

Data, data everywhere

OUR PANELLISTS WERE ASKED ABOUT ALL THINGS DATA, INCLUDING WHICH DATA RANKS AS THE MOST VALUABLE, THE IMPACT OF NEW TECHNOLOGY ON DATA AND WHETHER MANAGERS HAVE TOO MUCH OR NOT ENOUGH DATA. CHAIRED BY NICHOLAS PRATT.

PANEL

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Funds Europe – Do fund managers have too much data or not enough?

Andrew Barnett, RIMES – The technology is there now that enables almost any quantity of data to get through. The question is always in and around the quality. There are certain business functions that are still relatively slow in their adoption of technology and new data and they can be overwhelmed by the new volume coming through. Sometimes you'll need to provide more education, tell them that you can give them the full universe of data or tailor it down to something more aligned to their value proposition. That should be the role of anyone who's fulfilling that head of data management or chief data officer

“COMPANIES HAVE LOTS OF DATA, LOTS OF IDEAS, BUT LITTLE APPLICATION ON HOW TO ACTUALLY DRIVE IT FORWARD.”

Richard Clarkson, Oracle

(CDO) role. Having someone labelled 'CDO' isn't a panacea. It is someone taking the responsibility for that data and to understand the genesis and the pedigree of that data. But it is to also use two ears and one mouth and listen to your customers and clients and service them with what they need when they need it.

Mateusz Derejski, Metrosoft – The data is there, the technology is there and the people are there. There are data architects within the company but still clients are struggling with data. Sometimes they say they have not got enough data and sometimes they say they have too much. Why is that? There is a perception that there is too little data because it is dispersed through different systems that are neither integrated nor unified. Large asset managers who use different service providers are struggling with having a unified view over the entire world of data because the pieces of the data are within different fund administrators. The industry should look to consolidate its use of technology.

Richard Clarkson, Oracle – There are multiple uses for data but we need to be careful about its consistency and reliability. Everyone wants more data, but can they use the existing data pools they have? Can they spot trends to reduce financial crime? Do they use AI within that space to beat the criminals? Many firms have data lakes that have come from multiple legacy systems but you've got to be able to bring it all together so that the CDO has one source of truth. The CDO can then provide the data for future investments or to improve the distribution network. If we don't understand our data, we can't do that. What we see is companies have lots of data, lots of ideas, but little application on how to actually drive it forward.

Kate Webber, Calastone – We have clients trying to collate information across multiple TAs [transfer agents] so that they can see information in a much clearer way. They are also trying to understand data from the distributors in much more detail and to know it's accurate. It is quite a hard thing to do, particularly the way that the data comes in. More often than not, the data has



“TRYING TO SELL THE LATEST ASSET MANAGEMENT CAREER BENEFITS TO A GENERATION OF GRADUATES WHO WANT TO WORK ON THE LATEST TECHNOLOGY CAN SOMETIMES BE A STRUGGLE.”

Tony Peacham, Amundi

to be cleaned before it can be used for analytics. In some business areas, firms have too much data and in other areas, they have too little. What they really value is a way to analyse the data so they can get answers to queries on a timely basis.

Tony Peacham, Amundi – The data challenge for Amundi has been ensuring quality data in a timely manner to our clients. Amundi has developed internal data management repositories and reporting tools that have expanded and inherited legacy repositories from acquisitions such as the recent Pioneer merge. The volume of data that we either

migrated or aggregated demonstrates the breadth of data a company would have of this size. It is quite extensive and a great asset. The question of having too much data or not enough data really boils down to what is sufficient to service clients, be it from internal or pipeline from suppliers. We have an aggressive reporting timeline for clients and ensuring data-quality checks for them is a critical focus for our GDM [global data management] function. We can never have enough data in my mind, but it is the quality of data and how we can use that for the client that really matters.

Funds Europe – Do you think once you've gone through all that system consolidation that you will have less data but of a higher quality, or is it more to put yourself in a position where you've got more data?

Peacham – It is an interesting question. One of the major IT developments is the consolidation and administration of data feeds. We built a global data management team based in Paris, Tokyo, Dublin and more recently in Boston, which ensures our data feeds go through on time with sufficient governance checks. Because of the number of data repositories generally within a

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company of our size, it can be tempting to consolidate it all in a data warehouse through a large IT project over many years, which can have considerable capital expenditure. Our approach instead has been to develop a layer of reporting through a globalised tool to allow client reporting managers and other internal customers to see consolidated data of interest in a single tool, but pull the data across many data repositories.

Davey – I'm sure there are lots of cases where asset managers could make more use of the data they have internally to create intelligence on the process, but equally there are other areas where there's probably not enough data. For example, there's a lack of data and transparency around ESG [environmental, social and governance] investment methodology. Just look at what a company like Truvalue Labs is doing applying AI to massive volumes of unstructured data to get a real-world view of ESG practice to add into the traditional structured methodology that we see from some of the data vendors. It's a good example of where asset managers sit between the structured historical data of the past and the AI analytics of the future.

Funds Europe – **How has the growth in data changed the operations of a fund manager or asset servicer? How many more people are employed in a data-related role than ten, 20 or even five years ago?**

Davey – I started my career writing SQL databases with relational database management systems. Over subsequent years, technology moved on to focus on data warehouses, moving through to big data and looking at unstructured data, then to combining structured and unstructured data and the analytics we've been talking about. As you go through

that progression over the last 25 years, it puts demands on the organisation to respond in terms of the operating model, the people, the process and the technology to support that business. Consequently, managers today are increasingly looking to outsource their operations and are looking for a collection of functions that can be outsourced.

There has also been an impact on staffing. There's a big focus on data scientists and people with technology ability and a maths or a statistics background as well as a business understanding that can apply all those three components to add value for the asset manager. My children's generation with maths skills are being employed by asset managers to work very closely with portfolio managers in a very iterative process of developing code with ideas and putting it into practice very, very quickly. There's a big change in how that model is working given the challenge to create value from data.

The analysis of unstructured data to develop investment insights is not as straightforward as it sounds because you're looking at alternative data sources like satellite imaging or language processing and it may give you useful intelligence, or it may not. You will likely have to combine it with another data source or two to really get your insight, and then you have to ask, 'Is that giving me an edge, or is that already priced into the market?'

Over the last ten years there has been an increasing focus on data science. We have about 200 data scientists at SocGen and we have an institute where we train highly qualified staff in the discipline of data science to expand that population, because it's a key constraint for the industry. These people also are being competed for by the big tech firms and many other businesses and industries as well that are looking to access that kind of talent.



“I SEE CLIENTS WHO ARE GATHERING THIS DATA BECAUSE REGULATION MADE THEM DO IT. NO ONE IS LOOKING AT THE DETAILS OR ACTING ON IT.”

Mateusz Derejski, Metrosoft

Peacham – Data management is a key expanding function within Amundi which has received significant infrastructure and FTE investment. We have data scientists and data management professionals who work on an overall ESG data strategy that will see all forms of equity ESG rated by 2021 as part of our overall ESG strategy. At Amundi, we've developed a distributed data governance model across the globe to make sure that data is managed efficiently. And we have a quant and smart beta team in Dublin as well, which works very closely with the multi-asset investments team.

ESG is probably our biggest data challenge at the moment in terms of finding suitably qualified staff, and ESG quality data sources. From a skills

perspective, it can be difficult to recruit someone with the right skill sets because today you're competing against so many technology-focused companies such as Google and Microsoft for candidates, and trying to sell the asset management career benefits to a generation of graduates who want to work on the latest technology can sometimes be a struggle.

To help combat this, we have created internship and apprentice programmes with local universities in Dublin and Paris to aid potential candidate recruitment and demonstrate the benefits of our industry as a professional career, where they can apply their skills and be educated in financial services.

Barnett – We have used data scientists as well but we brought them in from

“MANAGING DATA PRIVACY IS GOING TO BE ONE OF THE CHALLENGES WE ALL FACE. WE WILL HAVE TO DEVELOP NOVEL SOLUTIONS.”

Matt Davey, Societe Generale



outside the industry and it has given us cognitive diversity that wasn't there. On the buy-side, there's a tendency to rely on a spreadsheet and a Bloomberg terminal. When somebody comes in with new capabilities, such as Python, they're always asking why we have a static model for ESG scoring or why they can't get certain data revalidated. It's a really interesting development but it has to be tempered with the realisation that asset managers are institutional organisations and you can't just download any data and play with it.

Funds Europe – From the service providers' perspective, have you noticed a change when you're dealing with asset managers?

Webber – At the back end of last year, we launched the Fund Flow Index and we've seen huge interest in that because that information comes directly off our transaction network. We are also seeing a lot of our clients wanting to understand their data in a lot more detail. There's been a lot of talk in the industry about how fund managers can use data to make their funds more effective but we now need to start thinking about how we attract the right portfolios to the right customer. We have done very little as

an industry about understanding our customers to a much greater level of detail than a lot of other industries have done, and that's probably where we need to start thinking.

Clarkson – Yes, so there is that challenge as well because you've got to be able to understand that form of data. But we are talking about the traditional world here. In the alternate world, this kind of data science role has been around ten-plus years. They've been hiring quantum mechanics and mathematicians for almost 20 years, and they've been playing with that data for a lot longer. But they've had intermediation and the confusion of additional value-adds that are provided by various asset servicers and other companies along the way. They have a direct distribution panel, which makes life easier for them.

Funds Europe – Data has become such an important commodity but how do you value and rank the various properties of data within the asset management world? For example, is front-office data more valuable than back-office data?

Clarkson – There's only one property of data, its cleanliness. You can have all the other properties you like, but if it's not clean, it has little value. It's about having the right analytical tools to strip out the duplications, the extras and the unnecessary noise.

Davey – I would challenge that to say, isn't that the historic view from structured data or relational data that quality is really important, whereas with big data, more data beats better data, so if you're looking for a signal in the noise, you want more and more data to find the signal. I think that's probably shifted with the analysis of big data, and if firms can combine both structured data analysis as

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well as unstructured data analysis, then that is where real value lies.

Barnett – With market data you lease it, you don't own it and that helps all of those market data providers to immunise themselves against any liability. It also makes them very sticky. If you want to close a contract, those ten years of historic market data have to be removed from systems and not made available throughout the organisation. Also, as we modernise with technology, we're generating a lot more operational data than we did before, and it's incredibly useful management information. You

“IT WILL BE INTERESTING TO SEE IN THE COMING DECADES WHETHER AS AN ENTIRE SOCIETY, WE MOVE TO THE CONCEPT OF PEOPLE OWNING THEIR DATA COMPLETELY.”

Kate Webber, Calastone



see systematically where your operations are truly inefficient. I think the ownership of both those sets of data is really, really important – they form the basis of turning data into information.

Davey – I completely agree. We've done some work on process mining where you compare your system logs of different departments involved in a business process. Rather than looking at business processes and analysing them from the business end, you just compare system logs. Very quickly you can identify where the key value points are and the inefficiencies in the process.

Webber – One area where the industry has undervalued data is from regulation. Businesses must collate vast quantities under MiFID II around costs and charges, target markets and product governance. Regulation is viewed as cost but there's incredible data that you could extract which would give you valuable insights.

Derejski – There has been tremendous growth in the amount of regulatory data. Sometimes the industry's error is collecting data that already exists somewhere else. There are public sources to which you can connect online to collect data rather than collecting it all and storing it within the firm. And what makes it worse is that some of this data is on paper or Excel spreadsheets and is unstructured, so even the most powerful AI platform would struggle to analyse it.

Davey – There's a great quote from a London academic who said, "Regulation uses a language called English on a system called paper." His whole point was, if we have regulators coding in rules, they can be taken straight into firms for implementation on their systems.

Derejski – It's also a problem relating to risk management. I see clients who are

gathering this data because regulation made them do it. No one is looking at the details or acting on it. It is just put into a drawer in case there is an audit.

Funds Europe – Is front-office data more valuable than back-office data?

Davey – We have an example of a product we have built to analyse data on fund distribution. This is primarily around the data lake, so the value comes from putting together all of that data, which gives a view that the asset managers may not have themselves and generating insights in a way that's valuable for them; so they can see where funds are not performing, not selling particularly well or where there are opportunities to sell more funds. So, you're giving an insight on revenue generation for the asset manager on the distribution. That's a very valuable thing which has come from the back-office data. The only caveat to that is you need to be careful about data privacy and GDPR topics.

We are doing some interesting work pooling data between firms; the challenge is how do you collaborate and still have data privacy protection? If you can do that within a secure computing environment, then it means that different firms can contribute in a collaborative way and get the benefits. For example, look at legal entity identifiers (LEI) codes – we have them, everyone has, it's a big overhead to make sure they're accurate and correct. We're working with one client who's got a few asset managers who are pooling these LEI codes into a secure environment and then running analytics on the data to find exceptions. It means every one of those asset managers does not have to pay a provider to validate their LEI codes or have to do it themselves.

Clarkson – I think there are two types of data, there's the market data and then there's the servicing data. The asset

manager will own a certain amount of servicing data even if he's outsourced the transfer agency, fund accounting and custody to other places, so it's up to them to use it. But if the asset servicers and custodians and transfer agents can add value to that data, can they then monetise it? Yes, the data is owned by the asset manager but how much data do they want? Can the TAs provide a cleaner service? There are TAs that have got single global systems, which makes providing data easier and cleaner compared to other TAs, who use multiple systems and then have to build layers.

Funds Europe – Are there issues over data ownership and the prospect of service providers selling assets managers' own data back to them?

Davey – I think it is a big topic for the industry. Consumers are now awake to the business model of the big tech firms and what that means, and we're starting to see technology tools to protect our own personal data and to build the self-sovereign identity concept where you control your data and you can assert your right to privacy or you can give others permission to use it. GDPR was less of an issue for financial services than in some industries because we have always been focused on confidentiality and data privacy, not to belittle what it took. As we put data together in data lakes to create value, managing data privacy is going to be one of the challenges we all face. We will have to develop novel solutions to make sure we can get the insights we want but at the same time protect the security and privacy of the data.

Webber – That's why GDPR isn't a European issue, it's very much a global issue because of the way that data is managed in these very large organisations. I really like the concept of GDPR – the idea that over decades, people will come to own their own data.



“WE ARE CREATING DATA AND SELLING IT AS A SERVICE. THIS IS JUST THE WAY OUR BUSINESS MODELS ARE GOING. WE NEED TO FIND NEW WAYS OF GENERATING REVENUE. IF YOU DON'T, YOU DIE.”

Andrew Barnett, RIMES Technologies

We talk a lot in this industry about who owns data, but we never talk about the fact that the investor is the person, they own that data, and it will be interesting to see in the coming decades whether as an entire society, we move to the concept of people owning their own data completely.

Davey – But if we get it right, then it means that investors should get a better service. One of the other pilots we've got is pooling fund buyer information so that you can see if an investor bought this kind of fund, they are more likely to buy this other type of fund. Or, from the investor's perspective, if you are interested in this strategy, you might want

to look at this fund which does basically the same thing but with lower fees. If you can get those two things right and protect privacy, then you can get a better service at the end of the day for the investor.

Barnett – Whether you're a provider or practitioner, business models are changing and evolving and there is an expectation of output in the form of commercialisation from those new models. For example, if you are building a new ESG operation, at some point the CEO will ask when you are publishing the data and when you think the public will start buying the data. Fund managers think they have this intellectual property that others don't have. We are creating data and selling it as a service. That is just the way our business models are going. We need to find new ways of generating revenue. If you don't, you die.

Clarkson – If all this data goes back to the individual, why would they need a fund manager? They'll start being able to drive down their own cost. The mutual fund was created to bring down costs and over the years, costs have been added back in. It could be that investors start buying direct again and fund managers just become providers of direct access to the market and investors create

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their own fund, rather than paying fund managers to create one for them.

Webber – I've heard lots of things from lots of different players about who's going to be exiting the market in the next five years. I've heard it about the TAs and about platforms and I've even heard it about fund managers no longer existing in the future. I think what we all would agree is that in order to survive the next five to ten years, you need to start to really figure out what your value is to the end customer, what you're bringing, and how you want your operation to run on that basis. I think what we hopefully will start to see is a lot more collaboration within the industry to find ways of bringing cost down really effectively. We know that margins are falling and we know that there are more people who use Amazon Prime in the US than vote in the elections. If these are the new service norms, then the industry is going to have to start to figure out how it works more effectively to that end.

Funds Europe – What impact will technology like blockchain, quantum computing and the cloud have on the use of data in the future?

Davey – I think cloud is still the biggest disruptor and probably sometimes underestimated. It gives you massive storage capability, scalability, at relatively low cost, so it allows for fast experimentation and innovation. I think it's a really important enabler. How much of the asset management industry still uses Excel? With cloud, it's not just the storage but it's the AI and data-management tools you get access to. We're hugely committed to cloud technology. We do a lot of our risk processing in public cloud because it's the only place you can get massive processing capability on a distributed basis in a very short time space.

Barnett – A lot of people falsely also believe that I can take a data warehouse, pop it into the cloud and all of a sudden I get huge benefit from it. The reality is that some of the old technology doesn't get any benefit within the cloud. Some of the new technologies such as the micro-servers and containerisation are phenomenal in a dev-ops environment and for application development.

Derejski – It is sometimes easier to work with a fintech company in order to be innovative than trying to do it internally because of the legacy issues that you mentioned. Solutions that are built around legacy systems are not really innovative or disruptive.

Webber – For me, having sat in TAs for years, the ability to share data through a blockchain solution is really, really exciting for this industry. One of our biggest problems is how we process data on a daily basis. We process it over and over again, up and down our value chains. If technology enables us to stop doing that and instead allows us to share data in a controlled way, it will create a benefit for the industry that we have yet to fully appreciate.

Peacham – Blockchain is certainly a very powerful tool, if used in the right way. It is not the fix to all our problems as many think. Amundi is working on several projects both internally and externally to evaluate the technologies' effectiveness and efficiency opportunities. If quantum computing becomes mainstream, which in its current form is some way off, it becomes a very different world where targeted calculations, fraud detection, asset valuation, pattern clustering for decision support and probability becomes almost instantaneous. It is an incredibly exciting opportunity. On a level playing ground, this obviously could bring immense global advancements

to all disciplines of healthcare, climate modelling, industrial evolution and of course financial services, well beyond even what has been achieved since the modern computer and in a very short period. At the same time, many technologies, particularly around security cyphers, would need to adapt in tandem to ensure it does not become a negatively disruptive technology.

Davey – Tokenisation is very interesting. We've been through the trough of disillusionment and there are some tokenised assets that are starting to find business value where we've got the concept of stable coins that are backed by fiat currency or some other form of collateral. I think that's a really interesting development, because we've got to a point where that has a real value and there are a lot of advantages in using those. That's something that is far more near-term than quantum, but it's a real-world application which could have real value for the financial services industry.

Clarkson – And 5G will bring data even quicker. I have seen demonstrations with a person in a shop just picking up items and walking out. There's no need to use a checkout because the 5G cameras monitor everything. That's disruptive.

Barnett – When I look at utilities and other organisations that have got that greater value chain control, they also had standardisation implemented very, very early and surprisingly, they're very regulated, so a lot of their inputs become actionable faster. Financial services is highly regulated but it's not highly standardised and we're about to add, by a factor, many more data sources that are semi-structured and unstructured. Value creation from these new data sets will depend on technology, business models and the ability to glean value from the relationship between the data. **fe**