

Status of digitalization efforts in financial monitoring

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Japan Financial Services Agency



Contents

I. Background

II. Summary

III. Centralization of data requirements with the Bank of Japan

IV. Utilization of granular data

V. RPA (Robotic Process Automation)

VI. RegTech/SupTech ecosystem

I. Background

- In Japan, the financial environment has been changing dramatically due to the declining population, the aging of society, and the prolonged low interest rate environment. Against this backdrop, IT technologies such as RPA, AI, cloud, and API have reached the diffusion stage, and progress in digitalization utilizing these technologies is remarkable.
- The progress of digitalization (Digitalization) utilizing IT is divided into two categories: (i) initiatives aimed at improving operational efficiency, such as digital conversion of analog information, which is commonly referred to as “Digitization,” and (ii) initiatives aimed at reforming existing business models, such as providing new value to customers, which is referred to as “Digital Transformation.”
- Japan's existing financial institutions and new non-financial players are working on digitalization from the approaches described in (i) and (ii) above. However, many of the existing financial institutions are focusing on digitization.
- The JFSA is currently reviewing its inspections and supervision, and it is required to improve the sophistication and efficiency of its financial monitoring. The enhancement of the sophistication and efficiency of financial monitoring is inseparable from the sophistication and efficiency of data collection, accumulation and analysis functions.
- Therefore, in light of the trend toward digitalization, including the advancement of IT technology, initiatives were started to introduce SupTech※ to support the sophistication and efficiency of financial monitoring from the last business year (operation year 2017).

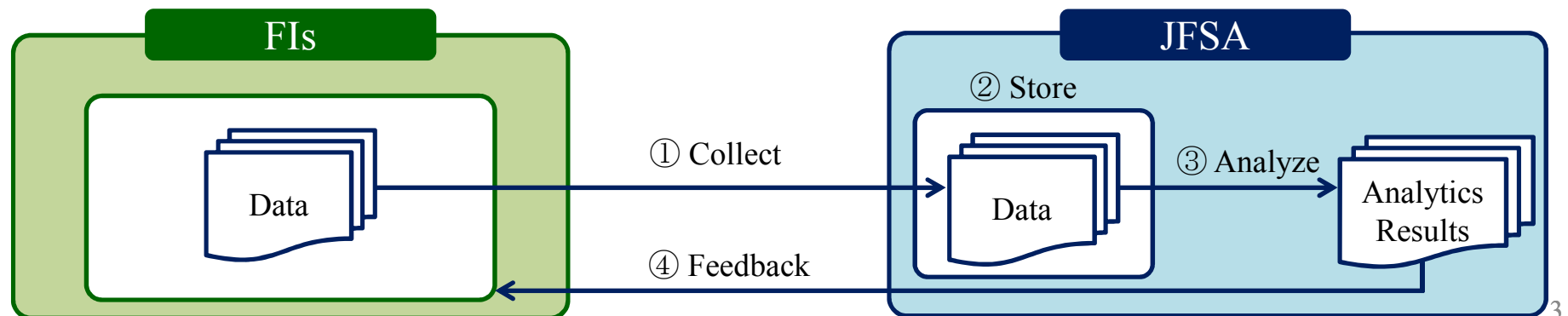
※ Abbreviation of Supervisory Technology. It is used by regulatory and law enforcement agencies in the sense of IT technology used for the purpose of enhancing the sophistication and efficiency of inspections and supervision. RegTech (Regulatory Technology) is used by private financial institutions to efficiently respond to financial regulations using IT.

I. Background

Progress of digitalization in Japan

	Digitalization	
	Digitization	Digital Transformation
Main body	<ul style="list-style-type: none">● Focus on FIs	<ul style="list-style-type: none">● Focus on major/new FIs and FinTech companies
Concept	<ul style="list-style-type: none">● Digital conversion of analog information● Promotion of operational efficiency	<ul style="list-style-type: none">● Creating added value by utilizing digitized big data with IT● Change in business model
Technology	<ul style="list-style-type: none">● RPA● API <ul style="list-style-type: none">● Cloud● AI, etc.	<ul style="list-style-type: none">● Same as on the left
Utilization of data	<ul style="list-style-type: none">● Only use divisional units and silos	<ul style="list-style-type: none">● Promoting new collection of Big Data and cross-organizational utilization

Flow of data between FIs and JFSA



II. Summary

■ The JFSA's current initiatives are as follows.

【Viewpoint of operational efficiency】

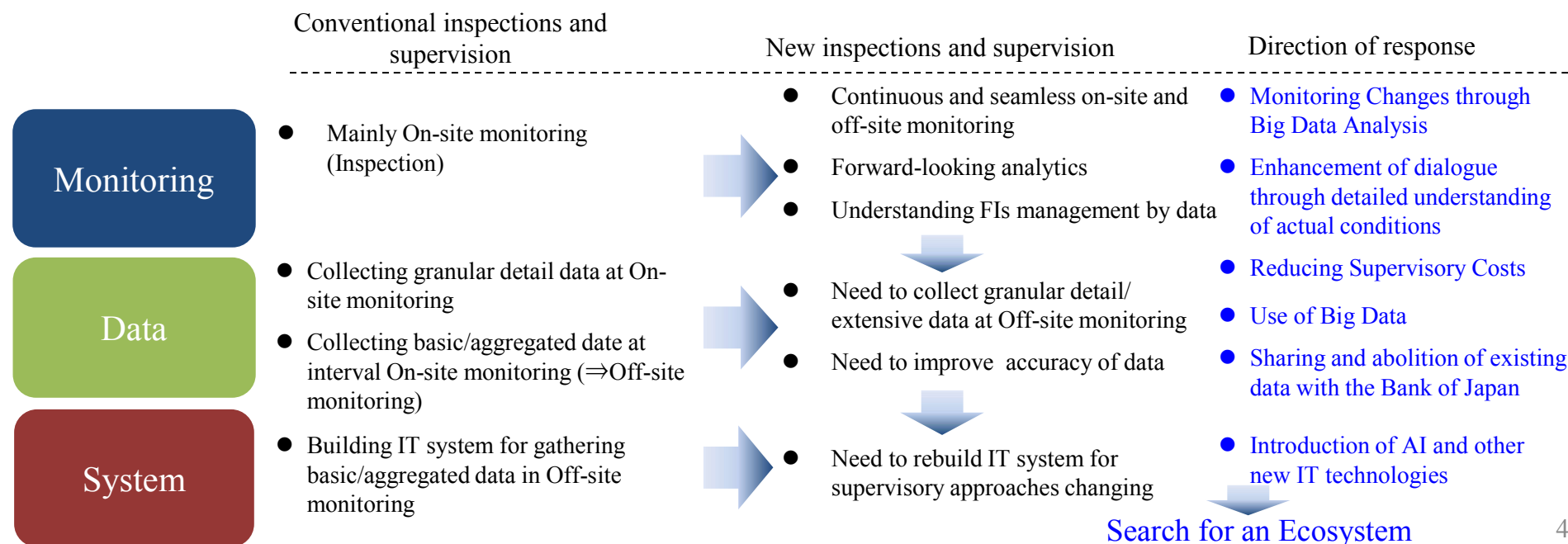
① Centralization of data requirements with supervisors (Bank of Japan)

② RPA (Robotic Process Automation)

【Viewpoint of analytical sophistication】

③ Utilization of granular data

In addition, ④ We also explored the concept of RegTech/SupTech ecosystem.



III. Centralization of data requirements with the Bank of Japan

[Issue]

- Data collected by the JFSA from financial institutions is duplicated and similar to data collected by the Bank of Japan from financial institutions. Such a situation imposes a considerable burden on financial institutions.
- From the viewpoint of reducing the cost of supervision of financial institutions, it is necessary to (i) centralize the data collected from financial institutions that is similar to those collected from them as much as possible, and (ii) unify the reporting parties after establishing a system to share data securely between the JFSA and the BoJ.

[Previous Initiatives]

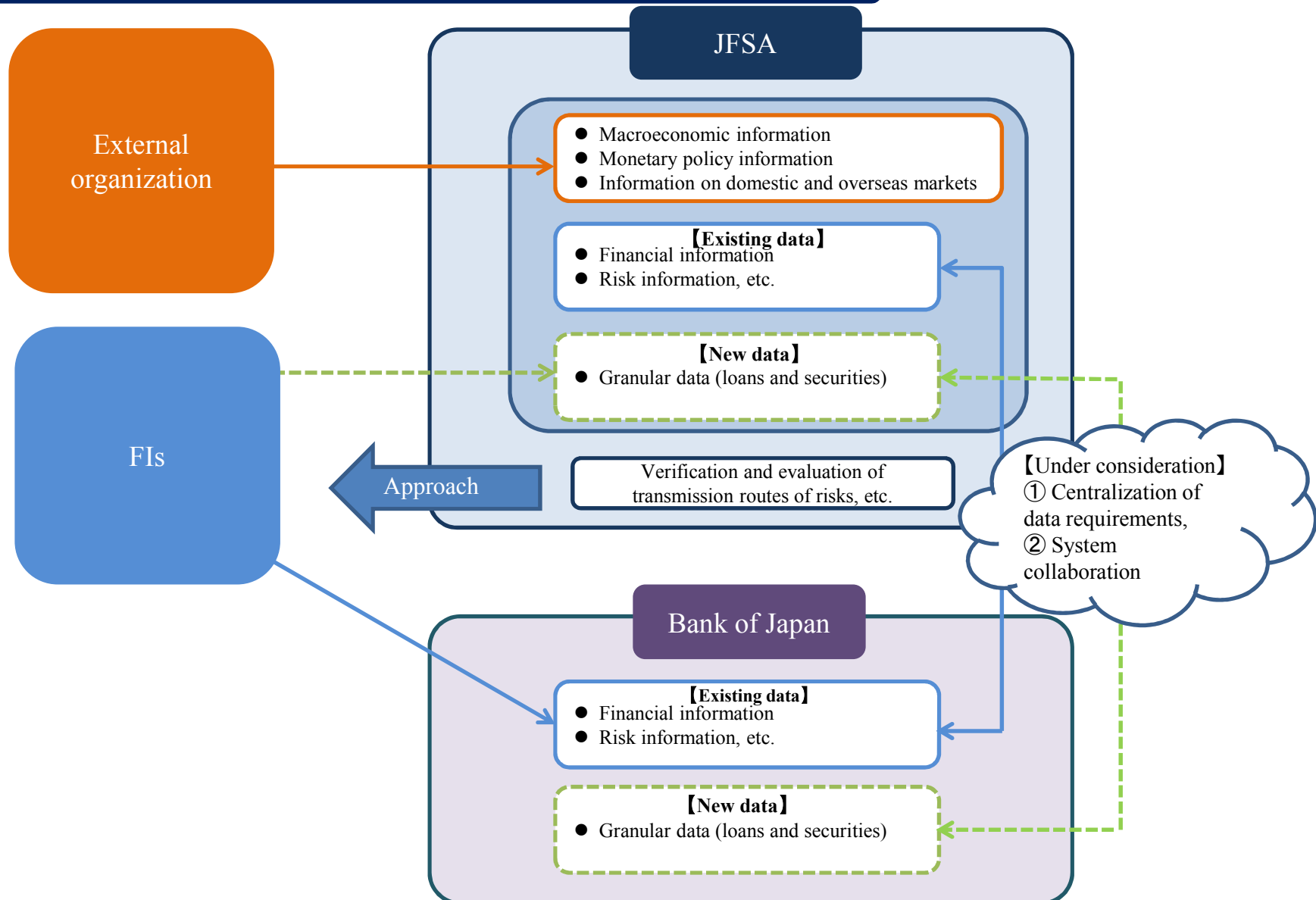
- As a result of coordinating centralization of similar data between the JFSA and the BoJ, the two types of data will be unified from September this year. In addition, the JFSA and the BoJ began examining the ideal form of data sharing.

[Policy for Future Initiatives]

- In the next business year, similar data will be identified and unified, and concrete details and schedules for data sharing will be studied.

III. Centralization of data requirements with the Bank of Japan

Centralization of Data and System with supervisors <image>



IV. Utilization of granular data

[Issue]

- Regarding the utilization of data collected from financial institutions, there is room for improvement (particularly for the regional banks) with regard to: (1) detailed understanding of the portfolio and regional characteristics of individual financial institutions in dialogue between the JFSA and FIs; (2) feedback information from the JFSA to FIs; (3) efficient utilization of data between relevant institutions that require the same type of data; (4) reduction of the burden on the submission of non-regular data.

[Previous Initiatives]

- In this operation year, we will examine detailed data on loans and securities centered on financial intermediation (hereinafter referred to as detailed data) and management methods at the JFSA using consulting.

[Policy for Future Initiatives]

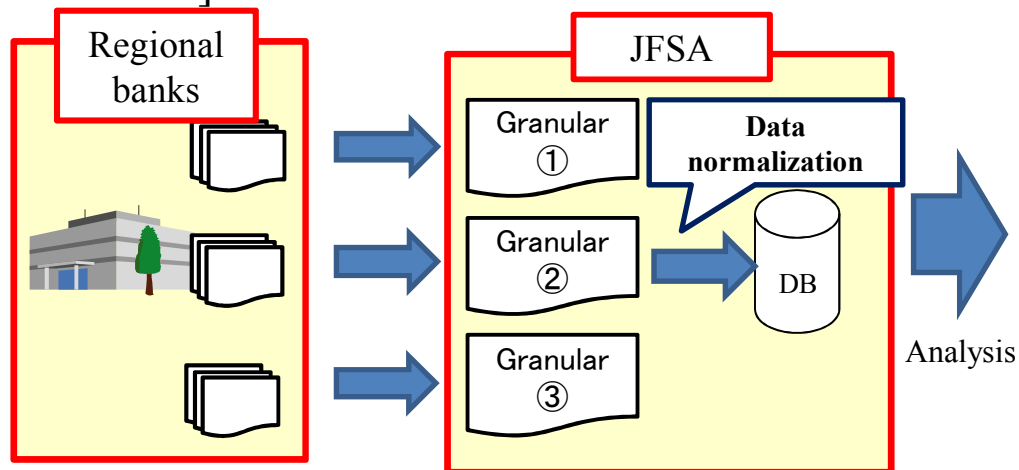
- From this summer onward, in order to verify the feasibility of collecting detailed data and the administrative burden, collaborative verification work with several regional banks will be carried out. Considering the collaborative verification work, we will consider how to collect detailed data in the future.

IV. Utilization of granular data

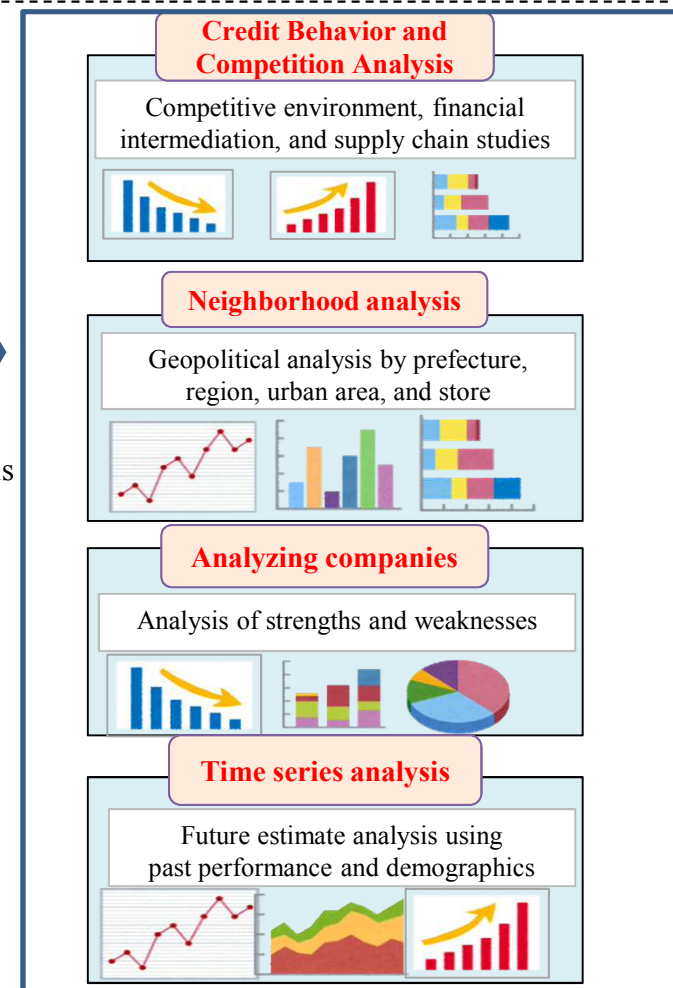
Outline of granular data's PoC ① (Data exchange method)

- In granular data's PoC, from the perspective of reducing the burden on the regional banks, the JFSA intends to accept granular data held by the banks in a flexible manner and to normalize the data, instead of the format in the traditional compilation tables.

[Overview of Data Exchange Method and Data Utilization]



(NOTE) In this PoC, granular data on "corporation loans" and "investment trusts, etc." will be used.



IV. Utilization of granular data

Outline of granular data's PoC ② (main content)

- In collaboration with regional banks, the JFSA will examine (1) the feasibility of data collection and processing, (2) the feedback of data based on the analysis, and (3) the utilization of data.

[Outline of planned verification work]

Items subject to verification	Stakeholders	Verification methodology
(1) Feasibility of data collection and processing	① Collecting	Regional banks → JFSA The regional banks examine whether data can be submitted from the following viewpoints. ➤ Holding of Granular Data ➤ Time and Load Pertaining to Submission of Granular Data
	② Processing	JFSA Detailed procedures for data processing such as cleansing, mapping, and master management are organized. JFSA verifies how much burden JFSA is able to bear.
(2) Feedback of data based on the analysis	① Analysis	JFSA , BoJ Verify the sufficiency of the data required for the analysis and how the analysis should be.
	② Feedback	JFSA→ Regional banks Based on the results of the analysis, feedback methods of data that contribute to the utilization of data by regional banks and the sophistication of risk management were examined. ➤ Utilization of Corporate My Number ➤ Reduction of analytical data from a regional perspective
(3) Utilization of data	JFSAand Regional Banks→ Bank associations, etc.	Consider the possibility of efficient use of data, such as cooperation with bank associations, etc.

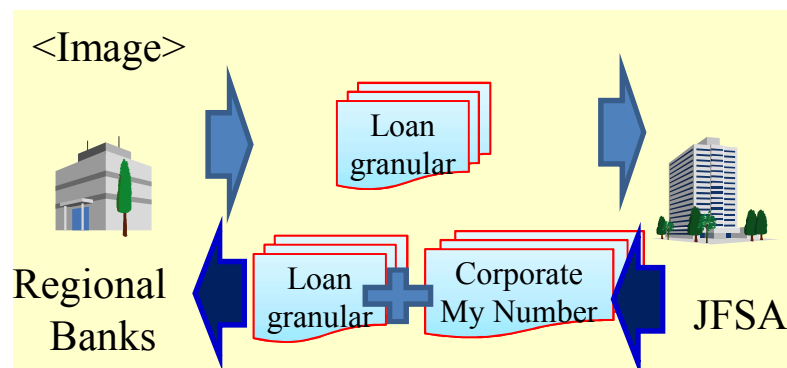
IV. Utilization of granular data

Outline of granular data's PoC ③ (Utilization of data)

【Utilization of Corporate My Number】

- In Japan, a 13-digit corporate numbering system (so-called "Corporate My Number") was launched in 2016 for corporations in order to improve administrative efficiency and convenience for the public. There are no restrictions on use and they are posted on the NTA website.
- Deposit-taking FIs are progressively developing their facilities.

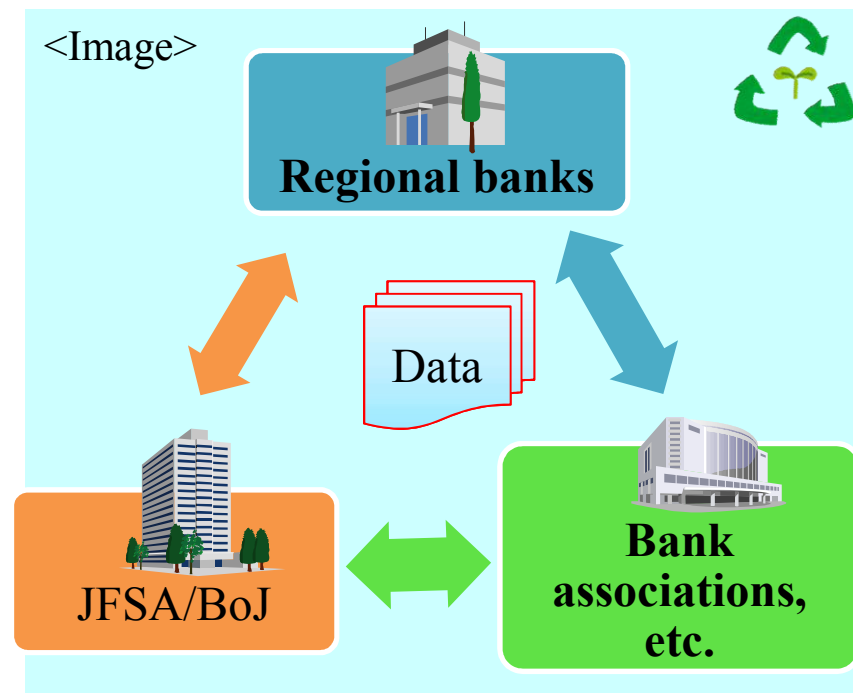
⇒ In this PoC, the JFSA added the Corporate My Number to the loan granular data received from the regional banks, and returned them to the banks.



【Ecosystem <Data Recycling>】

- Lending information is provided to different parties (such as Bank associations) for different purposes as well as to supervisors.

⇒ This PoC verifies whether the burden on the regional banks can be reduced by sharing some of the lending information received by the authorities with Bank associations.



V.RPA(Robotic Process Automation)

[Issue]

- In financial monitoring, as part of the review of inspections and supervision, on-off monitoring is being promoted, and the importance of data analysis in off-site monitoring is increasing more than ever before. The workload of data analysis has also increased.

[Previous Initiatives]

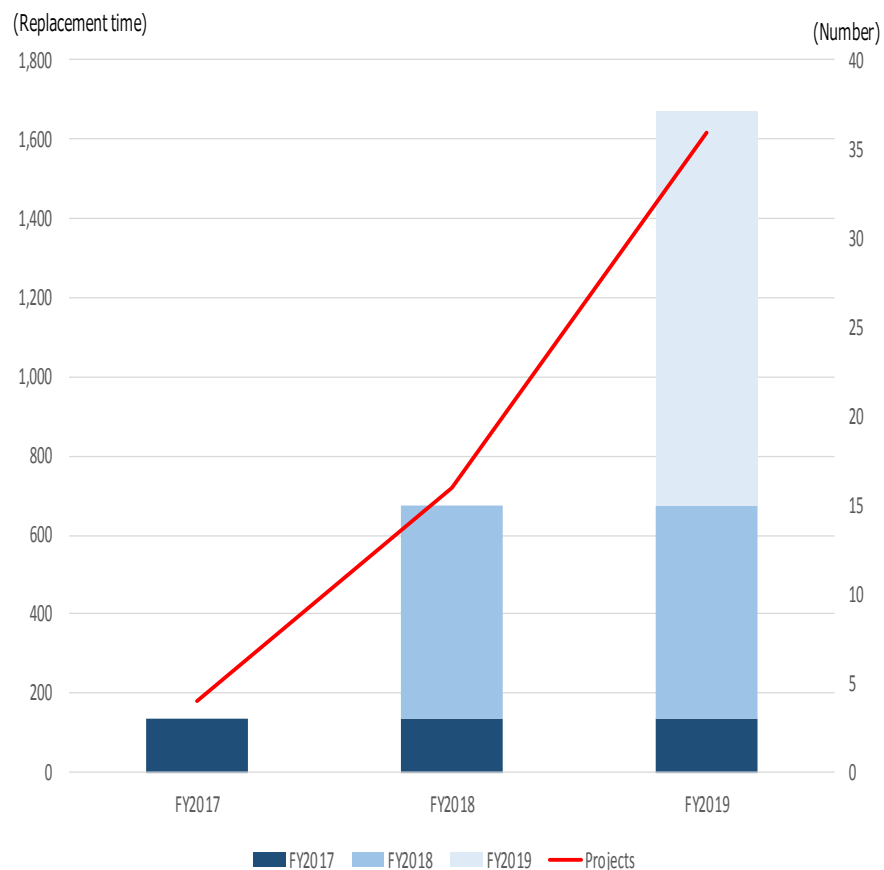
- Since many routine tasks are carried out on PCs in the data analysis work, concrete studies were conducted from fiscal 2017, including PoC, with the aim of introducing RPAs, which are being introduced in the private sector, in the data analysis work for financial monitoring.
- Based on the PoC, the management system was established in FY2018, and the full-fledged introduction of the system was started ahead of other ministries and agencies, resulting in the automation of 12 operations. This will improve the accuracy of analytical data and improve the productivity of monitoring staff (increase the allocation of time to data analysis based on deliverables).

[Policy for Future Initiatives]

- In fiscal 2019, it plans to automate about 20 operations, and it intends to continue working to improve the sophistication and efficiency of its data analysis operations.

V.RPA(Robotic Process Automation)

Replacement time and number of projects using RPA



RPA use cases

Classification	Examples of RPA-based operations	Percentage of automated operations
Data Downloading	Downloading data from the internal system	83%
	Downloading data from external sites such as the Bank of Japan and EDINET	81%
Concentration Transcribing	Collection of materials submitted by local finance bureaus and FIs	96%
	Preparation of materials and emails to FIs	90%
Others	Canceling the mail attachment password and saving it to a shared folder	80%
	Initialization of Overtime Hours Entry Form	100%

VI. RegTech/SupTech Ecosystem

- As digitalization advances, financial institutions are expected to collect and accumulate digitized data and utilize it to conduct data-driven management. Nevertheless, some argue that the current situation is still insufficient, as evidenced by the limited use of data in the collection and accumulation of data on a sector-by-sector basis within FIs.
- On the other hand, the JFSA conducts financial monitoring by gathering, accumulating, and analyzing (using) data within FIs, so it is necessary to respond without delay to the utilization of data by FIs. However, there are limitations in the response of conventional long-term system development.
- In light of these circumstances, in order to resolve the various issues surrounding the collection, accumulation, and utilization of data by FIs and the JFSA, it is necessary to establish a system (RegTech/SupTech ecosystem) in cooperation between the public and private sectors in the future.
- The RegTech/SupTech ecosystem needs to benefit FIs and respond flexibly to various needs. The concepts currently considered are as follows.

Effectiveness	Internal management of FIs and enhancement of financial monitoring by Supervisor
Efficiency	Lower cost of FIs' management and regulatory reporting and system for FIs and Supervisor
Flexibility (Connectivity)	Can respond to player in new technologies and non-financial fields
Timeliness (Real-time)	Participants grasp information in real time
Interactivity (Data sharing)	Shared by participants rather than a one-way system for reporting
Simplicity	Developed into an agile simple system, not a conventional heavy and long-term developing system
Confidentiality	Ensure confidentiality of shared information

VI. RegTech/SupTech Ecosystem

- In order to realize this concept in the future, the JFSA will invite the ideas from FIs for more sophisticated and efficient data collection, accumulation, and analysis (utilization) between FIs and the JFSA, and based on that, the JFSA will conduct a demonstration experiment in cooperation with FIs.
- With regard to cases where it is deemed appropriate to build a new IT system through public-private partnerships, consideration of the system will be conducted with the expansion of covered areas. Possible areas of consideration are as follows.

Possible areas of consideration

	Project	Content	Benefit (FIs and JFSA)
Data Collection and Storage	<ul style="list-style-type: none"> ● Data sharing through API collaboration ● Web-based research 	<ul style="list-style-type: none"> ● A system in which the JFSA and FIs are linked to API, and the JFSA checks various reports through the system in a timely manner, rather than receiving reports from FIs. ● A variety of questionnaire surveys conducted by the JFSA were conducted on a web-based basis. 	<ul style="list-style-type: none"> ● Reducing the reporting burden on FIs ● Improvement of the effectiveness of monitoring by the JFSA ● Reducing the reporting burden on FIs ● Easy to compile, maintain, and manage by the JFSA
Data Analysis and Utilization	<ul style="list-style-type: none"> ● Utilization of KYC data 	<ul style="list-style-type: none"> ● A system that encourages the use of KYC data within FIs and contributes to the improvement of credit judgment, etc. 	<ul style="list-style-type: none"> ● Adding Value to Risk Management, etc. of FIs