Alternative Data Factbook 2024

"Pace of growth in data usage has slowed but become more diversified"

February 2025





Introduction

We are pleased to publish the 2024 edition of the Alternative Data FACTBOOK. This FACTBOOK has been compiled by Masato Koike and Kenji Suganuma, senior researchers at SOMPO Institute Plus, Inc., on behalf of the Japan Alternative Data Accelerator Association (hereafter JADAA). We have been conducting an annual survey of JADAA members on the current status, future prospects and challenges of alternative data use in Japan, and this is the third report. We would like to take this opportunity to express our sincere gratitude to all the JADAA members for their cooperation.

This type of regular survey on use of alternative data is unique and unprecedented in Japan. Reflecting the diversity of JADAA members, the results of the survey are broken down into three groups: (1) data purchasers, (2) data providers, and (3) data analysis contractors who act as intermediaries between the two. We therefore can find how the trends in the responses are different across the respondent's position. We believe that this survey provides useful information not only for JADAA members, but also for a lot of people who are interested in using alternative data in their businesses and research. We would be grateful for your continuous support, and if you could give us your opinions and requests regarding the questions, answers and analysis in this survey.

We have added the subtitle 'Pace of growth in data usage has slowed but become more diversified' to this 2024 edition. As this is the third time that we have conducted the survey for the FACTBOOK, we are now able to grasp the latest changes in trends in the use of alternative data by comparing the results with previous surveys, although respondents are not exactly the same each time.

Through the comparative analysis, we find that

(1) The pace of increase in expenditure on alternative data use has slowed down after the remarkably high growth observed in previous years.

(2) On the other hand, there has been a greater expansion in the content and form of data, and also in the fields where they are used.

(3) In addition, there has been a gradual increase in the number of staffs in purchasers, who originally had fewer staffs specializing in alternative data than data providers and analysis contractors.

In terms of demand for alternative data, most respondents replied that it had not decreased, which implies that the growth and development of the alternative data industry will continue in the future. For more information, please read the body of the FACTBOOK or the summary document.

In addition, this latest edition includes new questions on artificial intelligence (AI). We find a mixed results that half of respondents use AI with alternative data, while the other half do not. Nevertheless, many respondents show positive attitudes towards using data with generative AI in the future.

You may not easily understand a close relationship between AI and alternative data. AI analysis, however, is inherently well-suited to use of big data, because AI algorism does not require a rigid framework such as a predetermined linear functional form between variables, allowing the data themselves to determine the form. Given that most of alternative data are big data, use of alternative data will highly likely to grow with increasing use of AI.

On the other hand, as with previous information technology innovations such as the internet and smartphones, there is a concern that progress in AI technology may exacerbate productivity gap between those who can utilize it and those who cannot. Through my activities at Sompo Institute Plus and also at JADAA, I myself have an impression that, while the number of alternative data projects and businesses successful in commercializing or in enjoying tangible benefits is clearly increasing, the majority of JADAA members are still at the early stage of data usage, i.e., they are interested in using alternative data but so far do not have concrete plans for it.

It is almost certain that traditional businesses in Japan will face shrinking markets due to further decline and aging of population. Therefore, usage of new technologies such as AI and big data is essential to uncover new demand and opportunities. I hope that contents of this FACTBOOK 2024 will support activities of various people and organizations by showing possible paths in the era of AI and by highlighting issues to be resolved.

Seisaku Kameda Principal and Executive Economist Sompo Institute Plus

1. About this survey and the Japan Alternative Data Accelerator Association

(1) What is alternative data?

Alternative data is a collective term used to distinguish data from traditional data, such as official government statistics. It refers to diverse data that has become available to financial institutions, private companies and economists as a result of advances in digital transformation. Typical examples of alternative data include point-of-sale data, financial news, weather information and location information. This data has been largely unavailable in the past, but is now attracting a lot of attention thanks to advances in machine learning and natural language processing technologies, as well as computing power. In the past, alternative data was mainly used by financial institutions and investors seeking to manage their assets efficiently, but in recent years its use has expanded rapidly. For example, alternative data is used by private companies for business development and by public institutions to analyze economic conditions.



(2) About the Japan Alternative Data Accelerator Association (JADAA)

Although the use of alternative data has been expanding around the world, its use in Japan is still in the middle of the road due to several issues such as regulations, lack of experts and cost. The Japan Alternative Data Accelerator Association (JADAA) was established in 2021 to address these issues by bringing together companies from different industries. Currently, participants such as financial institutions, data providers, and data analytics companies share their activities and challenges to promote the use of alternative data.

(3) About the survey in the FACTBOOK

Foreign countries have been building up knowledge and insights on alternative data, and their research and studies on data use have also been progressing. On the other hand, in Japan, there is not sufficient analysis on the use of alternative data, such as "who uses the data", "what type of data is used", or "how often the data is used".

In this survey, as in the previous years, we asked members of JADAA to complete online questionnaires to understand the use of alternative data and its issues in Japan. On behalf of JADAA, Sompo Institute Plus compiled the results into this Factbook. Although this survey may not cover the overall use of alternative data, we believe that our results capture accurate information about the current situation and issues of alternative data, as the respondents have already been users or are very interested in the use of the data. We plan to continue this survey in the future to regularly monitor trends in the use of alternative data in Japan.

(4) Survey respondents

We asked JADAA members to complete questionnaires, and a total of 56 institutions responded. The table below shows the respondents sorted by business category.

Business	Number of Respondents	Ratio
Asset management	5	9%
Finance and insurance (excluding asset management)	7	13%
Manufacturing	2	4%
Think tank	3	5%
Education	7	13%
Information technology/System development	21	38%
Other	11	20%
Total	56	100%

Figure 1-2: Survey Respondents	s
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(5) Survey data collection period

The survey collected data from respondents between 15 August and 15 October 2024.

2. Information on the use of alternative data

(1) Experience in using alternative data

Figure 2-1-1 shows that 68% answered "Yes" to the question that asked whether they have experience of using alternative data. The respondents who answered "Yes" have "Purchased" (34%), "Sold" (45%), or "Analyzed as a contractor" (21%).





In the following section, we define respondents who have purchased alternative data as "buyers," those who have sold data as "data providers," those who have analyzed data as contractors as "data analytics contractors," and those who have never used any data as "non-users." Figure 2-1-2 shows the relationships between these groups.



Figure 2-1-2: Conceptual Image of Relationships between Key Groups

(2) Expenditure on alternative data compared to previous year (buyers)

Figure 2-2 shows the result to the question that asked buyers how their expenditure on alternative data have changed over the year. In this question, 85% answered "Almost the same" and 15% "Increased." Compared to the survey in 2023, we find a gradual slowdown in the rate of growth.



(3) Range of annual expenditure on alternative data

Figure 2-3 shows the result to the question that asked buyers about the range of their annual expenditure on alternative data. According to the figure, "Less than 5 million yen," accounted for 62%, "At least 100 million yen, less than 300 million yen" for 15%, and the other answers were in the minority.

Considering the expensive unit prices of alternative data, this result suggests that only a limited number of members use the data extensively and most buyers use the data to a limited extent.



Figure 2-3: How much do you spend on alternative data per year? Please select a range.

(4) Start date for using alternative data

Figure 2-4 shows the result to the question that asked about the timing they had started using alternative data. The figure shows that the most common answer among all respondents was "2017 or earlier" (34%). However, those who

started in 2020 or later also made up large percentages, indicating that demand for alternative data had grown during the pandemic.

The breakdown by entities follows the similar trend, but while data providers and data analytics contractors started using it early, there are also a reasonable number of buyers who started using data after 2022.



Figure 2-4: When did you start using alternative data?

(5) Purpose of using alternative data

Figure 2-5 shows the result to the question that asked buyers the purpose of using alternative data. The result shows that the majority answered "Investment decisions/economic forecasting" (60%), followed by "Academic work" (30%), "Marketing" (20%) and "Risk management" (10%).





(6) Benefits of using alternative data

The benefits of using alternative data include instant availability that allows users to check real-time activities, and extensive coverage compared to government statistics. According to Figure 2-6, 53% of all respondents selected "Differentiation from traditional data," 47% answered "Complementarity to traditional data," and 34% "Instant

availability."

This result is not quite the same when responses were sorted by groups. The most common answers were "Differentiation from traditional data" (62%) and "complementarity to alternative data" (62%) for buyers, whereas it is "Usability for new business/product development" (50%) for data providers.





(7) Most frequently used alternative data

Figure 2-7 shows the result to the question that asked buyers the type of alternative data they most frequently use. The most frequently used data is "POS data" (15%) and "Credit Card data" (15%). Some answered "Location data" (8%), "SNS data" (8%), "News data" (8%), and "Web scraping data" (8%).



Figure 2-7: Which type of alternative data do you use most frequently?

(8) Number of employees dedicated to alternative data management

We next asked buyers, data providers, and data analytics contractors about the number of employees who are dedicated to alternative data management.

Figure 2-8 shows that the most common answer was "0" (29%), followed by "1 to 2" (26%) and "3 to 5" (16%) for all respondents.

When we sort answers by key groups, there are some major differences. Among buyers, 46% answered "0" and 23% "1 to 2,". In contrast, lots of data providers and data analytics contractors dedicated more staff members. However, the number of dedicated staff members in buyers have increased compared to the previous year, indicating that their structures of alternative data analysis are improving.



Figure 2-8: How many of your employees are dedicated to alternative data management?

(9) Preprocessing of alternative data

We also asked buyers the preprocessing of alternative data. Figure 2-9 shows that 46% answered "We purchase raw data and preprocess internally," 15% "We purchase already preprocessed data," and 38% "All of the above." The increasing number of dedicated staff members among buyers, as shown above, may make it possible to preprocess internally.

To the question that asked the part of preprocessing, the majority answered "Remove outliers" (62%), "Convert text data to numbers" (54%), "Fill missing values" (46%), and "Remove duplicate data" (38%).



Figure 2-9: Alternative Data Preprocessing

(10) Internal sharing of analyses using alternative data

We asked buyers how they share the results of analyses using alternative data within their organization.

Figure 2-10 shows that many responses were "Managers of the user department and other relevant department" (38%) and "The team using the data on the ground" (38%), followed by "Management" (23%).

Figure 2-10: Where are alternative data and results of analyses of those data shared within your company?



3. Information on how and what type of alternative data is traded

(1) Channels of purchasing/selling alternative data

In section 3 we first asked buyers and data providers about the channels they use to buy/sell alternative data.

Figure 3-1 indicates that the most common answer was "From vendors" (54%) among buyers, and was "Direct transaction with data holders" (59%) among data providers. Some buyers used "Direct transaction with data holders" (15%) and "From multiple channels" (23%).



Figure 3-1: What purchase/sales channel do you use to buy/sell alternative data?

(2) Regions of alternative data

We next asked buyers the region(s) that the purchased alternative data covers. Figure 3-2 shows that the most common answer was Japan (100%). For foreign regions, North America (31%), China (31%), Europe (23%), and other Asian countries (23%) were listed, which implies that it is likely that purchased alternative data are mostly those on major economies.





(3) Sectors of alternative data

We also asked buyers the sector(s) that the purchased alternative data covers. The most common answer turned out to be "General consumer goods" (54%), "Essentials for everyday living" (54%), "Finance" (54%), and "Real estate" (54%). It was also shown that "Information technology" (31%), "Healthcare" (31%) and "Telecommunications service" (31%) have some weight.

Figure 3-3: Which of the sector(s) does the alternative data you buy covers? (multiple choice question)





(4) Types of alternative data

We next asked buyers, data providers, and data analytics contractors which type(s) of alternative data they are handling.

The most popular data for all respondents were "News data" (37%), followed by "Web scraping data" (29%), "Location data" (26%) and "Social media data" (24%).

When we compared answers by groups, we found that the results were significantly different.

Buyers commonly use "News data" (46%) and "Location data" (46%). On the other hand, it was shown that in data providers and data analytics contractors, various alternative data such as Financial data, Shipping data, Patent-related data, Medical data and ESG data are being handled as well.

Figure 3-4: What type(s) of alternative data do you use? (multiple choice questions, up to 3 answers)



(5) Data obtained by web scraping

In 2024 survey, we asked web scraping users about how they obtain and use the data.

We found that a wide variety of data is being scraped, such as publicly available information including "corporate disclosure information", as well as "X (formerly Twitter) data". Regarding the usage of the data, the answers were "data provision" and "in-house use".

Figure 3-5: Obtainment and usage of web scraping (users of web scraping)

Corporate disclosure information.

Data related to crowdfunding (movement of fund procurement status, etc.).

Data related to job advertisements.

X (formerly Twitter) data.

The status of shared office openings by our company and other companies.

Disclosure information from companies.

Various announcements on the website.

Using AI and algorithms, we collect data mechanically, cleanse, merge and sort names, and provide the data or provide it in the form of scores.

Scraping public websites to obtain licensed content via third-party data providers and using it for inhouse data.

(6) Customers of alternative data providers

We asked data providers to whom they sell alternative data. The most common answer was "Asset management companies" (88%), followed by "Administrative agencies" (24%) and "Government agencies" (24%). "Other" answers included universities and businesses.



Figure 3-6: Who buys the alternative data you offer? (multiple choice question)

4. Regulations and Issues

(1) Regulations that need improvement to promote the use of alternative data

In Section 4 we asked buyers, data providers, and data analytics contractors about the regulations that need improvement to promote the use of alternative data.

Figure 4-1 shows that the common answers from all respondents were the "Act on the Protection of Personal Information" (47%), "Copyright Act" (42%), and "Financial Instruments and Exchange Act" (29%).

Overall, the results were similar across all types of groups. Showing detailed difference, data providers and data analytics contractors consider that the "Act on the Protection of Personal Information" and the "Copyright Act" are in particular needed to improve.



Figure 4-1: Which of the established laws or regulations need(s) improvement to promote

the use of alternative data? (multiple choice question)

(2) Cross-tabulation: Regulations that need improvement to facilitate the use of alternative data (responses sorted by data used)

We then cross-tabulated the responses, sorting by the type of alternative data they handle and the regulations that needed improvement to promote the use of alternative data.

Figure 4-2 clearly showed that the "Act on the Protection of Personal Information" was all in all believed to need improvement, regardless of the type of data handled. For the "Copyright Act", answers varied according to the type of data used. It was commonly believed to need improvement by users of "POS data" (57%) and "News data" (57%), whereas the proportion were lower among users of "Credit card data" (14%), "Location data" (10%). As for the "Anti-Monopoly Act" and the "Telecommunications Business Act", smaller proportions of users answered that these laws need improvement compared to the other laws, regardless of type of data handled.

	Act on the Protection of Personal Information		Copyright Act		Financial Instruments and Exchange Act		Anti-Monopoly Act	Telecommunicat ions Business Act	n
POS		43%		57%		29%	14%	0%	7
Credit card		43%		14%		14%	0%	0%	7
Location information		30%		10%		20%	0%	10%	10
Satellite images		33%		33%		33%	0%	0%	3
Social media		56%		33%		44%	0%	0%	9
Web scraping		56%		33%		44%	0%	0%	11
News		43%		57%		43%	7%	0%	14

Figure 4-2: Regulations that need improvement (sorted by type of data used)

(3) Issues involved in the use of alternative data

We also asked buyers, data providers, and data analytics contractors about the issues involved in the use of alternative data. For all respondents, common answers were "It costs a lot to use alternative data" (50%), followed by "We have no staff or department for alternative data handling" (39%), "Data accuracy, reliability, and continuity are not guaranteed" (39%), and "We are not clear about how to use alternative data" (34%).

For buyers, common answers were "It costs a lot to use alternative data" (85%) and "Data accuracy, reliability, and continuity are not guaranteed" (69%).

For data providers, the most common answers were "We have no staff or department for alternative data handling" (53%) and "We are not clear about how to use alternative data" (53%).

For data analytics contractors, the most common answer was "We have no staff or department for alternative data handling" (63%), followed by "Data accuracy, reliability, and continuity are not guaranteed" (50%) and "It costs a lot to use alternative data" (38%).



Figure 4-3: What are the issues involved in using alternative data?

(multiple choice question, up to 3 answers)



In their free-form answers, respondents also mentioned the issues shown in the table below.

	Insufficient data accumulation makes it difficult to understand the habits of statistics and to perform seasonal adjustments.
	It is difficult to use as a main data source because of its poor accuracy.
Buyers	I have the impression that alternative data is being sold at high prices without a clear idea of its specific use cases.
	The data obtained is only valid under specific conditions, so it is not very versatile. There is a possibility of reaching the wrong decision.
	More expensive than traditional data.
	There are some data that are prohibited from being used in generative AI, and you have to pay a fee for each project.
	Because it is not possible to try using alternative data when asked about cost-effectiveness within the company.
	Many of the data sets cost over 5 million yen, so it is difficult to introduce them unless there is a good chance of a return on investment.
	Since many of the alternative data are new, there are many cases where there is not enough time to perform backtesting.
Data providers	Because this data is not included in the previous workflow, it is difficult for customers to imagine how to use it.
	Data of a different type to existing data will require individual handling.
	It takes time to train people who can handle data and to disseminate data itself.
	Because data is expensive, it is often the case that it will not lead to a purchase unless the benefits
	are shown to be worth more than the price or a discount is offered.
	Many Japanese companies (particularly general business companies) lack the human resources to be able to use alternative data.
	It needs to be made easier to handle.
	In particular, domestic companies' understanding of alternative data is still not very advanced.
	I have the feeling that there is not enough of a system or budget in place to carry out the analysis.
	Because the data is so advanced, there are often cases where people don't know how to use it.
Data analytics contractors	As there is no established technical system for handling unstructured data, considerable ingenuity is required for each type of data.
	If the premise of data collection is not known, questions remain about the reliability and accuracy of the data.
	It is difficult to recruit staff to handle data.
	Proof of Concept (PoC) is required to verify the accuracy of the data, which increases the man-hours required.
	As the trends in data change one after another, it is extremely burdensome in terms of business to keep track of each one of them.
	There is a shortage of people with skills in data processing and analysis.

5. Need and Outlook for Alternative Data

(1) Need for alternative data

We asked buyers about their needs for alternative data and data providers about their customer's needs.

Figure 5-1 indicates that there was still a strong demand for alternative data, despite the decline in specific demand seen during the COVID-19 period.

The demand has not declined in a wide variety of areas such as "Text data", "Financial instrument and exchange data", "Non-financial information" and "Asset management", which once again confirms a wide range of fields in the usage of alternative data. On the other hand, demand has declined in the area of "Costly data".



Figure 5-1: Is the need for alternative data declining?

In their free-form answers, respondents also provided the comments as reasons why their need for the data has/has not declined.

<Areas where demand has not declined>

Asset management, investment banking, insurance, and business companies.		
Consumer behaviour and marketing, sustainability-related, healthcare.		
Text data from newspapers, social networking sites, etc.		
Wages and employment-related fields.		
Data that can be expected to be used in generative AI and in the macro market.		
Marketing and insurance (pre-symptomatic) domains.		
Financial Instruments and Exchange Data.		
Non-financial information/		
Sales field.		
Insurance premium rate.		
Company Information.		

< Areas where demand is declining >

Costly data.	
Asset Management Field.	

(2) Outlook for alternative data

In terms of outlook, we asked buyers, data providers and data analytics companies whether they expected the alternative data market to grow in the near future (over the next three years, starting this year).

Figure 5-2 shows that in all groups, the majority answer was "the market will grow," which indicates that respondents have high expectations for market growth of alternative data.





(3) Using alternative data for AI

We asked our survey respondents about their use of alternative data in AI.

Figure 5-3 shows that a certain number of buyers (54%) responded they have experience using alternative data in AI. Regarding specific methods and data usage, the answers included "investment decisions and the streamlining and sophistication of the process", "translation and summarization of text data", and "analysis of consumer behavior", indicating that it is being used in a wide range of fields. Reasons for not using AI included "we are using AI, but not in conjunction with alternative data" and "we can't imagine any specific examples of its use", while many respondents answered that they were considering using AI.



Figure 5-3: Have you ever used AI in business or research using for alternative data?

(4) Future use case of alternative data

In the 2024 survey, we asked data providers which alternative data use cases that they expected to grow in the future.

Figure 5-4 shows that the most common response was "Application to Generative AI" (65%), followed by "Use for human resource development" (18%), and "Use for public function" (18%).





6. Non-users

(1) Reason for not using alternative data

We finally asked non-users of alternative data why they did not use it.

Figure 6-1 shows that the most selected reason was "We are not clear about how to use alternative data" (28%), followed by "We have not considered using alternative data" (22%), "We have no staff or department for alternative data handling" (17%), "Government statistics and other traditional data suffice for our purposes" (17%), "The cost of using the data is high" (11%) and "The accuracy and reliability of the data are not guaranteed" (11%).



Figure 6-1: Why do you not use alternative data? (multiple choice question, up to 3 answers)

In their open-ended responses, respondents also provided the following comments as reasons for not using alternative data.

We want to collect and store data in-house, but we don't have the necessary organisation in place.		
I would like to use it if I can clarify my company's unique business and research theme.		
The examination of the use of alternative data has only just begun.		
There is limited demand within the organisation.		
We are not receiving orders for projects that match our costs.		

(2) Possibility of using alternative data in the future

We finally asked non-users whether they have plan to use alternative data sometime in the future (the next three years starting from this year). Figure 6-2 shows that 50% of the respondents answered "We plan to start using alternative data," while the other 50% answered "We don't plan to use alternative data."



Figure 6-2: Do you plan to use alternative data sometime in the future (the next three years, starting from this year)?

n = 18

7. Conclusion

This FACTBOOK was the third year of survey into the quantitative evaluation of the use of alternative data in Japan. The results of the survey have provided some insights, which we will introduce below.

Firstly, the survey showed that there was still a high level of demand for alternative data. Although the pace of increase in their expenditure on the data was slowing, more than 90% of both buyers and data providers responded that 'demand for alternative data has not decreased', confirming that there remains a strong need for the data. The majority of respondents also expect the alternative data market to continue to expand in the future, and half of the respondents who are not currently using alternative data replied that they plan to start using it in the future, implying further growth in the market.

The second point is the expansion of specialists dealing with alternative data. Compared to data providers and data analysis contractors, a lot of buyers claimed the shortage of specialists dealing with alternative data. However, compared to the results of 2023 survey, even in buyers there was an increase in the number of dedicated staffs for alternative data. As the use of alternative data has become more widespread, these buyers may begin to hire their own dedicated staff who handle alternative data. It was surprising that the proportion of buyers who 'purchase alternative data and perform pre-processing in-house' had increased significantly in 2024 survey, but strengthening of dedicated staff has made it possible to bring such work in-house.

Thirdly, it became clear that there are still various issues that need to be addressed in order to expand the use of alternative data. In this survey, issues such as 'the cost of using data is high', 'there is no personnel or organization to handle data', 'the accuracy, reliability and continuity of data cannot be guaranteed', and 'there are no laws and regulations in place' were still frequently cited. In addition, there were also responses such as 'the use cases are unclear' and 'I don't know how to use it concretely', implying that the difficulty of using alternative data is an issue for both buyers and data providers. The weekly study sessions by JADAA are considered to be effective as a place to share a wide range of use cases.

With regard to 'usage costs', in addition to the expensive unit costs, scarcity of prior test usage makes it difficult for users to expect in advance whether the benefits of usage will exceed the cost, which may be a factor behind the slow progress of data usage. According to the responses of buyers, over 60% of respondents answered that the annual amount of purchased alternative data was 'less than 5 million yen', and the entities handling high amounts of data remain in the minority. If the test data usage becomes more widespread, this may lead to an increase in the amount of data transaction, as it will provide buyers with more information to help them make decisions.

The difficulty of recruiting and training staff to handle alternative data was also cited as an ongoing issue. Even for data providers and data analysis contractors who already have a dedicated system that exceeds that of buyers, there are still issues to be addressed regarding further expanding the number of staff and improving their skills.

There were also a number of entities who were cautious about using alternative data due to the inadequacy of legal regulations. In particular, many respondents answered that the Personal Information Protection Law, Copyright Law and Financial Instruments and Exchange Law need to be improved in the future. JADAA has published a Data Provider Due Diligence Questionnaire (DDQ) that can be used to effectively verify for legal violations and other risks. We will continue to make recommendations for legal improvements and develop guidebooks.

Alternative data is regarded as useful by a wide range of entities, but there are also many issues to be addressed.

In order to further promote its use, it will be necessary to resolve the issues surrounding alternative data by formulating voluntary rules and understanding the needs of users. In this context, it is also effective that learning from overseas, where there are many precedents for the use of alternative data.

As mentioned above, the use of alternative data is expected to continue to develop in the future. The benefits of using alternative data are becoming more widely known, but at the same time, efforts to resolve various issues must also be promoted. In order to understand the current situation regarding the use of alternative data and the issues involved, we will continue to publish the FACTBOOK in the future.

Commissioned by: The Japan Alternative Data Accelerator Association

Commissioned: Sompo Institute Plus Inc. Masato Koike (mkoike@sompo-ri.co.jp) Kenji Suganuma (ksuganuma@sompo-ri.co.jp)