

The Future of Asset Management:

Data and Analytics, Part 2 – Research and Automation

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The Future of Asset Management: Data & Analytics, Part 2 – Research and Automation

Executive Summary

The challenges for the asset management industry may never have looked greater, but neither has the opportunity for success. With the global pension shortfall now estimated at \$41 trillion¹, continuing changing demographics and evolving requirements for increasingly tech-savvy investors are forcing the industry off the starting blocks in its digital transformation. The growing accessibility of unstructured datasets and advancements in technology in other industries is leading to the digitalisation of the investment process itself as subsets of AI technology create opportunities to intelligently connect the right content with the right analyst.

The assumption that fundamental active asset managers can no longer compete with the super tracker funds oversimplifies the wider challenges facing the asset management industry today. The downward pressure on fees and squeeze on profit margins is exacerbated as the current investment cycle matures in a period of radical geopolitical change where it is becoming progressively challenging for active managers to consistently deliver alpha. As traditional pension schemes fail to keep pace with liabilities due to increases in life expectancy and declines in interest rates, a generational change in investors is emerging; different both in requirements and investment appetites, as well as demanding more accountability and transparency from their managers in the process.

During April to June 2019, we spoke to 42 industry participants to discuss how they are changing their approach to data and technology to address the challenges facing the asset management industry across a variety of roles; nearly half of our participants hold C-suite positions including new roles such as Chief Data Scientists and Chief Technology Officers. 61% of asset management firms are based in the UK, 21% in Europe and 18% in the rest of the world. The asset managers who contributed are responsible for \$11.4trn assets under management; their interviews were augmented with conversations with Data & Technology providers (see appendix for the list of firms who contributed).

Top 3 Findings

1. Change in the investment process is already underway, with 73% are using greater quantitative analysis in portfolio construction.
2. This trend will only accelerate as active managers need to appeal to future investors and diversify strategies and geographies, including an increase in ESG with 57% of respondents indicating that ESG now underpins their investment strategies as a whole.
3. Sixty-nine percent of respondents have increased their use of analytics to demonstrate execution performance.

“Pension funds are moving away from the traditional market. It’s cyclical – everyone had a quant fund around 2006/7 and was making a lot of money until they didn’t. Now it’s smart beta, but it still needs correlation to work. If that correlation goes away, you start having big problems. Passive has grown to such an extent and if that company is not in an index, it is not going to trade. Whether small cap companies are included in an index fund is somehow the most important factor for a company is their ability to raise capital. As an industry, we are moving away from long-term investments and that’s a problem. On a quarterly basis clients are calling and asking about the performance. That means the industry is chasing performance and that’s a problem. It is pension money, it should be super long-term money.”

**Managing Partner & Board
Member of Asset Manager**

“You have new investors coming to the market – women, people of colour, a younger generation – different investors with different investor objectives. Fund performance still matters but offerings will need to be much more bespoke and tailored. The next generation have fluency with digital spaces, they will want to log in and make their own decisions, the pricing model will need to be transparent and auditable. You will want to text message your AM and have control over your investments as easily as ordering an UBER.”

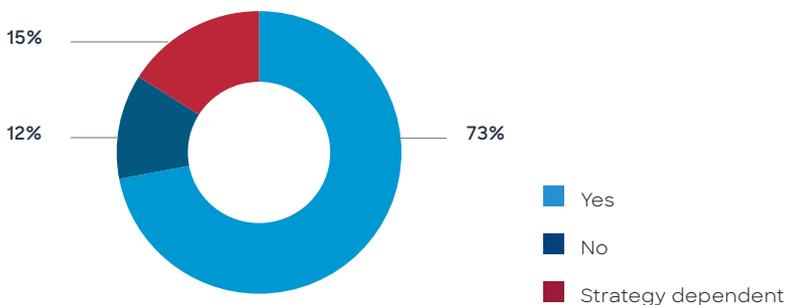
**Head of Digital Product, Global
Asset Manager**

¹ https://www.genevaassociation.org/sites/default/files/research-topics-document-type/pdf_public/pensions_epidemic_summary_final.pdf

Research Access - From Today to Tomorrow

The historic approach to investment has been devoid of enriched alternative datasets for many discretionary portfolio managers but this could be set to change. Enhancing the scope and breadth of consumable data sources along with automation of mundane tasks through ML and NLP will allow analysts to mitigate cognitive bias through quantitative rather than qualitative analysis, providing deeper research rather than merely keeping up the information flow.

Exhibit 1: Are you increasing the use of quantitative analysis in portfolio construction?



Source: Liquidnet market structure commentary, April -June 2019 - Asset Management responses

One area where active managers are already seeing a significant change is in the increased use of quantitative analysis in the construction of portfolios (see Exhibit 1). This is particularly evident when looking at global multi-strategies given the geographical dispersion and broad range of assets where focusing on company meetings and bottom-up analysis becomes impractical.

Statistical arbitrage funds have long leveraged market data to look for opportunities and discrepancies between markets and use quantitative analysis to create algorithms to trade. In contrast, discretionary funds have elected to trade using algorithms, but the incorporation of data in the investment process has remained focused on risk management of a portfolio. However, the increased scrutiny on performance and the ability to demonstrate successful management of portfolios now requires a constant verification of investment decisions.

Speed of access to an investment idea is also altering the consumption of research ideas from the sell-side. Rather than waiting for the production of a written research report or engagement with a sell-side analyst after the production of a report, asset management firms are choosing alternative means by which to ingest the information ensuring they can compete with the quant firm who historically has been able to trade on the information several stages before the fundamental PM had even opened his email (see Exhibit 2).

Exhibit 2: Traditional Fundamental Access to Sell-Side Research Ideas vs. Quantitative Methods



Source: Liquidnet market structure commentary, April -June 2019

“A lot of our fundamental portfolios will have 40-100 stocks, but all global strategies will have thousands of stocks; so rather than even pretending we have the ability to go and visit companies we have larger quant driven input data to build a strategy and that requires a change in approach to investment and data.”

Head of Dealing, Global Asset Manager

“Data is going to change the investing of portfolios. It is not just about scoring risk, but what investments to make or why and where you chose to invest. Some things are not obvious and have correlations you didn’t even realise were there.”

Head of Trading, UK Asset Manager

“One of the biggest frustrations on the buy side is where they have the right view, but they then choose the wrong trade and they should have made money, but they didn’t, so I think optimal trade expression is critical. They can look at their US equities exposure to Chinese growth and by using advanced analytics they can then look at a 100% quantitative empirical answer showing them what individual stock and what combination of stock is more sensitive to Chinese growth in isolation.”

Data Analytics Provider

“The document you have from 1995 may still be valuable to your investment process. By scanning all documents from any system, you can go in and extract the information you need and structure it. The investment approach needs to change and that’s probably the biggest change that is going to happen. The adoption of new technology needs to be incorporated into the investment process.”

Head of Digital Product, Global Asset Manager

Maintaining an edge is leading portfolio managers to incorporate increased levels and more varied sources of data earlier in their investment process to ensure that they maximise alpha opportunities making the right investment at the right time. Extensive portfolio modelling with empirical evidence provides the justification for the investment decision – whether this is for an individual instrument or a global multi-asset portfolio. The interconnectedness of individual and multiple investment decisions translates into multiple factors – macro or micro, of when to buy, sell or hold – all of which continue to evolve. Given the increasing short-term nature of investments, this level of analysis is becoming progressively important as well as the speed in which it can be completed.

Constraints on technology spend have seen firms prioritise resources. As the outsourcing of back office functions increases, firms can focus on research and modelling capabilities. Increased use of APIs and open source technology allow firms to partner with fintech providers better resourced to process greater and more effective use of data over a longer period of time. This provides digitalised access to traditional datapoints such as written broker research reports which can now be auto-tagged to aggregate and extract information faster and more efficiently.

The rise in importance of intangible assets means establishing the value of a company has become more nuanced, including factors such as trust, reputation and goodwill rather than a tangible asset such as machinery. According to HM Treasury, the world's five most valuable companies (Apple, Amazon, Alphabet, Microsoft, and Facebook) hold 95% of their £3.5 trillion of value in the form of intellectual property and other intangible assets; just 5% equates to tangible assets on their balance sheets such as land, buildings and equipment². Recent analysis of intangible value in the US, which looks at the difference between the equity value of companies in the S&P 500 and their tangible assets estimates that intangible assets comprise 84% of total assets in the largest US companies. This is a rise from 17% in 1975 and includes values such as sustainability, child labour, gender diversity, supply change management and public sentiment³.

Understanding the hidden risks that lie in a portfolio or strategy now requires analytics around the idea of a strategy, as well as on the sector, correlated stocks and mitigating factors – many of which are not included in traditional valuations of companies. With the rapid rise in social media usage, reputational risk has become much harder to predict and therefore manage. By running a name-identity recognition algo across different business units with siloed databases and Excel spreadsheets, firms can understand quickly their entire exposure to a particular company. Then through ML, the algo can relearn from the false positives and apply adjusted rules to new datasets in a subsequent context as it evolves. This framework facilitates greater strategy portability across different investment hubs and enables a more integrated investment platform, allowing firms to put assets under management to work faster and more effectively.

Access to richer and deeper datasets will shift investment approaches from just verifying a PM's investment idea towards the creation of ideas. Having access to evolving data means PMs can hone in on specific questions to uncover relevant answers, but these answers may trigger subsequent further questions as the data evolves necessitating a change in the underlying investment.

Firms are also increasingly using quantitative analysis to understand not only investment strategies but also PM behaviour, and whether there is unnecessary bias in the investment strategy, which leads to profits being taken too early, or conversely losing investments being run too long. By being able to understand who is good at what, investment teams can figure out where the strong suits exist, invest more time and internal resources on these areas and outsource where there is opportunity to do this more effectively.

While many firms have made significant progress, some still rely on fundamental data and more traditional ways of investing. While there is valuable data to consume that could impact on the underlying investment, the management of the data process is still very manual and so the ability to extract value is limited. While there is a legitimate debate as to the level of detail required for data analysis if your investment horizon is longer term, data is still necessary to monitor portfolios and understand levels of risk in terms of reviewing holdings.

“We are collaborating with new tech providers to make sure we can add a quantitative element. There is a strong focus on NLP particularly for analyst reports, additional monitoring of sentiment analysis providing signals to buy and sell, creating additional stock ideas based on what-if scenarios, portfolio weightings, additional tilts to the equity value bias – but it is still all based on verification of the PM's original idea.”

Head of Digital Product, Global Asset Manager

“I think there is a question in terms of alternative data and what the actual value of this is, as well as tangible vs intangible assets of companies. You need to do far much more in-depth screenings of your actual positions in your portfolio. There is a huge shift at the moment towards providing products which are more appealing to a younger generation – are you invested in a sustainable way etc?”

Head of Trading, Global Asset Manager

“We are using quant analysis for new investment products to look about where we could invest in. I think it is also about being better at figuring out what is your target and your stop. Understanding if your PMs have biases or if they are constantly too optimistic on targets or their achievement level is not realistic of the performance.”

COO & Partner, UK Asset Manager

“The key distinction is whether the PM is discretionary or systematic; a systematic guy is far more interested in how they are going to slice and dice this data. If it is a discretionary fund, they are more interested in how relevant a signal is going to be to them. Our job is to show them how the data is relevant and how it can be utilised.”

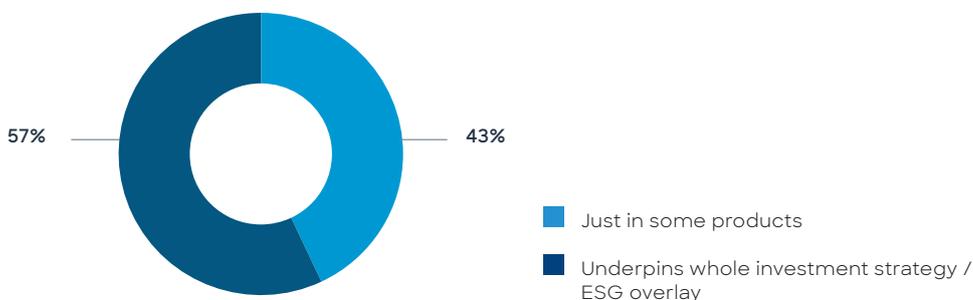
Partner

² https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/752003/Getting_smart_about_intellectual_property_and_other_intangibles_in_the_public_sector_-_Budget_2018.pdf

³ <https://www.oceantomo.com/2015/03/04/2015-intangible-asset-market-value-study/>

As the investment cycle matures, investments are entering a period of radical geopolitical change which not only could halt the tide of globalisation but will make it increasingly difficult for PMs to predict accurately. The rising tension between the US and China and subsequent ban on US companies using technology from foreign suppliers deemed a security risk requires investment managers to rethink strategies for a more localised era. New sources of data will be required to assess risk, and higher premiums will need to be incorporated to compensate for this increased risk adding a further level of complexity in managing portfolios. Given that the market can turn on a tweet, the need to be able to respond quickly and accurately has never been more acute.

Exhibit 3: To what extent does ESG form part of your investment strategy?



Source: Liquidnet market structure commentary, April - June 2019 - Asset Management responses

Secondly, for active managers to appeal to future investors as well as retain assets, firms need to diversify strategies and geographies, including an increase in Environmental, Social and Governance investing (ESG). Client demand for Responsible Investing (RI) has risen 50% in the last year according to AIMA⁴.

While ethical investing is not new, certain funds have always deliberately chosen not to invest in companies or industries that did not align with investor values such as “sin stocks” like oil and tobacco or weapons manufacturers. The difference today is the need to incorporate new multiple factors into the investment decision making process, linking these factors to investment returns – positive rather than negative screening investing. Backed by the UN Principles for Responsible Investing (PRI), these factors are extending the investment decision making process to include elements such as a company’s impact on climate change, the level of executive pay, lack of diversity in senior corporate roles and poor corporate governance.

RI and ESG are no longer seen as separate stand-alone investments, but for some firms are becoming part and parcel of all investment strategies. This creates a potential risk of “green-washing” of funds to achieve ESG endorsement. This risk arguably increases the number of datapoints and analysis required ahead of verifying an individual investment decision to minimize the potential of “green washing” as well as ensuring the validity of the investment decision. All of which adds weight to the debate as to whether the investment rules of today are truly fit for purpose for the investments of tomorrow.

“Asset managers are now getting a lot of pressure from their clients (unions, NGOs...) and they all have different views on how they would like to invest or what they would like to invest in. They are doing a top-down approach when they are creating their portfolios by excluding this or including that, but it does not necessarily mean it is a good portfolio from a financial or ESG point of view. I think it is a lot of hype still until you get you get a very clear ESG profile. The question is now who is willing to pay the extra cost for that type of portfolio.”

Managing Partner & Board Member of Asset Manager

“For the majority of our PMs, access to data remains using BBG and FactSet to validate investment decisions rather than Alt Data or sentiment analysis to uncover investment decisions. It is still too expensive to build reliable use cases.”

Head of Innovation, Global Asset Manager

“ESG is at the forefront of every client meeting and I only see this getting bigger. Dutch pension funds will no longer even talk to you unless you can deliver ESG. But there is a world between ticking the ESG box and really understanding how it works.”

Head of Trading, Global Asset Manager

“This year I would say we definitely are expanding our ESG offering, ESG specific products and also imbedding ESG in some of our existing investment strategies. We are very conscious of the risk of green washing – saying you’re doing something when you are not. For a strict ESG fund it is relatively easy as you can ensure a certain level of screening for example and you can exclude certain sectors and target certain stocks but for an RI fund it is more nuanced and requires implementing a group-wide framework.”

COO, Global Asset Manager

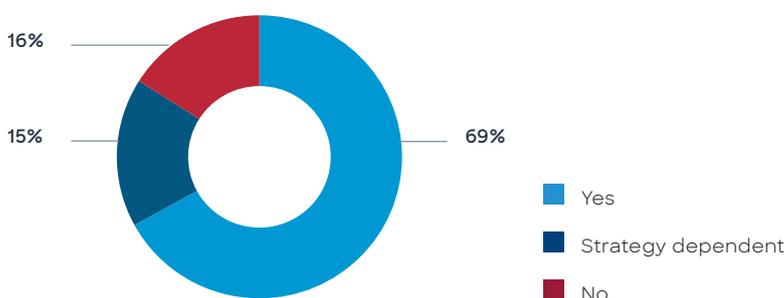
⁴ <https://www.aima.org/article/press-release-responsible-investment-by-hedge-funds.html>

Man & Machine – Tomorrow’s Trading

Data and the ability to use it efficiently in execution has always been important, but the rise of new trading protocols as well as the increase in the speed of execution requires firms to rethink their data intake and use of analytics to maximise the available alpha opportunities as well as ensure delivery of best execution.

Unbundling and the rise in automation alongside the increasing complexity of market structure is leading to a rise in the use of quantitative analysis in portfolio execution for 84% of respondents (see Exhibit 9). However, while predictive analytics around the method of execution or which venue to access has been part and parcel for some trading strategies for some time – others remain wedded to the instruction of a PM who may have limited information on market activity given the speed and complexity of trading today. Fundamental fund performance has, in the main, been based on whether a portfolio manager’s investment idea was successful. Reassessing the role the trading desk can provide in implementing the execution of a strategy not only minimises trading costs but also offers the ability to preserve alpha regardless of the underlying fund strategy.

Exhibit 9: Are you increasing the use of quantitative analysis in portfolio execution?



Source: Liquidnet market structure commentary, April – June 2019 – Asset Management responses

Use of computer algorithms with no or limited human intervention to determine whether to initiate an order, as well as the timing, price and quantity is on the rise. Historically seen as a trading protocol suitable only for quantitative strategies, this is fast becoming an example of the support AI can provide trading desks in implementing execution across all strategies.

While market volatility is not a new factor for traders to content with, the unbundling of research and execution services has led to an increase in the level of ownership of execution for buy-side trading desks, increasing their exposure to market volatility. The requirement to demonstrate best execution in a landscape of increasing fragmented liquidity puts far greater responsibility on buy-side desks to establish when, where and how to trade. Pressure on the sell-side budgets means that brokers are less likely to bear trading costs and make good trades when errors have occurred. Declining balance sheets have seen the use of risk capital become more discriminate. All of which necessitates buy-side trading desks to increase their use of technology backed by historical and predictive data to establish where liquidity is pooling in an instrument or when an issue was last traded as well as how to execute. This is extending to more collaborative industry approaches in sharing data amongst peers once private data has been removed. This allows costs to be constrained as well as provide gaps in traditional datasets such as OTC activity which enable firms to better understand trading risks. As liquidity becomes harder to source in certain instruments, analytics on available liquidity also allows trading desks to suggest alternative instruments to PMs with which match investment objectives.

Many trading desks however are still focused on the selection of counterparties and evaluation of execution outcomes. The requirement – whether regulatory or commercially driven – to evidence best execution and performance to end investors is leading trading desks to a more quantitatively driven process – necessitating yet more data. The ability to extract, analyse, store and feedback historical execution data not only enable firms to support execution decisions, it also provides an audit trail of which broker performed well, which in turn helps traders with their future selection of brokers and how to tailor order execution according to an individual PM and the instrument they are looking to invest in.

“The deeper the analysis, the closer we get to liquidity.”

Head of Trading, UK Asset Manager

“We are being quite thorough about what data we take in and the data we already have, making sure it is properly designed to do everything we can with it. What we put in place today allows us to take advantage of every piece of data we have in the future. We have increased our firm’s budget to put money into that space to make sure the data we have is reliable. We have a very deep bench of quants to help us with that. We have an AI team internally which is working on figuring out what data sets make the most sense and will allow for the greatest value.”

Head of Trading, UK Asset Manager

“It’s the additional monitoring of sentiment analysis providing signals to buy and sell, creating additional stock ideas based on “what if” scenarios, additional tilts to the equity value bias but it is all based on verification of the PMs idea – pre and during trading to cross check.”

Global Asset Manager

“For trading it is very much a transition to technology. We have a centralised trading function that is constantly looking for deeper pools of liquidity, trading directly between asset owners but not executing a portfolio directly – not yet.”

Global Asset Manager

“We do a fair amount of those quant funds trading through a portfolio trade prefer to be done in that basket instead of single stock. Would it go far as speeding up, slowing down in terms of the quant analysis? In terms of how we are trading – certainly something we could do, but we are not doing it. Right now, 100% of it is what should be in the trade/order, but not how it is executed.”

Global Asset Manager

While the aggregation of this trading data can be used in improved modelling to enhance trading strategies, firms are still dependent on the accuracy and reliability of data. Whereas equity data is seen as sufficient, most other asset classes still have challenges in accessing accurate and clean datasets. This situation is pushing some houses to look at alternative solutions to enhance execution processes. For example, a growing number of firms are investing in trading platforms that will match flow as well as capture execution data, quotes and additional information around the trade. With this new intelligence, traders are able to determine not only their own performance, but whether portfolio managers are reacting to momentum in the market, analyse trends and determine the decision-making process. This in turn helps the trading desk adjust execution methodologies depending on the portfolio manager they are working with as well as the instrument in question.

Although some traders acknowledge the increase in the amount of data now available, for others it is still not enough to make a ground-breaking change to their execution process. The type of data being accessed also matters; any automation or AI type of execution requires real-time data to be continuously incorporated into the systems, and the cost of integration remains too high for some firms who instead have to settle for end of day data.

Another challenge is whether the data can be packaged into an insightful, easily extractable set which can be modelled exponentially to maximise its use. The ability to store, clean and consume that data that is important and provides an edge to identify where alpha lies needs to be economically viable. The shift in incorporating third party data and technology partners will be vital in democratising this process. Not all firms yet have access to meaningful data at a reasonable cost nor the ability to dedicate significant resources to make the best use of it. As a result, some traders are reluctant to increase the use of quantitative analysis in their broker reviews given the lack of digestible data sets and instead fall back on brokers they trust and who understand their execution strategies. They may interact with brokers using enhanced analytics and AI in their smart order routing process but the ability to use it in-house, at their own firm level, is still limited, potentially putting their execution methods at a disadvantage to their peers.

Integrating data into investment strategies is not a new process. The core of the industry has always been based on the capacity to access and digest information. A long-only fund in the 1980s, it can be argued, was as reliant on data then as it is today, but it is the manner in which we consume data and the sheer quantity of data that will ensure a change in approach is necessary. Today, many trading models can execute in a matter of milliseconds, as a result the speed and delivery of trading information also must improve. Those firms that invest in the data and technology will be able to compete, and it is not necessarily only a question of big houses versus smaller shops, no firm is immune. Although large global asset managers currently seem ahead of the curve, the increased use of third-party providers will provide a valuable step-up for those unable to invest personnel and resources to the same extent.

Regardless of the size of the firm, for trading desks to optimise their opportunity to become a source of alpha for fund performance requires management support to implement this enhanced execution partnership. Those firms who opt instead for enlightened PMs support rather than addressing this cultural change across their organisations risk leaving valuable alpha on the table for their competitors.

“There are no mainstream TCA providers for the derivatives, so we use our own data to measure ourselves. We are pulling in a lot of information and we do have our own inhouse EMS. We looked at all our trades done for PMs for the last year and from this we can see where fund managers are reacting to momentum in the market. We are learning the trend and what is driving this decision-making process for particular funds and trades from particular fund managers, and therefore asking whether we should be more aggressive for some fund managers when trading and more passive for others. We are using data to learn that big picture stuff to learn how to best trade based on historical inputs and outcomes.”

Head of Trading, UK Asset Manager

“Not all companies have back-to-back data scientists. For data to be used, it needs to be more user-friendly, not everyone can code. But Automated ML, RapidMinor, DataIQ – all these data companies will have a BIG role to play in the future if they can just figure out how to engage with the industry.”

Head of Innovation, Global Asset Manager

“Access to real-time data remains very expensive and in terms of alternative data we have seen two types of offering: end of day data and real-time and in terms of costs it is extremely different so we are focusing more on end of day datasets.”

Head of Innovation, Global Asset Manager

“Data & automation are on my to-do list but my team are very defensive. We all know the trading desk is going to look very different in 10 years time – 30-40% of your liquid stocks will be traded by a robot and the trader will only be there for oversight, but is that in 5, 10 or 20 years?”

Head of Trading, Global Asset Manager

Conclusion

Matching liabilities to the balance sheet as defined benefit schemes make way for more flexible shorter-term investment horizons is problematic, added to which gains are progressively being taken as soon as returns are generated so that managers can demonstrate performance. Industry moves towards greater consolidation to benefit from scale of operational efficiency and breadth of distribution can solve some of the current industry challenges but not all. Relying on star analysts to consistently make the correct call is an increasingly risky strategy given the global nature and complexity of the market today. The level of information overload makes it challenging to read through the noise and hone in on what matters to ensure the right investment is made at the right time. Rather than waiting for the production and distribution of an analyst's report, increasingly fundamental asset managers are looking at ways to uncover alpha opportunities earlier in the investment process to compete with more quantitative managers (see Exhibit 1). This matters as understanding whether there is unnecessary bias, or how to maximise an investment team's strong suit is becoming increasingly important as firms struggle to retain assets as well as attract new investors.

Unbundling the traditional relationship between the sell side and the buy side has already led to the need for greater adoption of technology to redefine workflows to adjust to the new market eco-structure, whether uncovering untapped sources of liquidity or improving execution performance. Now the growing accessibility of unstructured datasets and third-party aggregation tools are creating opportunities for firms to leverage data and analytics more effectively for investment as well as execution purposes. While leaving in place the trading discretion of PMs and the value of corporate face to-face meetings, use of technology such as natural language processing (NLP), machine learning (ML) and robotic process automation (RPA) will facilitate the incorporation of richer unstructured datasets to improve modelling on a more scalable basis and maximise the alpha opportunity or minimise disruption.

The need to adjust investment strategies to meet the requirements of future investors will also demand a change in tracking performance. Longevity matters for active management so monitoring fund performance on a daily, weekly or quarterly basis may be an ineffectual way to continue to assess performance. Yet as the focus moves to more specialist, bespoke strategies based on value growth, the repositioning of the asset manager as a financial intermediary between savers and users of capital opens the door to new products and services from ESG and RI to private debt and infrastructure projects, moving the focus from short-term performance to longer-term investments which better match pension liabilities.

The shift into a new era powered by big data and advanced analytics will have profound impact on the asset management industry. From hackathons to the introduction of synthetic datasets with modelling based on video game technology, embracing the cultural change required to invest in the technological evolution is still the industry's greatest challenge. Ultimately those who invest in technology will replace those who do not.

Appendix: Data providers

Alphacution – <https://alphacution.com/>

A digitally oriented research and strategic advisory platform designed to deliver data-driven and navigational intelligence which focuses on 360-degree modelling, measuring, and benchmarking for technology spending patterns, and the operational impacts of those investment decisions, in and for the global financial services ecosystem (FSI).

CausaLens – <https://www.causalens.com/>

CausaLens is building the next generation of predictive technology for complex and dynamic systems, serving the most prominent hedge funds and asset managers. CausaLens' autonomous time-series prediction capabilities are becoming the industry standard.

ClearMacro – <https://www.clearmacro.com/>

ClearMacro provides institutional investors with a front-office software/service solution that processes rapidly changing data and information into live investment signals. It makes decision-making easier, helps improve portfolio returns, expands the user's investment coverage, and increases the transparency of their decision-making.

Distill Analytics – <https://distillanalytics.ca/>

Distill Analytics are bringing psychometric profiling to the investment world, measuring corporate leadership teams' decisiveness and drivers using quarterly earnings call transcripts. Using this method, Distill Analytics offers two key data products Cognition data and Management fundamental index which can be included quantitative models or fundamental analysis.

DXC – <https://www.dxc.technology/>

DXC provide technologists and software engineers who work on financial platforms with analytic services to uncover valuable insights and apply them quickly to improve business outcomes.

Prattle – <https://prattle.co/>

Prattle uses a proprietary Natural Language Processing (NLP) and ML system to produce analytics that measure sentiment and predict the market impact of central bank and corporate communications.

Quant-insight – <https://www.quant-insight.com/>

A macro analytics firm combining innovative quantitative technology with human judgement to analyse financial markets, enhancing performance and better understanding risk.

RavenPack – <https://www.ravenpack.com/>

A big data analytics provider for financial services. recognized for its speed and accuracy in analyzing large amounts of unstructured textual content. Its products allow clients to enhance returns, reduce risk and increase efficiency by systematically incorporating data-driven insights on news, social media and proprietary textual content in their models or workflows.

RSRCHXCHANGE – <https://www.rsrchxchange.com/>

A virtual library for professional clients, where they can read reports, track consumption and manage access to providers. The RSRCHX platform enables research providers to take greater control over distribution, ensuring regulatory compliance as part of a liquidity hub.

TickSmith – <https://www.ticksmith.com/>

TickSmith specializes in big data management technology, with a data lake platform which aims to solve the business challenges faced by capital markets firms. The platform solves many different use cases, including data centralization, global distribution, market surveillance, risk management, and advanced analytics.

About the author



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Rebecca is considered to be one of Europe's leading industry voices on market structure, regulatory reform, and financial services technology. She has authored a plethora of qualitative research reports and commentary covering the impact of market regulation on all asset classes, changing market structure and developments in dark pools, HFT, and surveillance. She joined Liquidnet in July 2016 to use her 20 years' experience to collaborate and deliver research and insights for both the European equities and fixed income markets. Rebecca is also Co-Chair of the FIX Trading Community's EMEA Regulatory Subcommittee, dedicated to addressing real business and regulatory issues impacting multi-asset trading in global markets. She has held prior roles at TABB Group, Incisus Partners, the British Embassy in Bahrain, Credit Suisse, Goldman Sachs International, and Bankers Trust International.



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Charlotte joined Liquidnet in May 2017 to work with Rebecca Healey on EMEA market structure and deliver research and insights about the European financial markets. Charlotte joined from Reed Exhibitions where she was a mergers and acquisitions analyst. Prior to Reed Exhibitions, Charlotte held a role at The Boston Company Asset Management in Boston.



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Lara recently joined the EMEA Market Structure and Strategy team. Prior to this, she studied at the University of Manchester where she obtained her Bachelor of Arts in geography with first class honours.

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