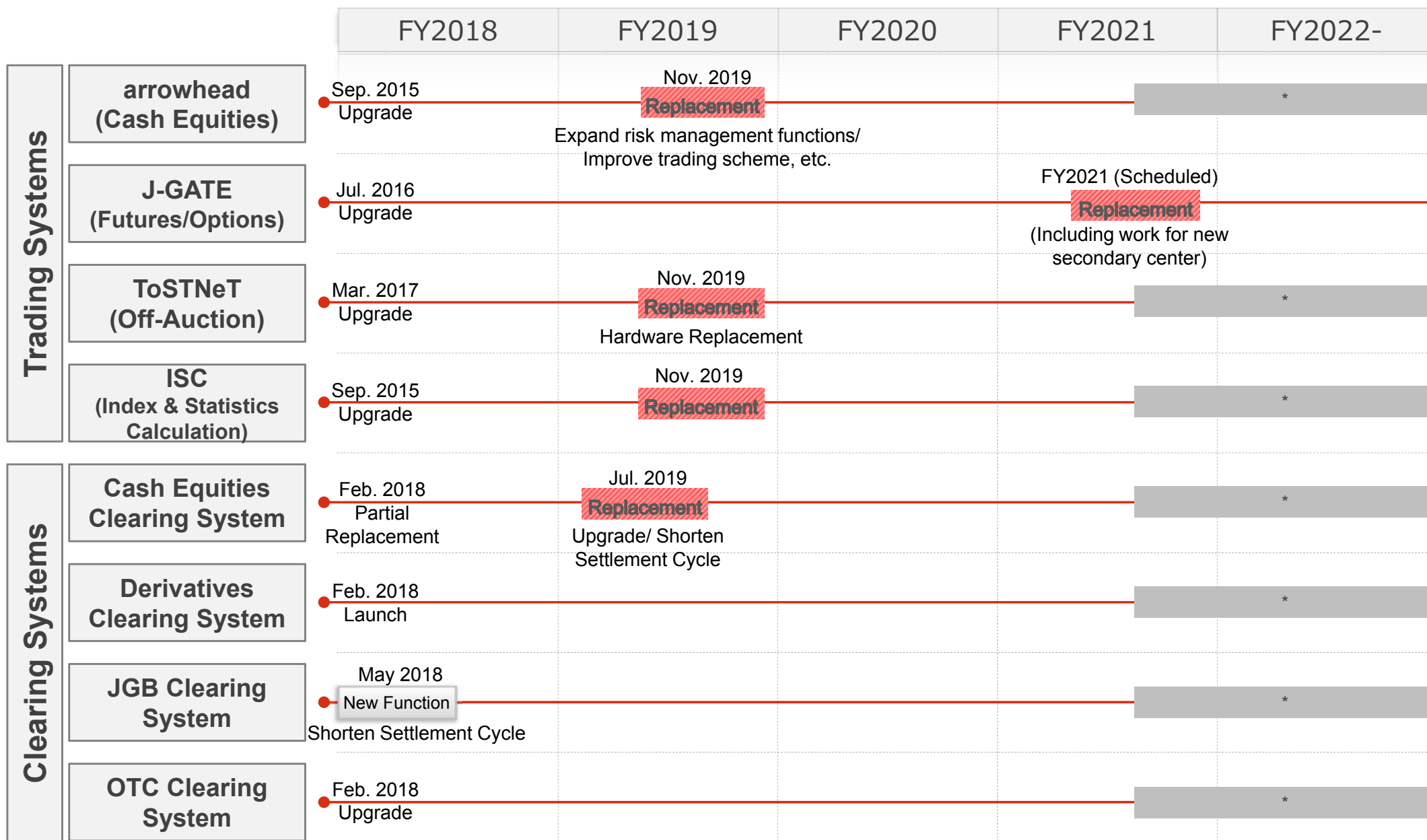
Specific Measures

Med-term Management Plan	Sustainable market operations		IT agility amid changes	
I. Pursue “the shape of the market” toward the next generation	I.-(1) Improve reliability and convenience via system upgrades		I.-(2) Raise the topline by building new platforms	
II. Launch and develop a comprehensive exchange	II.-(1) Realize flexible launch of new products and functions			
III. Diversify and propel data services into the next generation			III.-(1) Use accumulated information resources	III.-(2) Diversify channels that enable flexible information distribution
IV. Develop a foundation to support the future of our business and the society	IV.-(1) Improve BCP measures by building new secondary center	IV.-(2) Enhance stability by using new technology	IV.-(5) Proactively adopt advanced technology	IV.-(6) Train/develop human resources to use technology
	IV. -(3) Optimize operations via cloud and automation	IV. -(4) Strengthen measures against more complex cyber-attacks		

Overview of JPX Systems (As of April 2019)



IT Systems Plan



* Details of the system architecture at the new secondary center will be subject to future discussions to match the replacement schedule of the relevant systems.



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