



NORTHERN
TRUST



THE ART OF ALPHA

IT'S ALL ABOUT INVESTMENT DATA SCIENCE

A WBR Insights & Northern Trust White Paper

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Executive Summary

The proliferation and richness of data available to the financial services sector is already proving a profoundly disruptive force. For the asset management industry, harnessing its potential is now a real and urgent challenge.

Most firms are well aware that maximizing their data is the critical enabler in the hunt for alpha that they need to grasp – and fast. Their challenge though is this: how to make better use of data to position themselves at the top of the decision-making value chain?

To add to the complexities of rising costs, regulatory and compliance burdens and fee pressures – as well as the success of passive investing – many firms are still struggling to generate operating leverage with overly complex standalone technology stacks.

The result is siloed data models that make it difficult to access the full potential of their information, let alone to meet growing demands from investors and regulators for full visibility into the investment process.

As those investors become more proficient in analyzing their data and making evidence-based decisions around manager selection, asset managers will need to answer more sophisticated questions about their processes.

The firms that have continued to shine by maximizing alpha through the past pandemic-hit year have one thing in common.

Their golden differentiator is the recognition that intelligent and transparent data interpretation is now essential for every investment decision. This means a full embrace of data science, based on insights and idea generation from multiple new sources of

information, such as alternative or big data (including a firm's internal, proprietary information), as well as deeper analysis of traditional data streams.

In the main, it is the larger 'shops', with well-established units of data scientists, engineers and analysts who are currently best positioned to do this.

But, with the right resources, data science technology is ripe for the taking by all and has now advanced to the point where it is better able to adapt to unforeseen scenarios (like the pandemic) via the ever-growing amount of data available.

The democratization of data, enabled by technology, means the speed at which this is happening is exponential and it is strengthened by the growing sophistication of another game changer: behavioral analytics.

Behavioral analytic capabilities hold huge promise for bringing to light the real 'secret sauce' drivers of outperformance: the route to alpha and the process behind it.

The data gathered from our survey in this report provide a clearer picture as to the data science capabilities and ambitions of global asset managers in the next two years, alongside their key strategic priorities to help drive this forward.

The future is exciting for those prepared to commit to the next level of data science capabilities and grasp the new opportunities across the investment research value chain.

Because achieving alpha is not only an art, it is a science.

Key Findings

Most firms are evolving to new digital ways of working

The business case for digital automation and the use of investment data science is compelling. 98% of our survey respondents are already using, planning to pursue or interested in incorporating data science/decision-support tools into their investment strategy beyond spreadsheets for analysis in the next 1 to 2 years.

Learning from success and failure

The majority (52%) of our survey respondents cited that the area of their organizations' investment process that "could most benefit from data analytics" was "making their best investment ideas repeatable". Helping managers get better at ranking their conviction is a positive outcome of data science through access to enhanced technology that helps them make the right, repeatable and measurable decisions in the quest to achieve alpha.

Most firms access between 5 and 8 data sources

66% of respondents said their firms currently leverage between 5 and 8 sources for their investment data. The variety of data streams fueling the investment strategies of our firms was broad, with ESG data (59%) currently prioritized, alongside traditional factor data (MSCI, Wolfe, Axioma), cited by 55% of our respondents. But heavily in the mix now is alt data (51%) alongside consumer (27%) and sentiment data (10%), showing a clear emphasis on uncovering new sources of data to boost alpha.

Need for consolidation of data to improve decision-making

The majority of respondents (57%) cited the need for a centralized platform to consolidate their investment data to aid decision-making. As data sources proliferate, asset managers are looking for ways to harmonize their data sets, a need that became more pronounced during the pandemic year.

Measuring investment skill will be increasingly digitally enabled

Transparency and trust are major drivers of change in the industry. 40% of our respondents said they were now using data to "evaluate performance" and qualify the decisions of their machine + human model. Benchmarking results will become more critical in the light of investor scrutiny but there is work to be done. 48% of our survey respondents admitted that their organizations are still measuring the investment skill-level of their investment team by using a "qualitative measurement, which mainly relies on anecdotal evidence of proper decision-making". And only 12% use a formal research management platform.

Survey was conducted on 7th, May 2021.

Introduction



Greg McCall
President & CFO, Equity Data Science

In today's increasingly competitive world, asset managers need to surface the right opportunities and identify inherent risks to help them not only make the best investment decisions, but to make them consistently. And with an investor base that is becoming increasingly sophisticated in their scrutiny of decision-making, it is imperative that managers be able to continuously critique, measure and iterate their investment processes.

There is certainly no shortage of data to support decisions. Information flows from multiple sources and in numerous formats. Yet many firms struggle to keep up with the onslaught of data and make the best use of the information they have. Lacking centralized platforms, they continue to use manual spreadsheets for data capture, aggregation and analysis.

While the availability of data is a good thing, it can become useless if users aren't able to synthesize it and identify meaningful insights. The question becomes: how do we harness our data and incorporate it into our investment process to drive continuous (non-stop) improvement?

The answer lies in technology. It's no longer good enough for investment processes to live in spreadsheets or people's heads. Measuring "success" extends beyond traditional returns and attribution. Institutional investors need their investment processes to be repeatable, digital, and measurable if they want to compete and succeed.

The most successful firms and their partner organizations understand the need for automation to better scrutinize the different inputs into their processes and to be able to measure them effectively, without bias.

Being able to track performance over time creates a better learning environment. It creates more accountability, allowing managers to better understand which stocks they're strong in and which stocks they're weak in. And ultimately, it gives them the opportunity to make sure they surface the best ideas for their portfolios.

In a world where fundamental investors can leverage technology to improve their probability of success, investment processes become more consistent and transparent and investment teams are more productive and accountable.

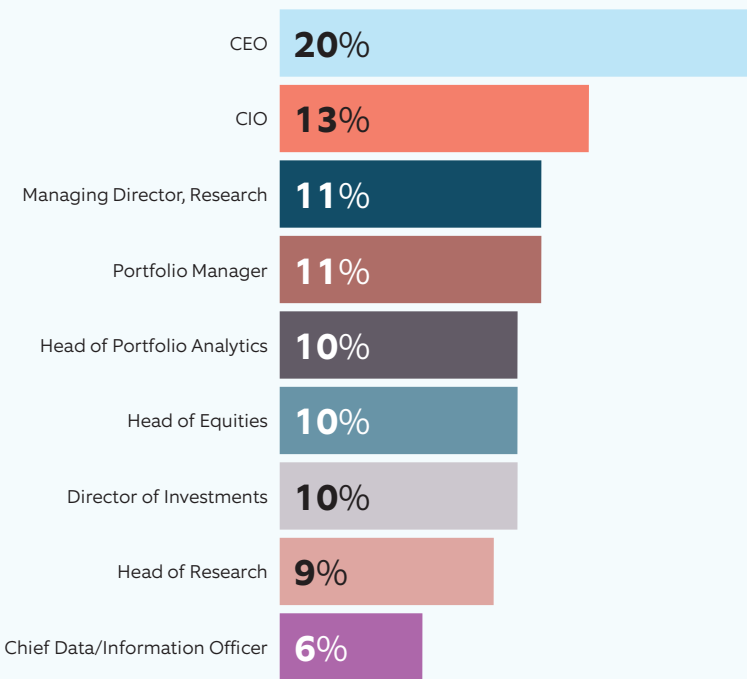
“Your investment process is special. How do you make it repeatable?”

Methodology

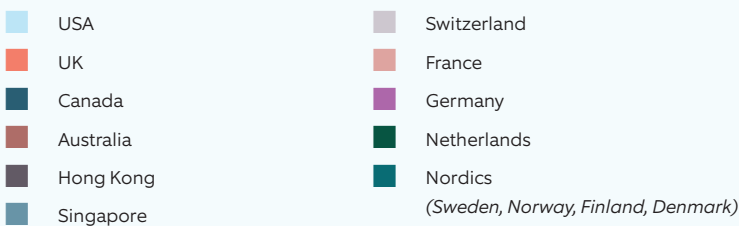
In Q2 of 2021, WBR Insights surveyed 300 CEOs, CIOs, Chief Data Information Officers and similar from across APAC, EMEA and North America regions, from asset management firms with an AUM of \$1bn - \$750bn and hedge funds managers with an AUM of \$250m - \$10bn to find out what their strategies are for maximizing their data, how they incorporate those data into their investment process and their plans to leverage data science tools to optimize their investment performance.

The results were compiled and anonymized by WBR Insights and are presented here with analysis and commentary from Northern Trust contributors Marc Mallett, Head of Strategy for Asset Servicing, Americas, Paul Fahey, Head of Investment Data Science, and Gary Paulin, Head of Global Strategic Solutions.

Which of the following best describes your job title?

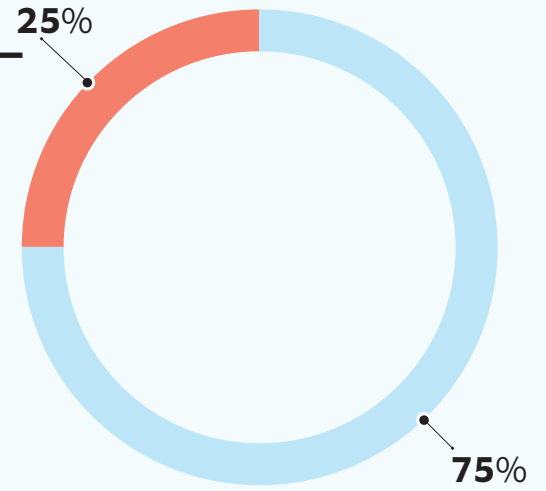


In which country is your company headquarters located?

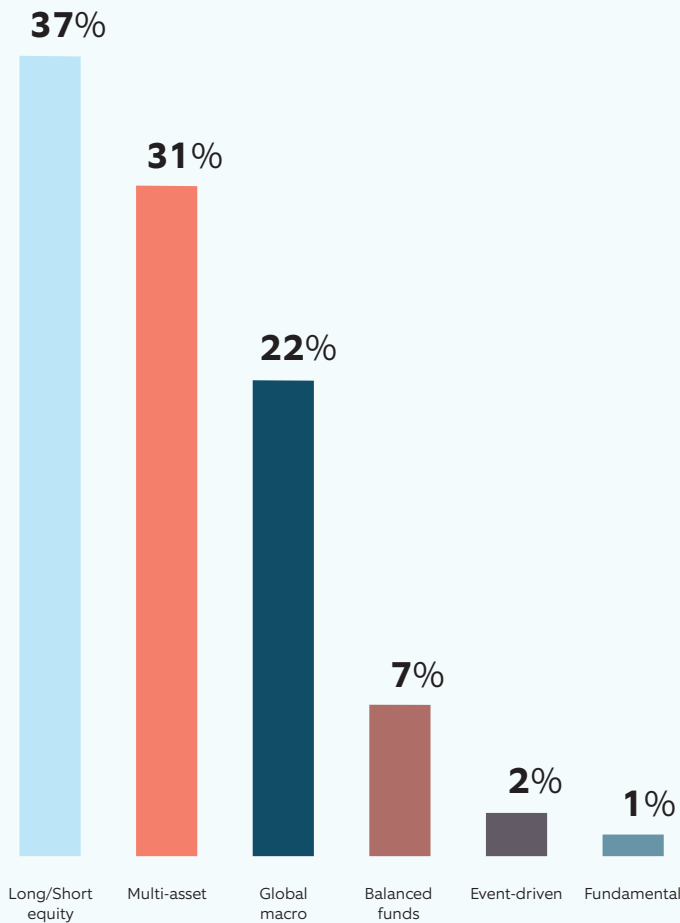


Which area are you currently working in within the buy-side?

- Traditional Asset Management
- Hedge Fund Management



What is the current strategy in place today within your organization?





CHAPTER ONE

DATA STRATEGY, SOURCES AND PROCESSES

Quantitative funds have long been tapping into data and generating trading signals out of market noise. Today, traditional active and hedge fund managers are increasingly recognizing the value of combining their discretionary investment approach with quantitative investment analytics methods too.

This was the finding of our survey, which showed that leading firms are applying advanced analytics at multiple points across the hedge/traditional active asset-management value chain, but with differing priorities.

The majority (58%) told us they were exploiting data sets to identify risks and opportunities to make portfolio adjustments. A similar number (56%) were doing so to automatically execute trades based on signals/trends. Over half (51%) were tapping into data with investigational intent “to inform or guide an investment theory”.

A significant number (40%) also said they were now using data to “evaluate performance” of their machine + human model. This is a good approach to take from an interpretability and transparency standpoint as asset owner scrutiny becomes more data-driven. The growth in data science means measuring investment skill by KPIs is becoming less nebulous and placing rationale behind conviction is coming more clearly into view.

In times past, managers were fed reports created by their administrators and counterparties. That approach no longer works. With so much data at hand, managers are clearly now tapping into multiple data sets to do analysis and develop synthetic benchmarks.

This was borne out by our survey demonstrating the speed with which new data sources are being used and adopted. It found that 66% of respondents said their firms currently leverage between 5 and 8 sources for their investment data.

The variety of data streams fueling the investment strategies of our respondents was also broad, with ESG data (59%) being the most prevalent, followed by factor data (55%).

Our survey showed that heavily in the mix now is alt data (51%) alongside consumer (27%) and sentiment data (10%). It was also telling that a large number (43%) of our survey respondents cited that they now rank expert networks and alternative data providers as “of equal value”.

And the technology available today means firms are increasingly moving well beyond traditionally structured data sets and accessing cutting edge, predictive analytics, underpinned by sophisticated machine learning tools. Yet access to this technology comes with a cost. Only 16% of our respondents expected the investment capital allocated to

investment data sourcing or alignment to reduce. Indeed, 27% expected to be upping their investment, with 56% anticipating their spending would remain roughly the same.

But if digital transformation is revolutionizing the investment research process, the route to it clearly lags behind and remains often analog and unwieldy. Only 30% of our respondents are currently using a data platform to aggregate all information as a single source of truth.

Instead, over half (52%) of our survey respondents said their organizations are still using error-prone spreadsheets to aggregate internal and fundamental data, with other data sources being done manually (email, PDF, etc.) to make investment decisions. The dangers here are obvious. When people use spreadsheets, they tend to develop their own links, formulae, charts and even macros, creating a single person dependency.

A further red flag was this: our survey showed that a significant number of respondents are clearly still intuition-focused and not ranking their conviction, with 19% citing using “a mental mosaic”.

Active management’s biggest challenge often comes down to human nature and behavioral mistakes. Intuition is typically defined as ‘knowing without knowing how you know’. All well and good. Yes, an intuitive decision is more likely to be correct when you’ve had considerable experience in making a certain judgment. But when it comes to investing, a rules-based approach to quick decisions typically outperforms the biases, error and emotion of “gut” reactions.

We asked our respondents the average years of experience of their investment team and the finding was between 11 and 30 years for 74% of respondents.

The advent of technology means that the industry is at an inflection point as the combination of pressures imposed by automation threatens previous career paths in favor of more data-driven investment expertise.

Data science – and its ability to map decision-making – could hold the answer here. Long-term sustainable success will depend on ensuring knowledge is carried forward – rather than stored in the heads of departing portfolio managers.

58% of survey respondents cited their organizations' investment strategies utilize data sets to inform risks/opportunities for making portfolio adjustments. 56% use data sets to automatically execute trades based on signals/trends.

In which way does your investment strategy utilize data sets?



When looking at the combined responses it is clear that data plays a critical role in the investment decision-making process. While the majority of respondents acknowledge utilizing data to drive decision-making, I wonder how many would say that they have consistent access to timely, accurate and complete data.



Marc Mallett

Using data for portfolio management and risk assessment is a well-trodden path and several technology vendors (including ourselves) incorporate these features into their offerings as standard.

For those less familiar with using data in their pre/post mortems, I would advise they think about doing so, not necessarily because it may lead to learning and better investment outcomes, but because their investors are beginning to utilize data more when they scrutinize fund managers in an attempt to measure their investment skill.



Gary Paulin

This response falls under the banner of "this is how we've always done it." The challenge now becomes how to put the increased and more timely data sets to work to inform the process and enable continuous improvement.



Paul Fahey

66% of survey respondents cited their firms currently leverage between 5 and 8 sources for their investment data.

How many sources do you currently leverage for investment data?

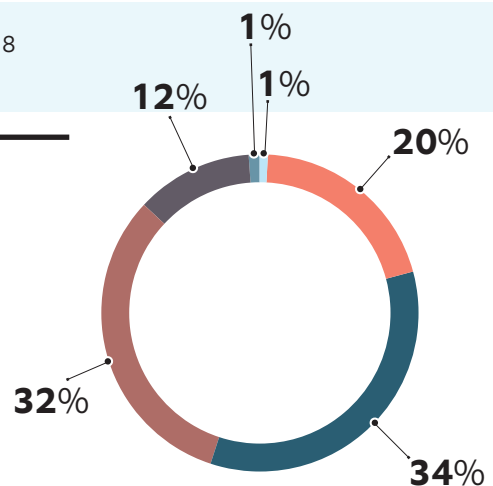


Many portfolio managers I speak with use a number of data sources (albeit they prefer to interface with them via one portal). Often the more signals or variables you have, the better. The magic comes in the weights that are applied to each, and the way the manager combines them.

Often, innovation occurs at the intersection of technologies and in the unique combination of user-driven outcomes. Value, therefore, comes not so much in the fact that they connect, but in the outcome of those connections. User-driven experiences drive creative solutions, a confluence of micro-signals to deliver strong/amplified responses.



Gary Paulin



Having a large number of data sources can become unwieldy if it remains as "data" and information or "signals" are not surfaced. The ability to bring the data sources together so they work in concert and are not competing with each other is a challenge. Those firms that can successfully stitch the data together in a complementary manner will yield the greatest results.

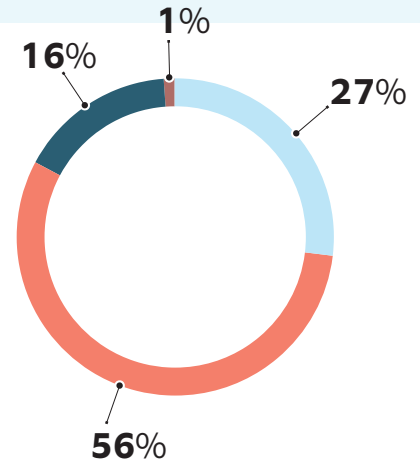


Paul Fahey

83% of survey respondents cited they expect the investment capital allocated to investment data sourcing or alignment to stay the same or increase in the next two years.

How will the investment of capital allocated to investment data sourcing or data alignment develop in the next two years?

- We expect it to increase from 2021
- We expect it to stay the same as 2020
- We expect it to decrease from 2021
- We don't know how this will change in the next two years



Technology is already the number one budget item for many firms, but with the exception of very big firms, large investments can be prohibitive. Instead, many firms are turning to large platform providers/asset servicers who can provide access to technology on a variable cost basis, thus removing the burden of investment. This in turn helps level the playing field, removes the inbuilt advantage of larger peers and allows these firms to get back to competing on alpha, and not on cost.



Gary Paulin

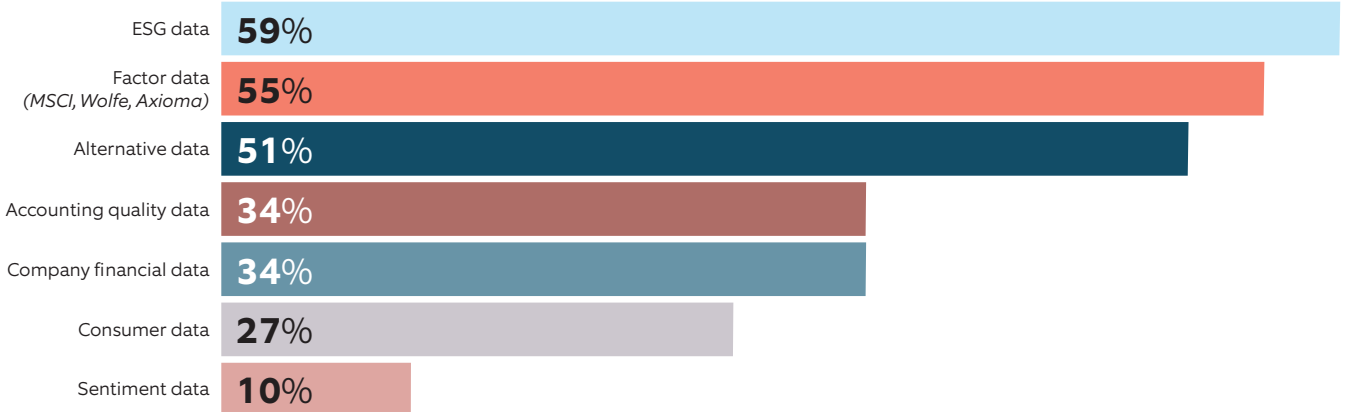
As cost pressures remain for asset managers, the ability to spend scarce capital wisely will be important and their willingness to partner with providers who can deliver high quality outcomes efficiently will allow them to invest in their core activities, both from a personnel and a technology standpoint.



Paul Fahey

According to our survey respondents, ESG data, factor data (MSCI, Wolfe, Axioma) and alternative data are the top three data streams that their organizations are currently using in their investment process.

Which type of data streams do you currently use in your investment process?



Investors can no longer avoid the consequence of ESG and it's becoming an essential aspect of all decision-making. Data will inevitably have a large role to play.



Gary Paulin

ESG is no longer a "screen" applied after the fact, but it is core to the investment process for a lot of managers. Whether it is driven by the manager, their investors or the regulators, the demand for high quality, complete ESG data is on the rise and will not abate.

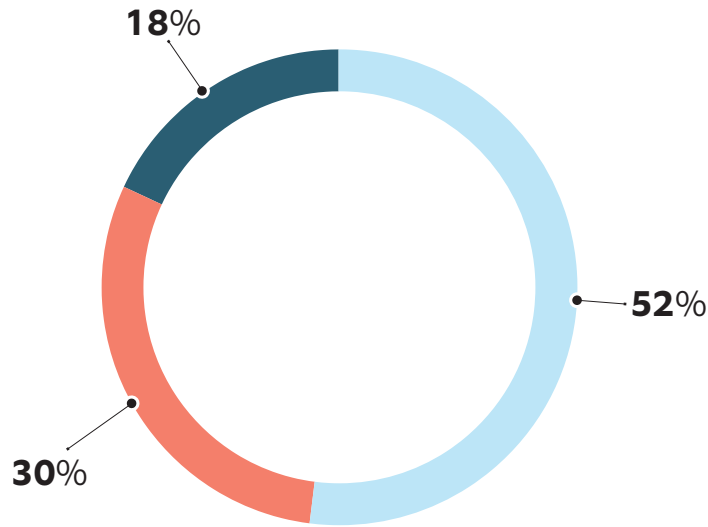


Paul Fahey

52% of our survey respondents cited their organizations are still using spreadsheets to aggregate internal and fundamental data, with other data sources being done manually (email, PDF, etc.) when integrating the disparate information sources which are being used to make investment decisions. 19% more use a mental mosaic. Only 30% use a data platform to aggregate all information.

How do you integrate the disparate information sources used to make investment decisions?

- Use spreadsheets to aggregate internal and fundamental data, but other data sources are done manually (*email, PDF, etc.*)
- Use a data platform to aggregate all information (*internal and external*)
- Mental mosaic – review the models in spreadsheets, review notes, read research, etc.



Maybe we should be surprised that approximately 70% of respondents indicated that they rely on spreadsheets and other analog tools to evaluate disparate data sources as part of their decision-making process, but I'm not. The evaluation and incorporation of data, both internal and external, into the investment decision-making process is typically left to each investment professional to sort out on their own. There is a long-held belief that each investment professional's process is unique and therefore unable to be supported by a standard software platform. I would agree that the process may be unique, but it is no longer true that standard software can't support it. Given the continued advances of cloud-based platforms that can adapt to each team's or team member's process, the ability to bring efficiency and transparency to the investment process is now a reality.



Marc Mallett

We are early in this journey of data optimization. That said, we believe the speed of travel will be fast given the confluence of competition, regulation, demographics and technology.

So much change is occurring in the industry that finding the time and resource to do everything can be a challenge. But it is clear that automating data via a single platform can provide the simplicity, security and scale that firms need to future-proof their operations.

Those that don't use a data platform to aggregate data may simply be resistant to change and believe the current model works fine. But it's becoming apparent that those resistant to change are also resistant to learn and may miss the future as a consequence. And any firm that stops learning in a highly competitive, knowledge-based industry like fund management, probably won't be successful for much longer. It's a case of adapt or die.



Gary Paulin

It would not surprise me if, when we look under the covers, we find that close to 100% of asset managers are still using spreadsheets to aggregate data from functional platforms such as their risk management or research management technologies.

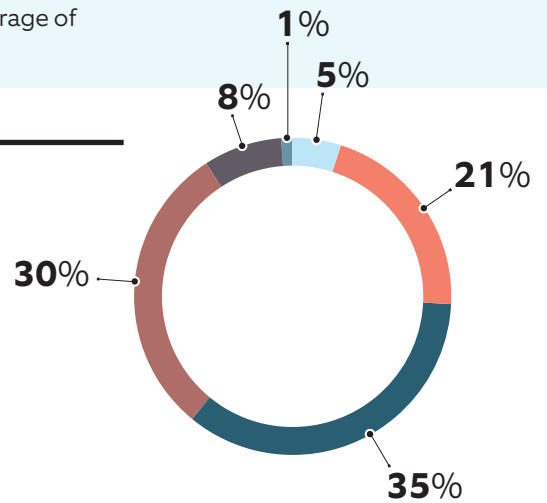
The demand from investors for automated data management platforms has not yet reached a critical mass but that is changing. As investors' access to the data increases and they are more demanding of their managers, it will not simply be about human error but human capacity to respond to detailed queries in a timely manner. Today, if a manager needs to respond to a complicated question from an investor in a couple of days it is manageable (albeit a costly use of analysts' and portfolio managers' time). But if the question is a complex one in our increasingly complex world and the answer is required in hours then no amount of human capital can manually respond to the query. There needs to be a systematic way to respond to those queries. Automated platforms can help create a repeatable process and provide the ability to continuously improve.



Paul Fahey

65% of our survey respondents cited that their investment teams have an average of between 11 to 15 or 16 to 20 years of experience level.

What are the average years of experience of your investment team?



Whatever your demographic, you need to become more digitally conversant, not because it will lead to better investment outcomes necessarily, but because it's being demanded more by key stakeholders: regulators, owners and investors.



Gary Paulin

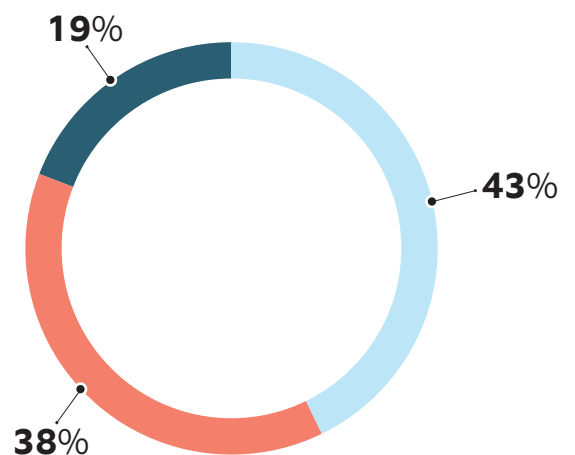
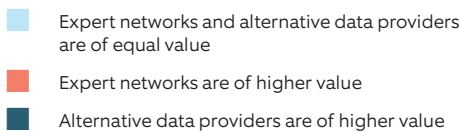
Any firm wants to be aware of key person risk and be able to manage the loss of knowledge that can accompany the departure of a person with years of experience. On the flip side, how does a firm make the onboarding process easier for newer team members and ensure that they are able to get up to speed quickly? That's where data science can come into play. By identifying processes and making them repeatable, a firm can both insulate itself from key person risk, and improve the process used to bring new team members aboard.



Paul Fahey

43% of our survey respondents cited that expert networks and alternative data providers are of equal value.

How do you compare the level of value between expert networks and alternative (independent/not already aggregated) data providers?



Both expert networks and alternative data providers can be used to provide inputs that help inform decision-making.



Gary Paulin

It is fast becoming less about one over the other and more about the combining of valuable data, be it traditional or alternative, to deliver greater insights.



Paul Fahey



CHAPTER TWO

INVESTMENT ANALYSIS

“Past performance is not a reliable indicator of future results” is a well-known compliance statement that appears in investment literature across the industry.

True. But the fact is that getting a better read on historical performance is essential to a firm’s future success.

Many firms *are* embracing new analytical methods at several points across the investment management value chain. These analytics aid sophistication in distribution, better investment decision-making and improve productivity across the whole office.

But challenges still clearly exist when it comes to democratization of the research process, with continued reliance on disconnected and inefficient analog tools.

Proving the benefits of active management now requires a strong investment culture blended with the power of data insight technology platforms. But how do you:

- drive efficiency, transparency, and data-driven feedback into decision-making without disrupting the way team members think and their individual processes?
- identify where a portfolio manager is adding, or even detracting, value?
- organize data to formalize, measure, and refine the investment process without it being lost in heads, notebooks and spreadsheets?

Any investment decision reflects a collective process. Full transparency requires an analytics platform that enables everyone to see all the varied signals and data and brings together financial document search, data extraction and modeling, market data, and research management to empower the complete analyst research process.

Yet our survey showed that most analysts are still toiling over spreadsheets. Most remain Excel-reliant. Only 12% of our respondents said they were using a formal decision-making research management platform for idea generation, portfolio construction and risk management.

The majority (50%) revealed they were still dependent upon spreadsheets (Excel-based or other) as their methodology to rank/score ideas to help prioritize their research.

Unsurprisingly in the light of this gap, the majority (52%) of our survey respondents cited that the area of their organizations’ investment process that “could most benefit from data analytics” was “making their best investment ideas repeatable”.

Ensuring that our investment team “has access to the totality of our research” was also prioritized by 64% of survey respondents.

Some leading-edge asset managers may be applying advanced analytics to their talent processes, using it to identify the characteristics of high performers, and codifying their processes.

But nearly half (48%) of our survey respondents admitted that their organizations are still measuring the investment skill-level of their investment team by using a “qualitative measurement, which mainly relies on anecdotal evidence of proper decision-making”.

As few as 24% use a decision support platform to identify drivers of performance and behavioral root causes at a more granular and individualized level.

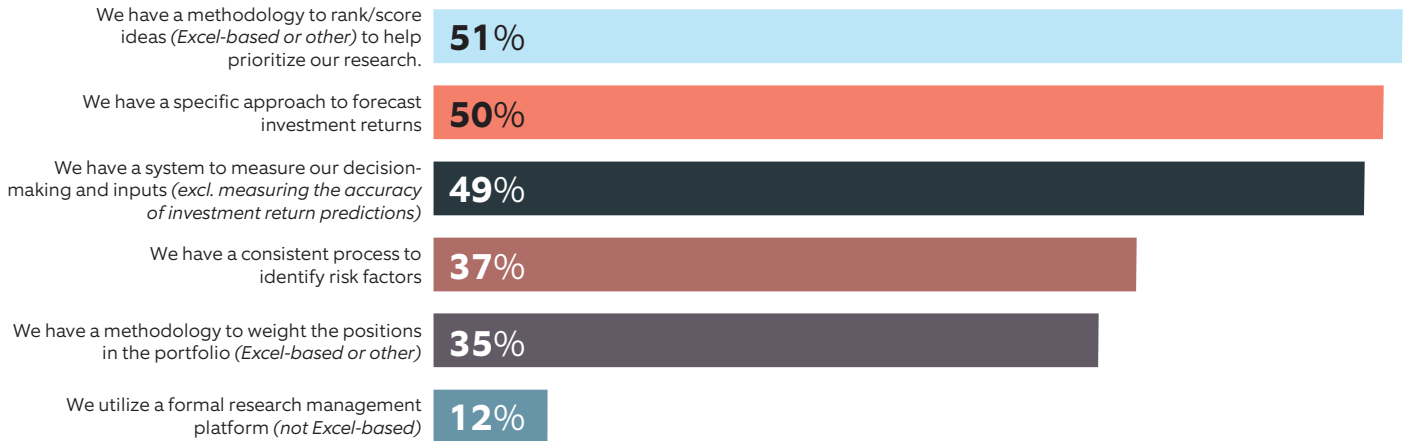
Clearly from a talent performance level, this matters. Eliminating systematic biases from the investment decision-making process is important to investors. The ability to combine a broad set of data sources about an individual’s or team’s trading history, communication patterns, even psychometric attributes, and time-management practices can be of immense value to investment effectiveness. And the growing increase in investor (and regulator) scrutiny means in the future it will matter even more.

Informed asset owners are now analyzing data and making evidence-based decisions to compare fund managers’ performance across time and asset portfolios. They want assurance, for example, that they are not paying for what in aggregate has become closet indexing.

As capabilities increase, digital measurement of individual investment skill is likely to become more desirable to bridge the opacity gap and bring objectivity to what can be a subjective and murky process for manager selection.

51% of our survey respondents cited that their organizations have a methodology to rank/score ideas (Excel-based or other) to help prioritize their research for investment decisions. 50% have a specific approach to forecast investment returns. Only 12% utilize a formal research management platform.

What formula or process is used to determine how investment decisions are made?



Bottom up, fundamental research has historically been supported by offline, desktop computing solutions. The nature of the work, which includes meeting with company executives, attending industry conferences, developing financial models, preparing research notes has largely been ignored by the industry's core front office solution providers (Order Management Systems). This has left individual managers and, in most cases, individual investment professionals to figure it out for themselves. Naturally they gravitated towards the solutions readily available to them, primarily Excel, Word and Outlook. These tools can create information barriers, limiting collaboration, transparency and opportunities for process improvement.

Leveraging a solution that combines the qualitative and quantitative aspects of the fundamental research process on a centralized platform can help the investment team make the most of their best ideas and quickly learn from some less optimal analysis.



Marc Mallett

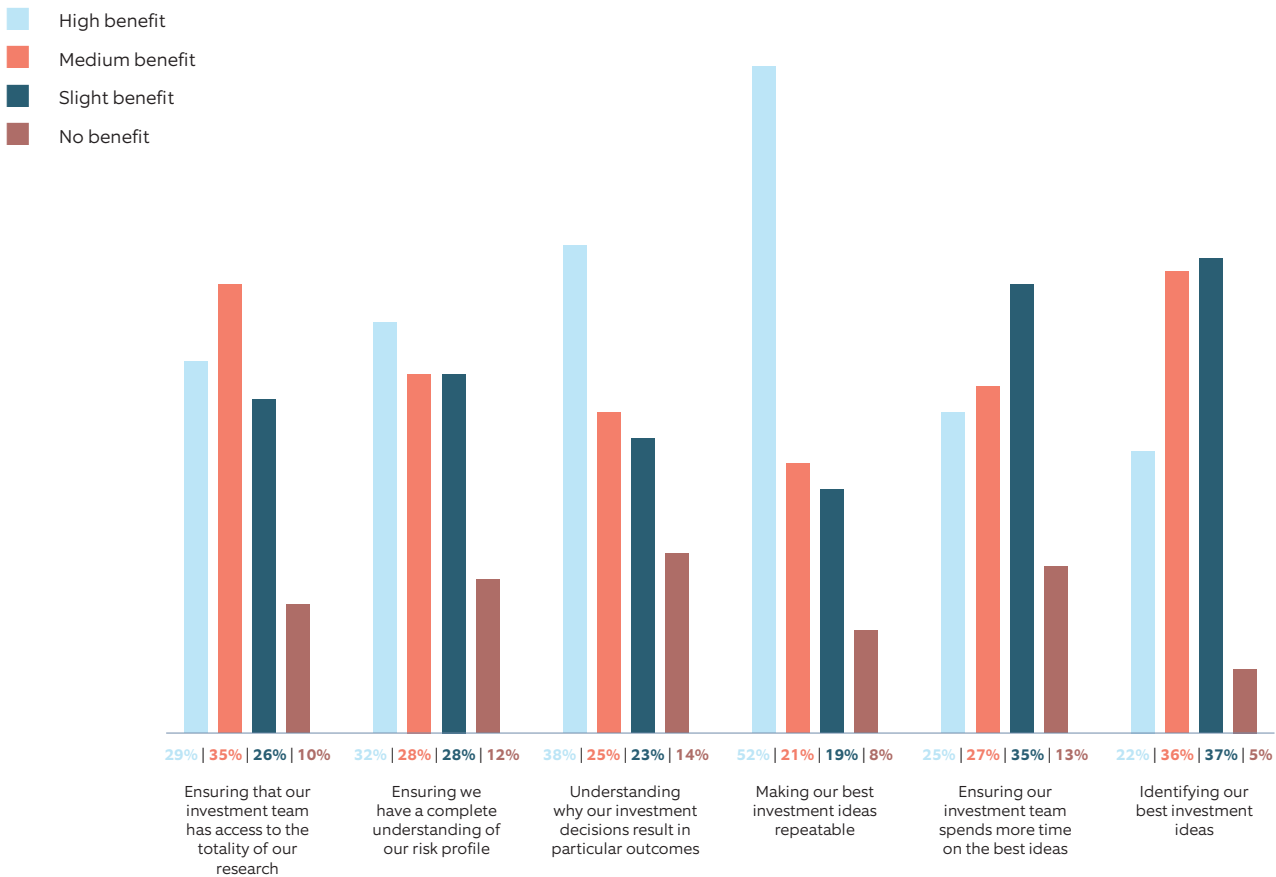


Gary Paulin

The fact that only 12% of respondents utilize a formal research management platform is perhaps a supply issue, not a demand one. While the demand for such is clear and indeed many (larger) firms have created their own internal processes, external service providers are a more recent phenomenon. As such, the low number could be due to a lack of awareness as to the market solutions available.

The majority of our survey respondents cited that the area of their organizations investment process that could most benefit from data analytics was making their best investment ideas repeatable. Yet a number of respondents also felt that identifying their best investment ideas or ensuring their investment teams spend time on the best ideas had only a slight benefit.

What areas of your investment process could most benefit from data analytics?



At first glance, I was surprised to see how little benefit respondents associated with spending more time on their best ideas. However, as I thought about it further one interpretation could be that the process to generate their best ideas is working, so no need to spend more time on them. Some of the other results point to the fact there is substantial benefit to understanding their decisions and being able to repeat the best ones. In order to understand the efficacy of their decisions they need to capture and analyze the inputs and results. Armed with this data they can make informed decisions about where to spend their valuable, limited resources.



Marc Mallett

Spending more time on the best ideas is what you should expect to see, remembering that the idea is the outcome of the process. It's the process that matters most, and that's where the focus is (per results) and should be.

With regard to the weight the respondents put on using data analytics to make their ideas repeatable, I've interpreted this response to mean that they want to make their best processes repeatable, not the ideas themselves. This is where data analytics can help. By codifying the process, you make it repeatable. Not only that, you minimize risk of bias. We expect a manufacturer to have a quality control process when making widgets. We should expect the same standards of decision-making, and data science is a tool to provide for this.



Gary Paulin

Without having a digitized investment process, managers have a difficult time identifying their "best ideas" and are heavily reliant on the outcomes as the measure of "best". Those managers that can interrogate their process efficiently and surface their best ideas are likely to commit more resources to those ideas over the average or poor ideas.

Today there is a lot of manual effort to understand what makes a "best idea". If a manager can efficiently interrogate their process to understand what delivered that best idea then they can look to repeat it. If it takes a lot of manual effort by highly skilled and valuable resources, distracted from their "day job", then it is seen as a waste of time.

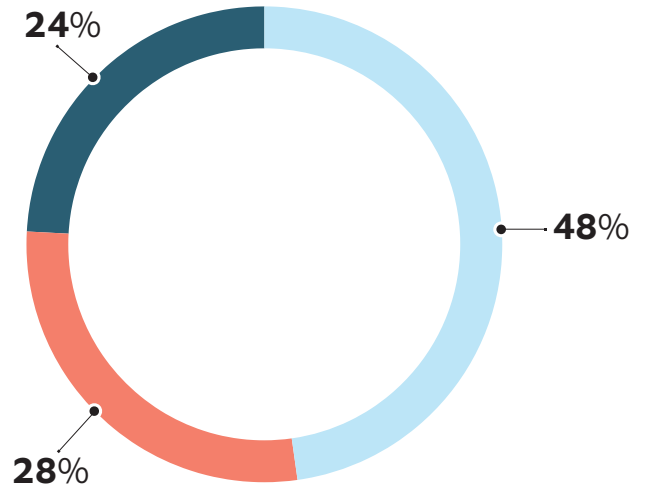


Paul Fahey

48% of our survey respondents cited that their organizations are measuring the investment skill-level of their investment team by using a qualitative measurement which mainly relies on anecdotal evidence of proper decision-making (not solely based on investment performance). Only 24% use a decision support platform to track and measure decisions and performance.

How do you measure the investment skill of your investment team?

- A qualitative measurement, which mainly relies on anecdotal evidence of proper decision-making (*not solely based on investment performance*).
- A quantitative measurement, which relies mainly on post-trade (*investment returns*) results.
- A decision-support platform (*or using Excel*), which tracks/measures both pre-trade decisions/inputs and post-trade performance



As we have discussed with some of the previous responses, so much of the decision-making process lives in the heads of investment professionals or in disconnected desktop computing tools, making objective, quantitative measurement very difficult. I'm sure most firms would find value in more quantitative measures. However, you can't measure what you don't track, so unless and until firms embrace the centralization and capture of the core elements of the research and decision-making process it will be virtually impossible to improve on these results.



Marc Mallett

Subjectivity is no longer an acceptable standard for basing judgments. We, as humans, are prone to error and bias. We need to rely, whenever possible, on more rational, objective evidence and stress test our assumptions.



Gary Paulin

Here too there is a maturity issue. Investors are only now beginning to have access to the quantitative data and are using it in their discussions with their investment managers, and those managers need to be able to respond in kind. Again, without a digitized platform that produces quantifiable metrics, managers fall back on anecdotal evidence, but this is no longer acceptable. Expert opinions without hard data are falling out of favor in all walks of life and investment management is not immune.

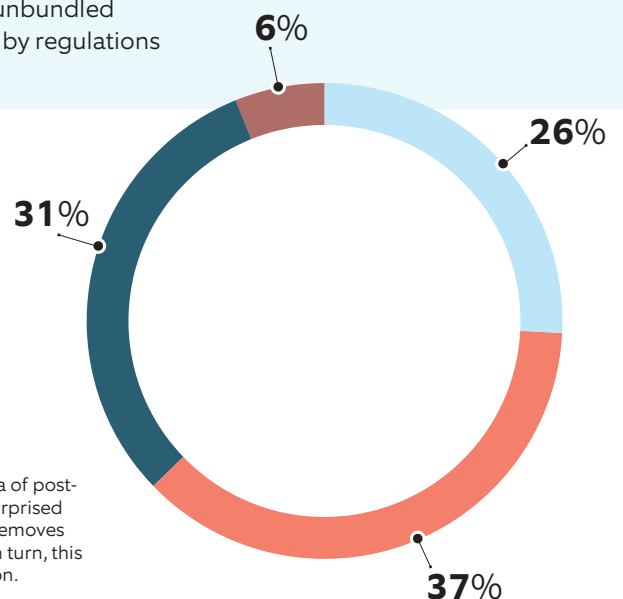


Paul Fahey

31% of our survey respondents cited that their organizations have fully unbundled trading from research commissions in markets where it is not mandated by regulations (such as MiFID II).

How have you been impacted by regulations (such as MiFid II) that mandate unbundling trading from research commissions?

- Fully unbundle due to regional mandate
- Unbundle in markets where regionally mandated
- Not mandated but choose to fully unbundle
- No plans to unbundle



Gary Paulin

Unbundling trading from research commissions delivers one of the key criteria of post-global financial crisis investor demands: cost transparency. If anything, I am surprised it's not seen more take up, for it creates good industry outcomes insofar as it removes the advantage of scale, and allows managers to compete on alpha, not cost. In turn, this promotes investor choice and healthy competition, the goal of good regulation.



CHAPTER THREE

DATA SCIENCE AND DECISION SUPPORT IN 2021

To advance along the path of greater innovation requires greater resources (human and financial), better access to data and systems, and anticipation of the disruption it potentially introduces to existing teams and processes.

It's a tough ask. But our survey showed that data science is making waves in the information- and research-driven world of finance and investment of our respondents.

The firms we interviewed clearly do see data as a big deal. They are fast transitioning from the old-fashioned world of descriptive analytics to more cutting-edge predictive analytics, underpinned by sophisticated machine learning tools.

According to our survey respondents, the top three multidisciplinary approach data strategies their organizations are currently using/planning to pursue in their workflows are the following:

- centralized platform for investment and related data consolidation (57%)
- natural language processing/sentiment analysis (54%)
- predictive analytics using past returns (internal and benchmark market data) (53%)

The data science revolution has big process and people implications for the way a modern active management business structures its research efforts, and the proliferation of tools being used is increasing.

Connecting and optimizing the disparate workflows/IP of investment teams is now being prioritized. The top three tools that our organizations said they are using to support their investment research process so that they can concentrate on what is important – their clients – are these:

- risk management platform (59%)
- note management tools (50%)
- research management system for notes (54%)

Change is overwhelmingly afoot. 69% of our survey respondents are already using or plan to pursue incorporated data science/decision-support tools into their investment strategy beyond spreadsheet analysis in the next 1 to 2 years.

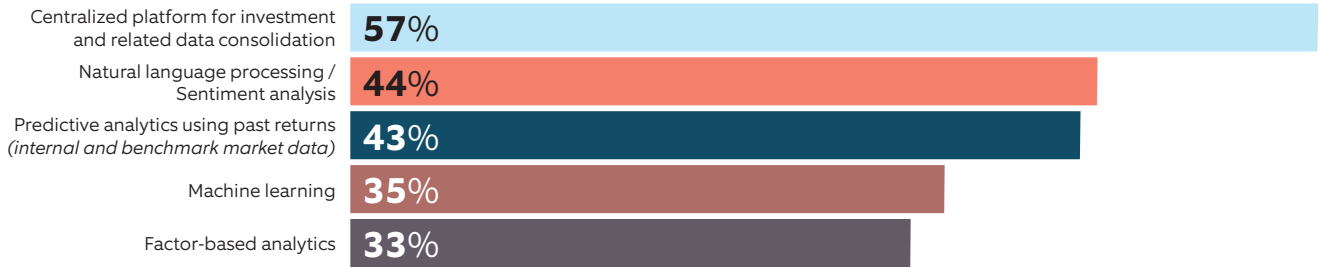
Their primary motivation (55%) is to drive continuous improvement in their processes via automation of time-consuming tasks. But there is also a sense that firms know the writing is on the wall – adapt to survive – underpinned by the pressure from their clients to adopt the new capabilities (41%).

These clients are becoming more proficient at analyzing data as their access to digital tools has become more widespread. They can more clearly see evidence of their managers' investment skills and make evidence-based decisions in what has heretofore been a subjective and backward-looking process for manager selection. As their clients ask why, managers will need to reply.

And more than a third of respondents recognize that data science and decision support tools can aid them in their quest for alpha. Data science can provide asset managers with access to tools to analyze the strength of their ideas, improve the performance of their teams, and help them make the next best decision.

According to our survey respondents, the top three data strategies their organizations are currently using/planning to pursue are a centralized platform for investment and related data consolidation, natural language processing/sentiment analysis and predictive analytics using past returns (internal and benchmark market data).

Does your current data strategy include pursuing or planning to pursue any of the following?



Nearly 60% of respondents indicated that they are currently pursuing or planning to pursue a centralized platform, when according to an earlier question only 30% indicated that they currently integrate disparate information sources on a centralized platform. So, that tells me that a lot of firms recognize the importance but are just getting started. I would strongly suggest that they reach out to the key partners who may have experience in these areas. They do not have to go it alone.



Marc Mallett

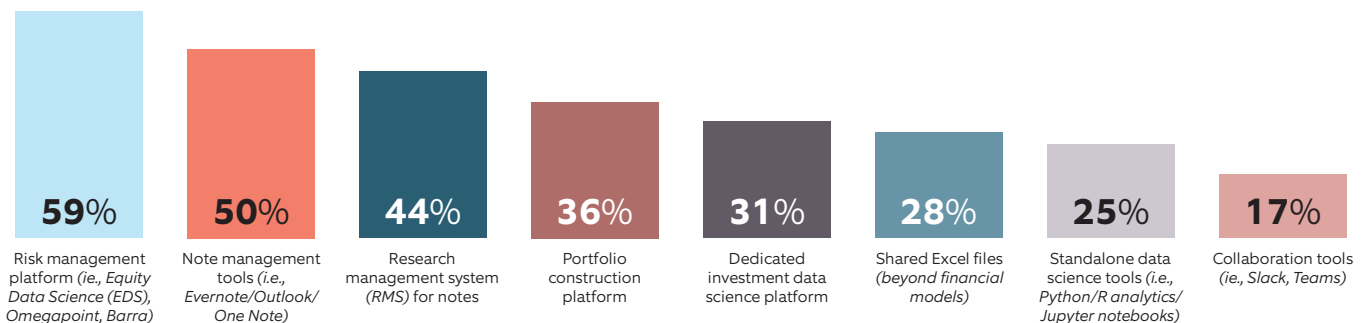
I wonder if the pandemic (and remote working) has impacted these answers? Would the need for a central repository of information be as high if they had all been in the office? Nevertheless, we see growing demand from clients to centralize and harmonize disparate data sets onto one platform, so I'm not surprised by that result. Indeed, COVID-19 may have acted as a catalyst.



Gary Paulin

According to our survey respondents, the top three tools that their organizations use to support their investment process are risk management platform, note management tools and research management system for notes.

What tools do you use to support your investment process?



Risk, note and research management tools have been widely available services for some time, so it isn't a surprise that those tools are the ones in most use. It is encouraging to see that investment data science platforms and other data science tools are used by 31% and 25%, respectively. Again, it is that type of data analysis that will be the game changer for asset managers and their investors.



Gary Paulin

Managers can point to research management outputs as "evidence" that the manager has a robust process for vetting ideas and, while that is true, it is only part of the story. Without the ability to analyze what drove the successful outcomes, i.e., the best ideas, there is still an overreliance on qualitative metrics.

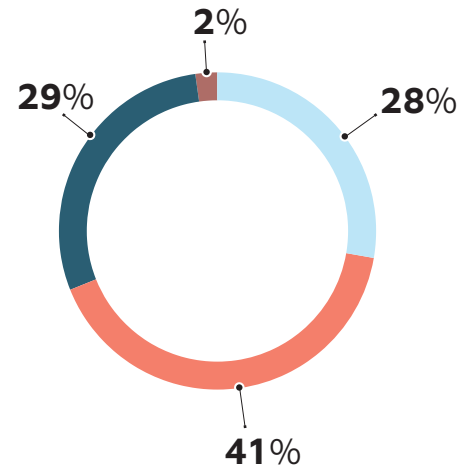


Paul Fahey

Only 2% of our survey respondents cited their organizations have no plans to pursue incorporating data science/decision-support tools into their investment strategy beyond spreadsheets for analysis in the next 1 to 2 years.

Does your organization have plans to incorporate data science/decision-support tools into your investment strategy (move beyond spreadsheets for analysis)?

- Currently use
- Plan to pursue in the next 1 to 2 years
- Interested but no active plans
- No plans to pursue



I think it has become clear that leveraging data and data science is required to remain competitive. What does surprise me is that nearly 30% of respondents, while interested, have no active plans to incorporate data science into their investment process. This indicates to me that they just don't know where to start.



Marc Mallett

There is growing awareness (and evidence) that incorporating data science not only improves investment outcomes, but also helps discharge obligations owed to investors, regulators and owners.



Gary Paulin

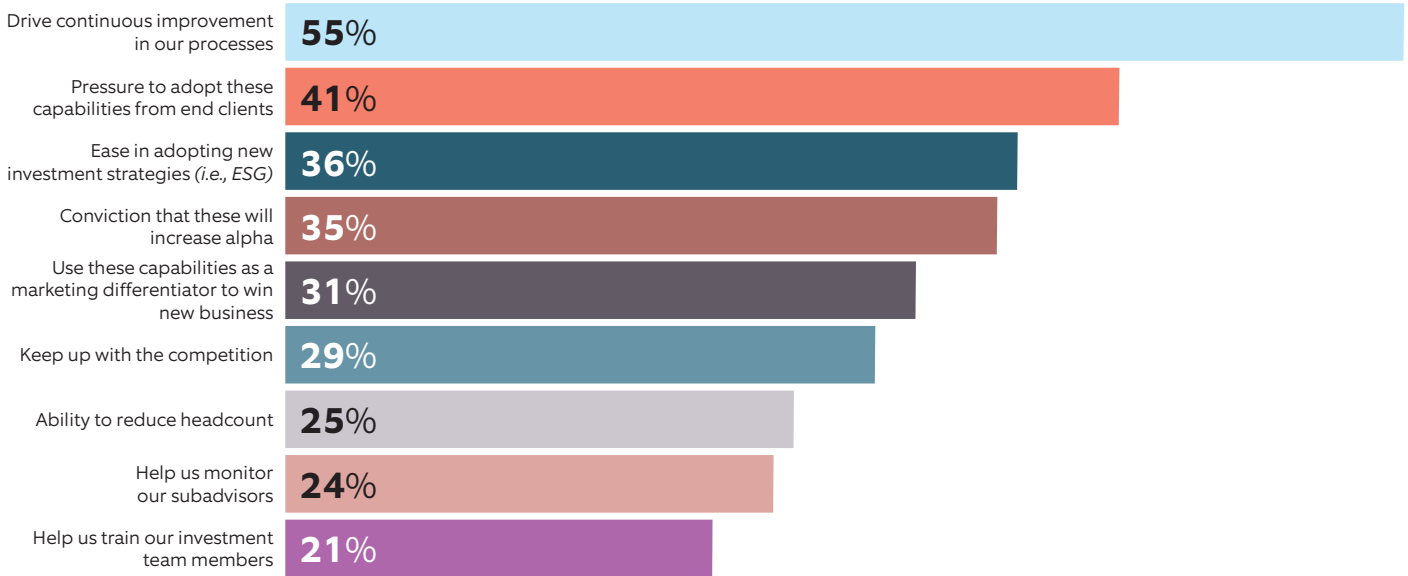
The only surprise is that the percentage of respondents that have no plans to incorporate data science into their investment strategy is that high.



Paul Fahey

According to our survey respondents, the top three primary reasons for their organizations to pursue these solutions are to drive continuous improvement in their processes, pressure to adopt these capabilities from end clients and ease in adopting new investment strategies (i.e., ESG). 35% feel these solutions can increase alpha.

What are your primary reasons for pursuing these solutions?



I find it interesting that over 40% of respondents indicated that they felt pressure from clients to adopt these capabilities, however only 30% saw a correlation with winning new business. I was also surprised that so few respondents made the connection to training. As has been discussed earlier, so much of the current process is offline and trapped in the heads of individual investment professionals, making it very difficult to transfer knowledge. Additionally, it seems odd that so many respondents identified continuous improvement as a primary reason yet they didn't make the connection to increased alpha or training.



Marc Mallett

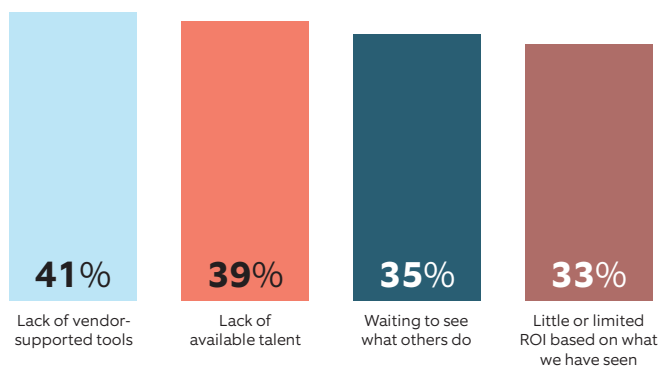
I would be surprised if "driving continuous improvement" was not number one because fund management is a learnings-based industry. Moreover, it is well documented that compounding small gains can lead to big wins over time (Charlie Munger has been a large sponsor of it. It is also embedded in Kaizen, a Japanese concept adopted by many famous sports teams). In terms of the second biggest, investor scrutiny, this is wholly consistent with what we expect and with what we see. Investors are now trying to define investment skill, rank it accordingly and use it as a base for comparison when selecting managers.



Gary Paulin

Only 33% of our survey respondents cited that their organization's key concerns regarding these solutions are a limited ROI. Interestingly, without the tools and the data to accurately measure the ROI, managers are "guessing" that the ROI is "limited".

What are your key concerns regarding these solutions?



Marc Mallett

First, I would tend to agree with their assessment; historically the core vendors in this space have not focused on supporting the decision-making process, they have really focused on decision implementation. Additionally, I would agree that data science resources are scarce, they are in high demand across industries. Much like the demand for skilled development resources, asset managers and hedge funds find themselves competing with Big Tech, FinTech and other fast-growing market segments. This leads me back to a comment I made earlier: I suggest firms lean on their key partners who may have more direct experience with relevant solutions and resources.



CONCLUSION

The data science revolution poses both a serious challenge and an immense opportunity.

Our survey paints a picture of an industry that is on the cusp of massive transformational change and one that is only too aware of the shortcomings it has to overcome – be it people, processes (spreadsheets aside!) or performance.

The pressures are real and pressing: the forces of automation, increased scrutiny and transparency, and growing operating costs mean it is now imperative to implement a digital decisioning model that enables effective idea generation and execution.

But it is also an exciting time to address current challenges and create a far more efficient, scalable and controllable investing model.

Given the increasing ease of outsourcing large parts of the activity chain, technology-enabled smaller players will be able to benefit from data science and thrive too.

Perhaps the most salient – and encouraging – finding of our survey demonstrating how firmly this is an industry determined to succeed, is this: only 2% of our survey respondents cited their organizations had no plans to pursue incorporating data science/decision-support tools into their investment strategy.

Data science will never replace the thinking and skills of a good portfolio manager. But it can enhance them in an unprecedented way.

And those firms who can exploit data science and behavioral analytics with their tried and tested investment expertise will be those that will emerge as the winners. In this environment, AI stands for Augmented Intelligence with humans and machines working in harmony to deliver exceptional returns.



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