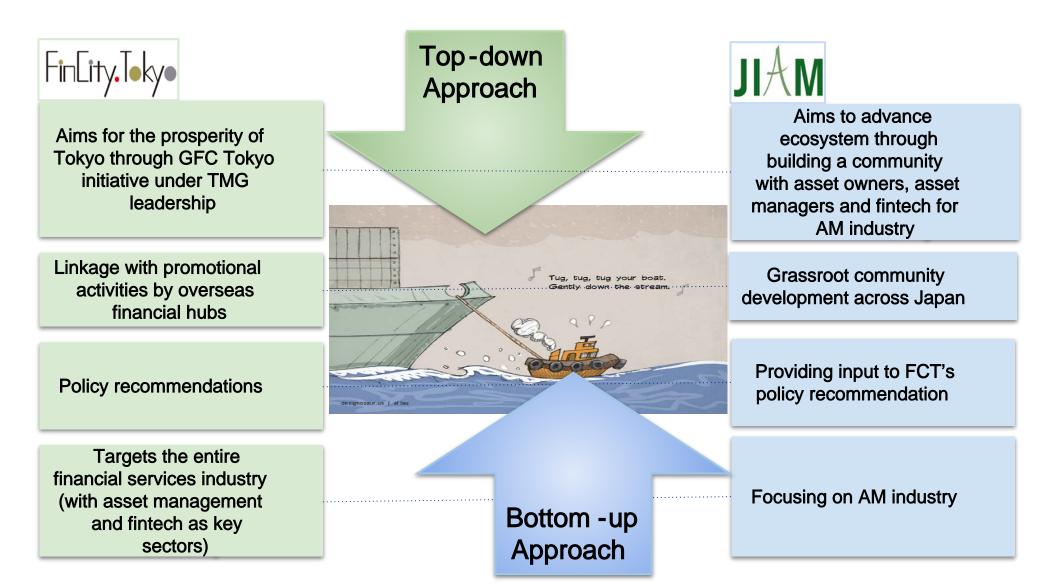




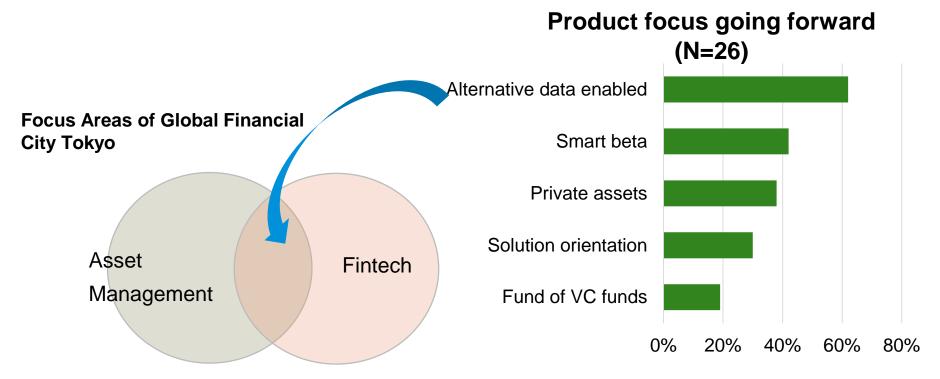


JIAM and FinCity. Tokyo both work for Global Financial City Tokyo (FCT) initiative but with a complementary approach



Why Alternative Data?

- JIAM's previous survey on fintech for the asset management sector revealed that over 60% of firms interviewed expressed an interest in products and strategies utilizing alternative data.
- At the same time over 70% consider alternative data as too expensive and questioned whether improvement in performance may be attributed.



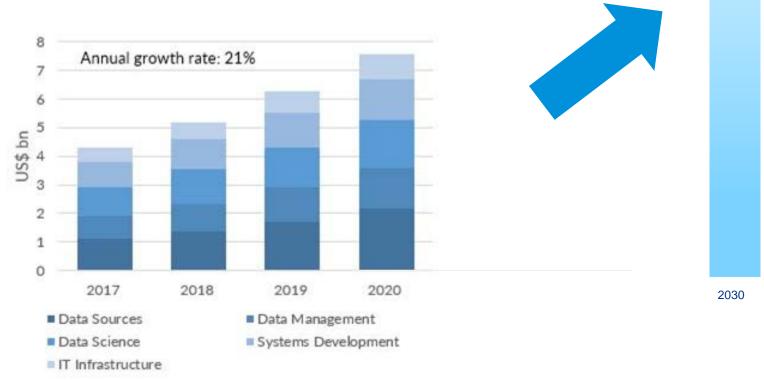
Source: Fintech for Asset Management in Japan "Key takeaways from interviews with 26 asset management firms" JIAM, December 2018

Global trends

20bn?

- Opimas estimates the market size for alternative data to exceed USD 7 billion by 2020.
- What is the state of utilization of alternative data in the Japanese asset management industry and what are the challenges against its growth?

Spending on Alternative Data for Trading and Asset Management



Source: Opimas, Alternative Data - The New Frontier in Asset Management, Mar 2017. http://www.opimas.com/research/217/detail/

Objectives and scope of the survey

Objectives

- To make policy recommendations to debottleneck the obstacles preventing use of alternative data
- To enable the advancement of the asset management industry in Japan

Interviewees

- Targeting ~20 Japanese asset management firms
- Those belonging to banks, securities firms, insurance firms but also independent and foreign affiliated firms
- Teams which use alternative data (e.g. quants, corporate planning, research, risk management)

Content

- Definition of alternative data
- State of use of alternative data (e.g. types of data, team and staffing, budget)
- Factors impeding use of alternative data and expectation for government, trade associations, JIAM in resolving them

Timing

Q4 2019- Q1 2020

Interim report based on interviews with 14 Japan based asset management firms

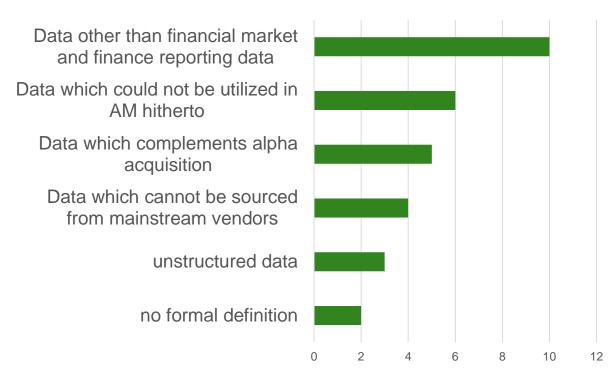
Attributes of the firms interviewed

AUM (USD)	Affiliation with				Total
	Banks	Securities	Insurance	Independent	
~10bn				3	3
~100bn			3		3
~500bn	4	1	1		6
500bn+	1	1			2
Total	5	2	4	3	14

1. Definition of "Alternative Data"

- Definition of alternative data varied by firm
- There were also views that strict definition was not necessary as what is considered as "alternative" can change with time.

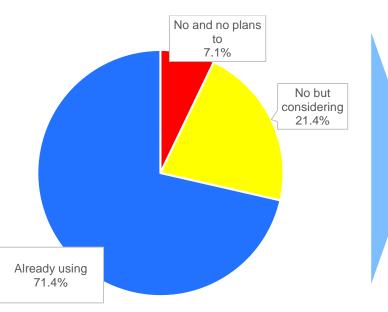
How would you define "alternative data"? (N=14, multiple answers)

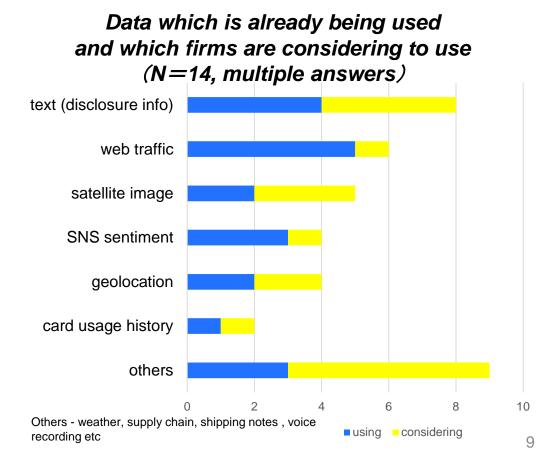


2. Utilization of alternative data

- Many Japanese asset management firms utilize alternative data
- Use of text data related to financial reporting is widespread among those who already utilize them
- There are firms which aim to use them for "alpha generation" but also which consider them as a data to back up their conclusion etc.

Do you use alternative data? (N=14)





2. Utilization of alternative data

Utilization in product development:

Products:

- ✓ Al enabled stock-picking utilizing alternative data for mutual funds for retail investors (5 firms)
- ✓ Use of geolocation data for REIT funds (1 firm)
- ✓ Private placement fund (1 firm)

Others:

- ✓ Marketing, in order to make better use of alt data which is expensive (2 firms)
- ✓ Risk Management, early indication for geopolitical risk events (2 firms)

Aspirations:

- "We want to move away from strategies that solely rely on market information"
- ✓ "We want to be able to develop replicable alpha generation patterns by using recording of our daily strategy meetings"

For reference: Use of alternative data by international AMs

Europe based firm A AUM – USD 10+ bn Style – Quantitative Systematic

- A lot of non-market data (which can be seen as) "alternative data" is already being used as normal, eg Firm A's trading execution data, filing of position to regulators, supply chain and relationships
- Alternative data and machine learning highly utilized for optimization trade execution which is often overlooked by conventional asset managers
- In addition, they are using credit card history, image, highway traffic and marine traffic etc as "extra financial datasets"

Europe based firm B AUM – USD 20+ bn Style – Systematic Managed Futures

- Would define alternative data as "unstructured data"
- Have used disclosure info extensively for forecasting share price. Another interesting use is to gather past data, analyze words and reclassify industry sectors and develop new investment strategies.
- Satellite image to forecast farm yields and predict commodity price.
- Set up a data center with 100 ppl to gather data but had to close due to difficulty in economic justification.

For reference: Use of alternative data by international AMs

US based firm C AUM – USD ~200 bn Style – Quantitative

- No set definition for alt data. Seen as an extension of quants strategy and therefore do not see need to treat it differently and have no dedicated team.
- Long investment horizon therefore data needs to be available for a long period.
- Use text (disclosure related) and SNS data.
 Experimenting POS data use. Sat image and location data are not being used. Text favored because of potential wide usage.
- Alt data is used not only for stockpicking/ investment decisions but also for risk management.

US based firm D AUM – USD ~100 bn Style – Quantitative

- Consider themselves as a tech company rather than an investment management firm with a team of large number of data scientists.
- PMs are working directly with technology/ data partners. In this sense, their PMs are very different from conventional PMs.
- Use 20,000 data sets to analyse equities.
 Interested in diversifying data sets to analyse Japanese equities.
- Outsource data cleansing to data providers in order to concentrate on data analysis.

3. Budget for subscribing alternative data

- None of the respondents had budget earmarked to buying alternative data
- Often it is included in corporate-wide research budget
- Elaboration on "linkage to better performance" and "optimization of company strategy" seems key for securing budget.

R&D budget etc is used in the absence of a budget specific to alternative data

"Because it is difficult to develop products using alternative data only, we do not have a budget which is specific to alternative data purchase"

"We purchase alternative data using company wide research/R&D budget and process/ analyse data"

"It is realistic to use budget linked to product development in R&D or research budget"

"It is difficult to link data purchases to specific funds as the cost would affect the fund performance"

...Having said that we cannot depend on R&D budget etc indefinitely

"We can allocate budget as R&D but it is down to the portfolio manager to demonstrate a strong desire and persuasive skills to obtain it"

"We have not yet been able to create a virtuous cycle of using alt data ⇒ increased profitability ⇒further need for using alt data"

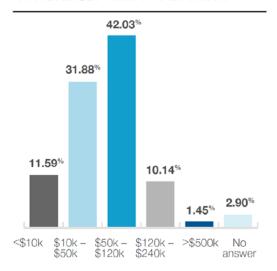
Budget for alternative data purchase (overseas)

- \$50K~\$120K is the common budget range for alt data purchase overseas
- More than half of buyers find them overpriced
- Nearly 60% do not have budgets specific to alt data

DATA BUYERS

Buyers most see an altdataset pricing average between \$50k and \$120k

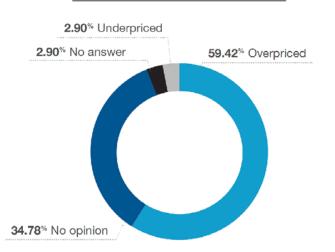
WHAT IS THE AVERAGE ANNUAL PRICE OF A DATASET THAT YOU LOOK AT?



DATA BUYERS

More than half of buyers think alternative datasets are **overpriced**

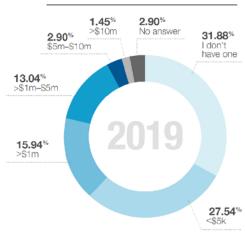
OUT OF DATASETS YOU'VE LOOKED AT IN THESE CATEGORIES, WHAT DO YOU THINK OF THE PRICING?



DATA BUYERS

Nearly 60 percent of buyers have a tiny or zero alt-data budget for 2019. A full third, however, now have a budget that exceeds \$1 million

WHAT IS YOUR ANNUAL ALTERNATIVE DATA BUDGET FOR 2019?

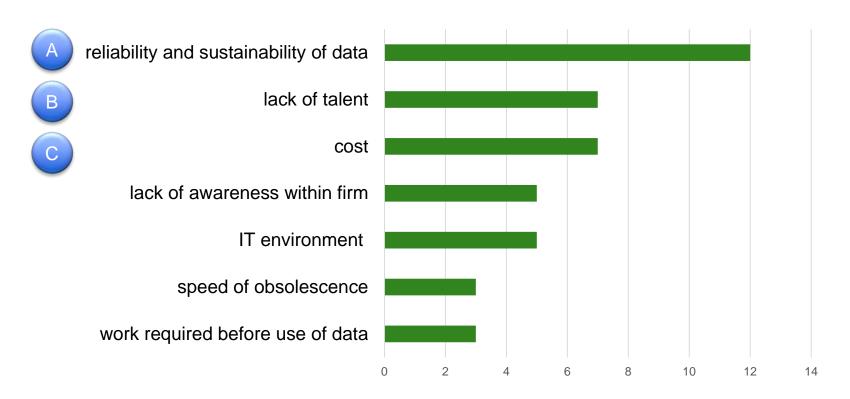


Source: "State of the Alternative Data Market 2019 - Pricing Survey Report-," BattleFin and AlternativeData. Org.

4. Challenges facing the use of alternative data

The main challenges are "reliability and sustainability of data (including its legal standing)", "talent" and "cost"

What are your challenges against using alternative data? (N=14, multiple answers)



4. Challenges facing the use of alternative data

Some of the challenges are beyond the efforts of individual firms and would require the entire industry to tackle.

Data reliability & sustainability

Talent

Cost

"Would like to buy data from large vendors from the reliability point of view"

"Lack of awareness for data compliance by start-ups is a concern"

"Legal uncertainty, eg potential infringement on privacy, insider regulation, is significant" "Hard to secure talent who are knowledgeable on IT infrastructure and data"

"Massive shortage of talent with data analysis skills"

"It is beyond the level of securing more employees with science background" "Data is expensive"

"There is no certainty that there is enough benefit against the cost for now"

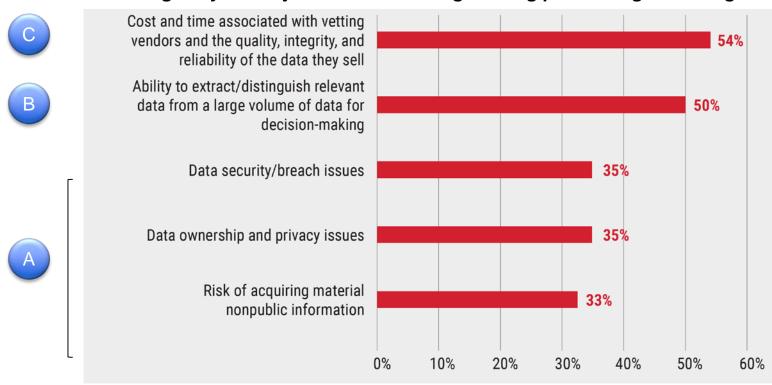
"Huge amount of time and labour required for data cleaning, processing and adjustment"

"Too much noise in the data and the checks required could be burdensome"

Challenges facing use of alt data (overseas)

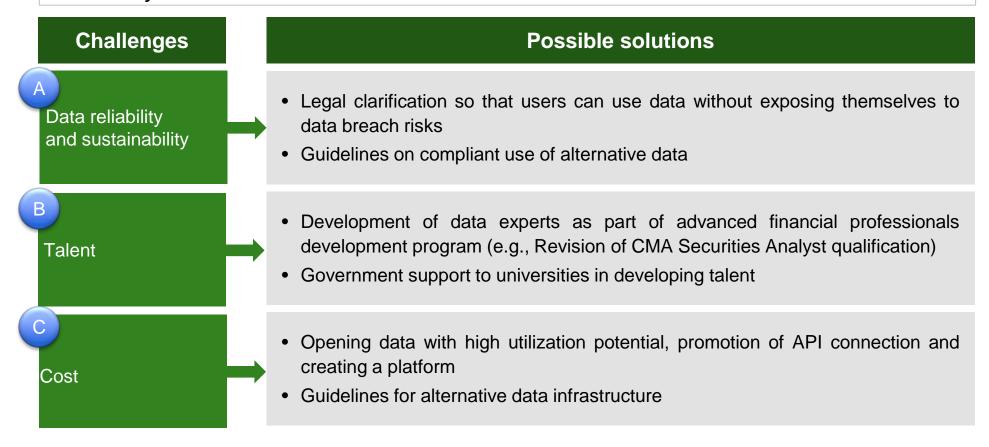
- "Cost and time associated with vetting vendors" and "capability for using data" are identified as
 issues overseas.
- In Japan prerequisites for using data (eg infrastructure and talent) are the large challenges.
- But there are also many similarities/ common issues.

Which of the following are your major concerns when gathering/purchasing and using alternative data?



5. Potential Solutions to the challenges

Japanese asset management firms source data individually and clean/structure them. How to use alternative data should be the competitive edge and support for necessary infrastructure to enable firms to truly utilize data would be needed.



Key Takeaways & Proposed Next Steps

Takeaways

- High level of interest by asset managers to use alternative data
- Usage is not widespread often a small team of data experts and quants experimenting
- Main challenges against broader usage are data reliability (including legal certainty), talent and cost
- A more fundamental challenge of getting the prerequisites (ie IT infrastructure and having the right talent) also requires resolving at some AM firms

Proposed Next Steps

- What can we do to support to grow this emerging trend which can contribute to enhance the Japanese asset management industry?
 - Liaising with government agencies (e.g., FSA, METI) on data utilization guidelines and talent development
 - An event involving vendors and users of alternative data and government agencies to exchange views and information
 - Workshops as a TMG initiative to bring the players and stakeholders together to address the challenges identified

Use of TMG open data x advancement of AM industry x asset formation for Tokyo residents

Tokyo residents & TMG affiliated business entities

ILLUSTRATIVE

- financial return
- social value alignment

Tokyo residents' data

(TMG Open data & Accumulation through Tokyo Data Highway 5G connectivity project)

Asset class/issuers

Optimization of return

More visibility on

ESG by investee

companies

Data cleaning &
Opening up of data
platform

Alternative data providers

Advancing and diversifying asset management

Asset Managers

(especially Emerging Managers)

Possible examples:

1) Sustainable REIT

Returning "value" to Tokyo residents

buildings

Financial return from sustainable REIT

Construction and operation of green Office

Data owned by Tokyo Met Gov

- CO2 emissions for each office building
- Rent income for each office building
- Sewage data for each office building
- Electricity and gas usage for each office building

Data service provider

- Cleansing of data to ensure privacy protection
- Verification of data accuracy
- Open API

Asset managers

- Origination of Sustainable REIT product
- REIT trading based on data gathered through Tokyo Met Gov

Possible examples:

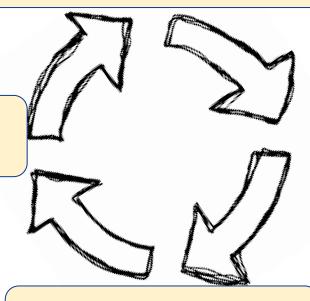
2) Tokyo waste reduction/ paperless/plastic-less company fund

Data owned by Tokyo Met Gov

 Data on waste treated by Waste treatment firms which are contracted by wards and cities within Tokyo Metropolis (ideally by waste type)

Returning "value" to Tokyo residents

- Emissions reduction by reducing waste
- Promotion of recycling
- Financial return



Data service provider

- Cleansing of data to ensure privacy protection
- Verification of data accuracy
- Open API

Asset Managers

 Investment in companies active in waste reduction and originating a fund to invest in such companies



Possible examples:

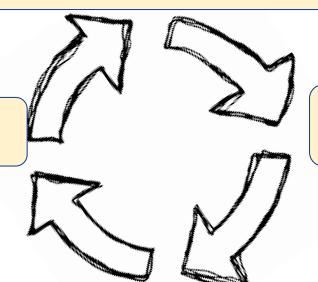
• Returning "value" to Tokyo Residents

Supporting fund allocation to Tokyo SMBs

3) Data on tax projection of Tokyo based companies and budget allocation by Tokyo Metropolitan Government and wards/cities ⇒ forward projection of growth by industry sectors

Data owned by Tokyo Met Gov and wards/cities

- Expected tax payment amount by companies
- Draft budget by Tokyo Met Gov and wards/cities
- Business plan by Tokyo Met Gov and wards/cities



Data service provider

- Cleansing of data to ensure privacy protection
- Verification of data accuracy
- Open API

Asset Managers

 Use data as forward indicator for growth for each industry sector and use it to complement investment strategies

東京都オープンデータ・ファンド・チャレンジ (仮)の提案

東京都オープンデータ

Category 分野(カテゴリ)ごとにデータを見る





東京金融賞表彰







アイデアソン ーデータ





Appendix

Purpose for using alternative data (Overseas)

"Generating greater insights into particular sectors....." and "additional support for findings/assumptions in fundamental research" are the main drivers. More than 40% responded "Generating profits", "generating higher returns"

For which of the following purposes do you use alternative data? (Select all that apply.)



(Source) "Alternative Data=Better Investment Strategies, But Not Without Concerns", Lowenstein Sandler, September 2019.



Fintech for Asset Management in Japan

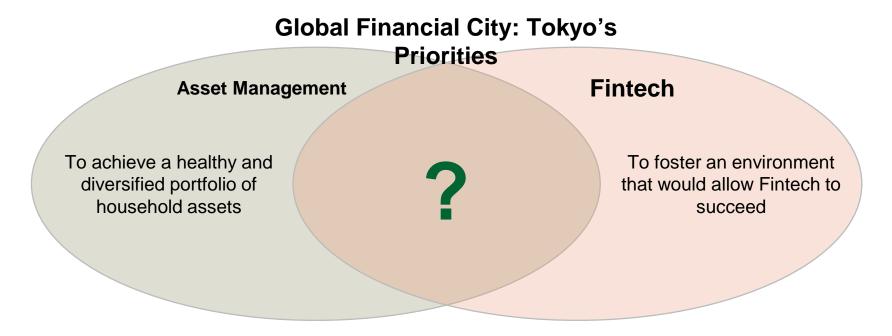
Key takeaways from interviews with 26 asset management firms (EXTRACT)

December 2018

Background

- The advisory panel to the Governor of Tokyo on building a Global
 Financial City: defined asset management and Fintech as growth drivers
- Although Fintech is highly publicized, the intersection of asset management and Fintech is NOT well understood
- Fintech is largely known for B2C and P2P payment and settlement, but NOT for asset management
- JIAM launched a demo center for asset management-oriented Fintech solutions named JIAM Fintech Square
- JIAM conducted a survey to understand and assess:
 - Japan-based asset managers' expectations for Fintech
 - Key obstacles by Japan-based asset managers to adopt Fintech
 - How to modernize the entire investment value chain utilizing Fintech in Japan

What is the intersection of AM and Fintech?

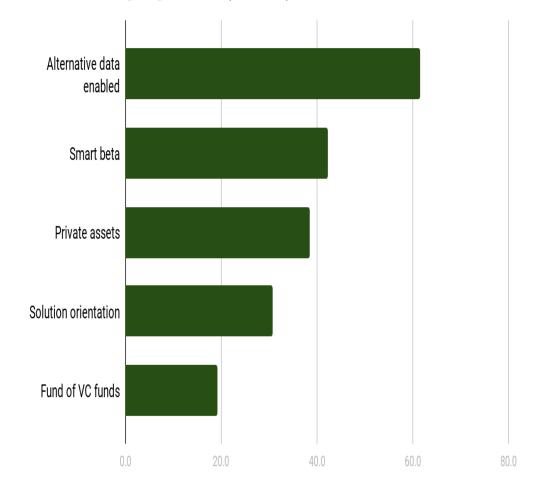


- The advisory panel for Global Financial City: Tokyo hosted by Tokyo
 Governor Koike and chaired by Andy Saito defined asset management
 and Fintech as growth drivers
- Although Fintech is highly publicized, the intersection of asset Management and Fintech is not well understood

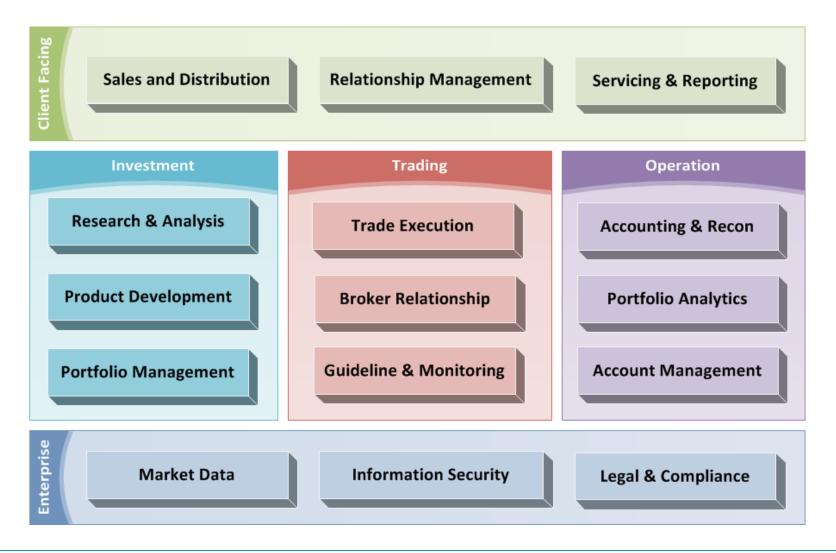
Product focus going forward

- 60+% focusing on alternative data enabled strategies
- ~45% focusing on low cost smart beta funds instead of actively managed funds seeking alpha
- ~40% focusing on private
 assets (e.g. infrastructure)
- ~30% are trying to be solution oriented as opposed to product push
- ~20% are focusing on fund of VC funds
- ~80% believe actively managed funds will be increasingly challenged to scale

Product focus going forward (N=26, %)



Where can we employ Fintech for Asset Management?

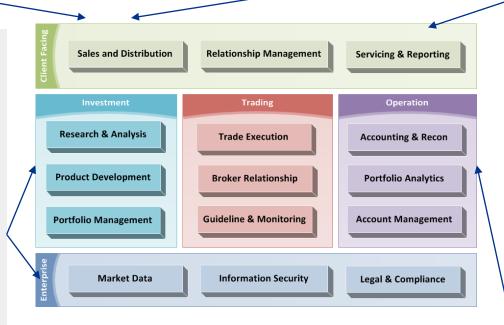


Survey participants believe in Fintechs more for cost reduction than alpha generation (1/2)

~45% trying to reduce **fund distribution costs** using advanced technologies

~50% view **Robo Advisors** as **product distribution tools** in Japan

~70% exploring use of alternative data sets (e.g. satellite imagery, weather patterns, credit card transactions, web traffic and social media sentiment); however, at this point alternative data is **too expensive** for **limited coverage** to justify the performance enhancement for each fund



~90% view manual investor reporting to be intensive especially for large Japanese asset owners that are largely paper based

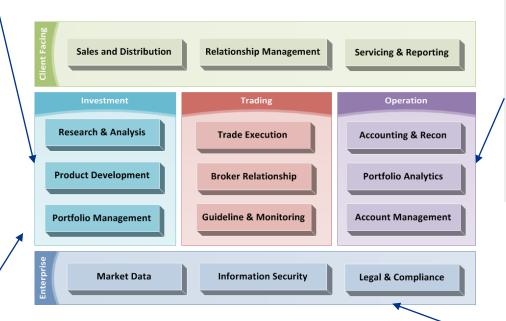
~90% view dual NAV calculation and 1 yen reconciliation have almost no value added to investors, i.e. a major disadvantage for Japan-based asset managers

Survey participants believe in Fintech more for cost reduction than alpha generation (2/2)

~75% are aware that the capability of Al for investment is overrated, Al won't be useful unless clean alternative data becomes affordable

~65% view index tracking as labor intensive and not necessarily meaningful for ultimate investors; thus, trying to automate this process using technologies

~50% interested in Fintech as a **talent pool** than Fintech products per se

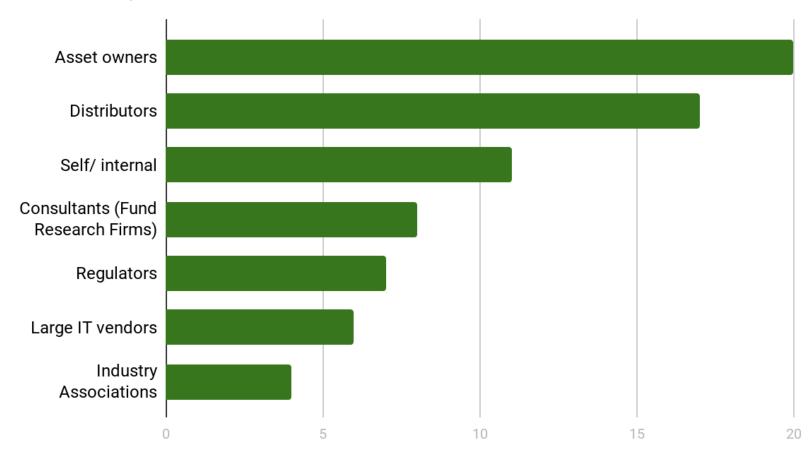


~60% think AI can be useful for verification of comments vis-avis charts and simple client inquiry response

~50% believe that **regulators** should adopt **RegTech** rather than asset managers (e.g. open API for auditing, utilization of secured chat as opposed to emails, licensing application and fund approval workflow management)

Who are the bottlenecks to modernize the asset management ecosystem in Japan/ Tokyo?

N=26, multiple answers



About JIAM

JIAM is a not -for profit organization which aims to contribute to "Global Financial City Tokyo" initiative by developing and advancing an ecosystem for the asset management industry, a key pillar of the initiative.

- We enjoy a collaborative relationship with both public and private sector entities in the asset management sectors which is enabled by our neutral/not-for-profit status.
- We aim to contribute to the growth of the asset management industry by crossing borders and industries.
- We conduct surveys, advocate policy recommendations and run events relating to the asset management ecosystem.

