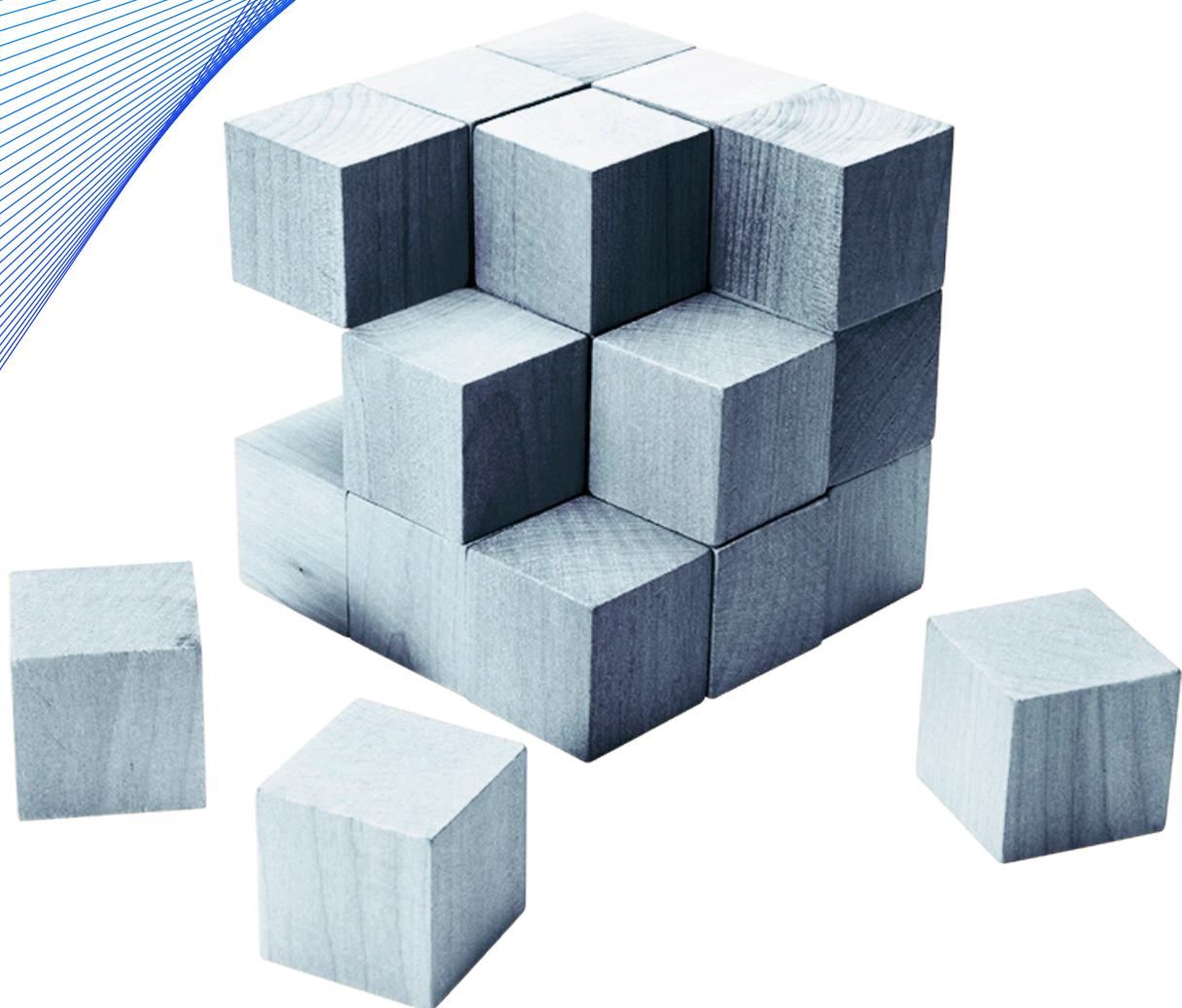


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Global Wealth & Asset Management Practice

# Advanced analytics in asset management: Beyond the buzz



March 2019

# Advanced analytics in asset management: Beyond the buzz

News reports and social media have been buzzing with the notion of robots making humans obsolete in a host of industries, including asset management. Most business conversations are peppered with terms like “big data” and “advanced analytics”. Indeed, a vast intellectual ecosystem of think tanks, professorships, and consultants has emerged out of an obsession with the impact of artificial intelligence on the future of work and commerce. In 2017, there were almost 14,000 research publications in the asset management industry that contained “big data” or “analytics” as descriptive keywords—four times the number in 2012.<sup>1</sup>

Faced with this deluge of opinions and claims, it can be difficult for asset management leaders to separate fact from fiction, and to get a clear perspective on what they actually need to do differently in this new “machine age.” Five years ago, the answer would have been: “Not much.” Granted, some firms—notably hedge funds—have been pursuing analytics-driven quantitative or systematic investing for a while, but most traditional asset managers with fundamental investing teams were content to let other industries take the lead. Some were experimenting with accessing alternative sources of data and building small data science teams, but little had been achieved at scale to alter the traditional way of delivering value in the industry.

Things are now changing. Over the last couple of years, the application of advanced analytics to specific business problems has started to deliver value for traditional asset managers—not by replacing humans but by enabling them to make better decisions quickly and consistently. A broad

set of firms are embracing new analytics methods at multiple points across the asset management value chain—and beyond the alpha-generating use cases favored by quant firms—from increased sophistication in distribution to better investment decision-making to step changes middle- and back-office productivity (Exhibit 1).

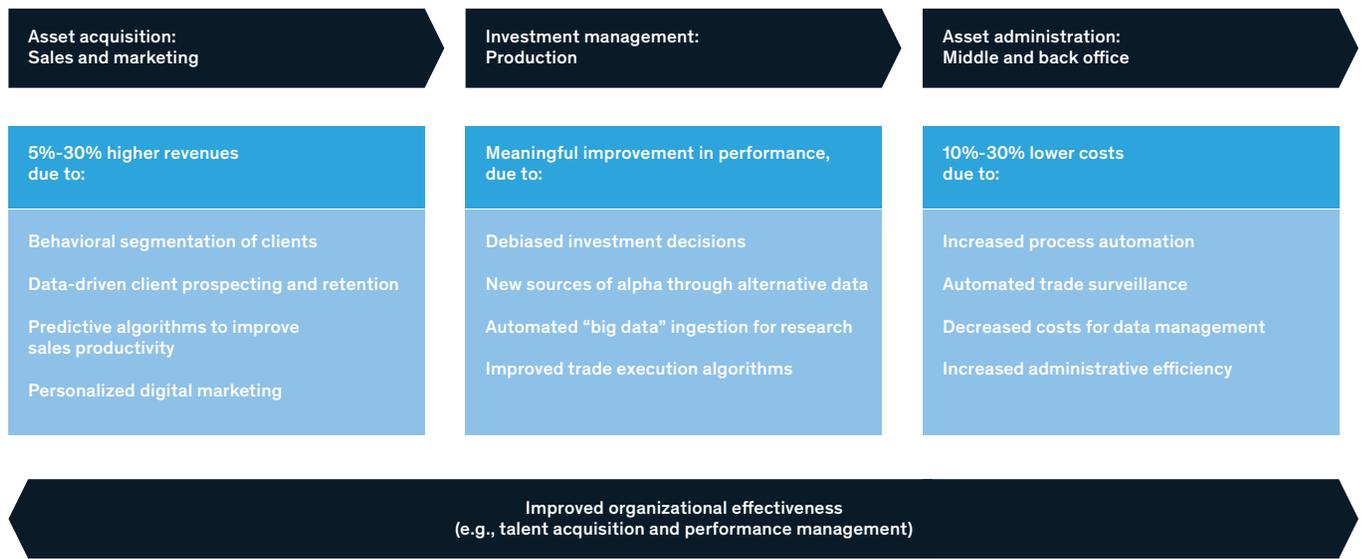
## Distribution

Against a backdrop of tepid growth (US organic net flows of 1.1 percent p.a. between 2013 and 2018, driven almost entirely by passive strategies), asset managers have been questioning traditional “feet on the street” distribution models. Some are now using data and advanced analytics to reinvent their distribution models, while others are using these tools to turbocharge their existing distribution forces and create greater operating leverage. Regardless of the extent of the transformation, the evolution toward a more data-driven approach to sales and marketing is now well underway

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<sup>1</sup> Google Scholar: Count of research publications with keywords “asset management” and “big data” or “analytics” (2012 vs. 2017).

**Asset management firms are applying advanced analytics techniques across the full value chain.**



Source: McKinsey

and continues to gain momentum. At present, asset managers are primarily applying advanced analytics to improve distribution along three main vectors:

- **Optimizing distribution and service models:** A number of asset managers are building vast data reservoirs of multidimensional client characteristics to design distribution and service models that better enable them to cover the right clients, through the right channels, at the right time. Rather than relying on client type or size to determine whether and how a client should be covered, asset managers are now using data to achieve more fine-grained segmentation: for example, between the digitally savvy financial advisor who almost exclusively follows model portfolios and the rep-as-portfolio builder who is eager for in-person portfolio construction advice. Our work with asset managers has shown that this type of behavioral-based segmentation of clients and subsequent adaptation of sales efforts can free up 15 percent or more of existing salesforce capacity and increase sales from priority client relationships by up to 30 percent.

- **Improving productivity through precision targeting:** Asset managers are also investing in analytics to generate actionable client insights to improve the productivity of sales and marketing efforts. Examples range from predictive algorithms that identify specific product cross-sell opportunities to those that identify clients at risk of redemption for specific strategies. These algorithms have proven to have greater than 80 percent accuracy in multiple instances, with sales results up to ten times better than control groups that did not use these analytical tools.
- **Enhancing performance management:** Advanced analytics is also being used by distribution leaders to manage the performance of their teams. Data provides the transparency that enables executives to closely monitor the effectiveness of sales and marketing activities and campaigns, and quickly address those that are not working. Some leading-edge asset managers are also applying advanced analytics to their talent processes, to identify the characteristics of high performers, which

are then incorporated into hiring, retention, and professional development processes.

The foundation for these use cases is a robust multidimensional data repository (Exhibit 2) on individual clients that combines the best of external (e.g., third-party) and internal data (e.g., transaction history, CRM).

### Investments

On the investments side, some traditional asset managers are now engaging more fully in advanced analytics. These efforts are focused in three areas:

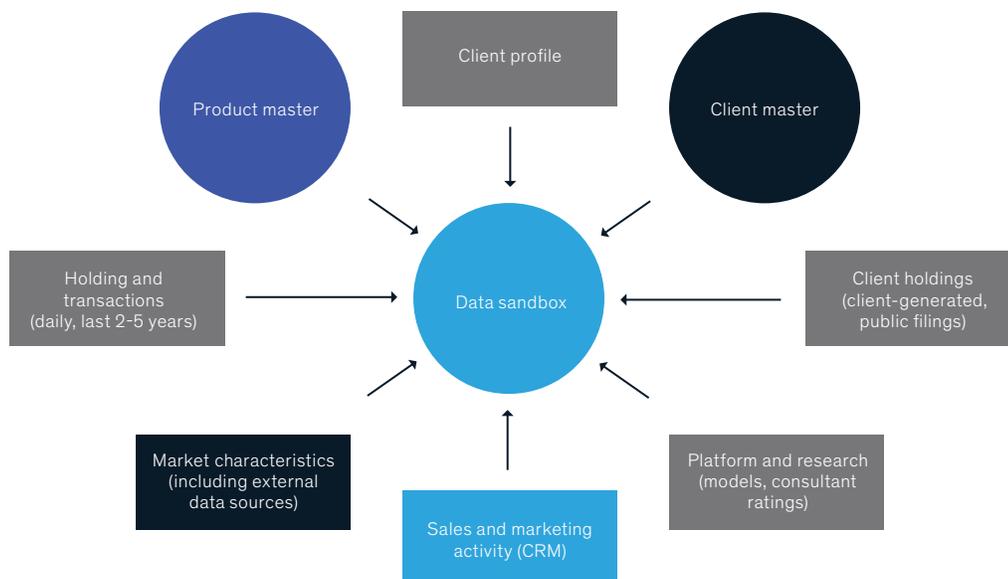
- **Debiasing investment decisions:** Eliminating systematic biases from the investment decision-making process has long been a topic of interest to investors. The ability to stitch together a broad set of data sources about an individual or team's trading history, communication patterns, psychometric attributes, and time-management practices allows firms to identify drivers of performance and behavioral root causes at a more granular and individualized level than previously. Managers can then make operational improvements based on these

insights; for example, by flagging trades that fit predefined patterns, and double-checking them before execution.

- **Using alternative sources of data to generate alpha:** The availability of greater quantities of data is putting a premium on having both data-acquisition capabilities and the data science skills to stitch these sources together into predictive models that improve decision making (Exhibit 3). This approach is being applied in real estate, to give one example, where the prevalence of location-specific data from a variety of sources is helping investors predict key metrics such as rent and vacancy rates with great precision. At one leading real estate investment manager, the combination of Yelp reviews, information on traffic flows, and credit-card spending data with traditional property- and market-level characteristics improved the predictive accuracy of three-year forward rent forecasts from 60 to 70 percent to over 95 percent. And while the predictive model was not used to replace the existing underwriting process, it was incorporated as an additional test before investment decisions are made.

Exhibit 2

**A robust client data repository includes the best of internal and external data sources.**



Source: McKinsey Wealth & Asset Management Practice

- **Enhancing research processes:** The application of techniques such as natural language processing (NLP) is also helping asset managers process vast amounts of information more quickly than before—for example by automating the ingestion and analysis of public filings and flagging changes in sentiment that a research analyst can focus on. This is an example of machines complementing the human process instead of replacing it—the technology helps narrow down what is relevant in much the same way that a recommendation engine on Netflix or Amazon would, and allows the investor to spend more of their time on high-value decisions. One leading alternatives asset manager has invested heavily in this concept by building an investment research engine that enables investment analysts to seamlessly record everything about a potential deal or portfolio through a front-end system. This data is then enriched with relevant proprietary historical data and structured data from third-party providers and results in a research and portfolio management tool that provides a rich, real-time view of potential opportunities.

Not all asset managers are embracing big data and advanced analytics in the ways described above. Many trust more traditional processes. Yet, certain firms or portfolio managers are taking this seriously and have begun to make investments in these capabilities.

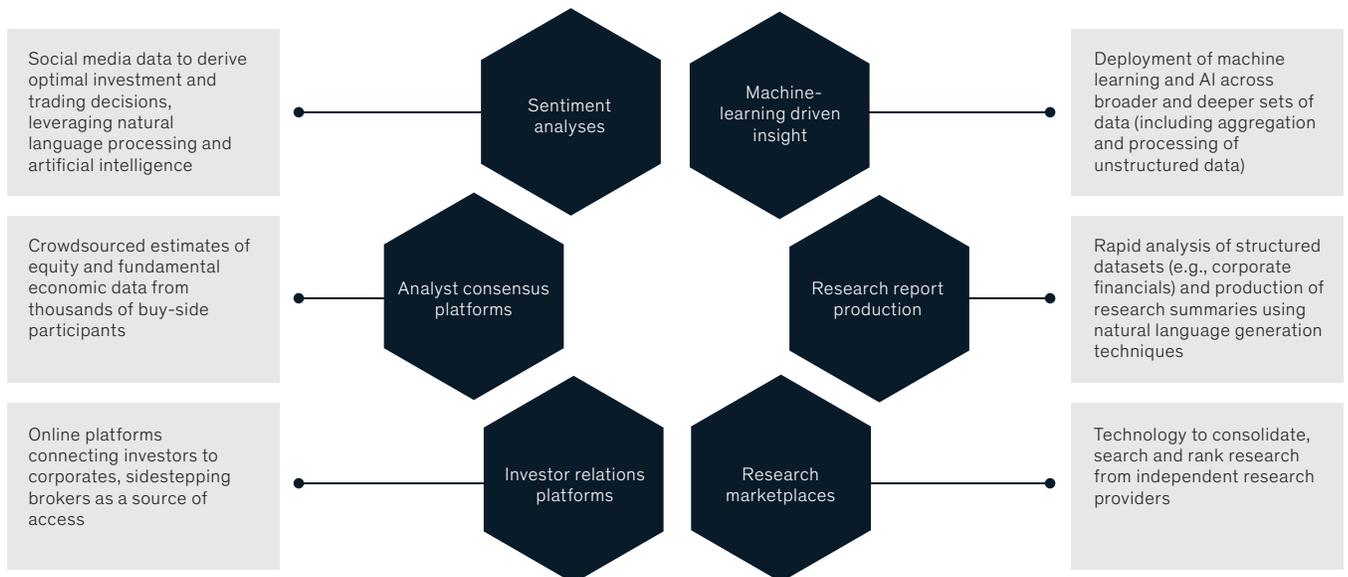
## Middle and back office

Advanced analytics is also being used to improve productivity in the asset management middle and back office. As firms contend with the growing complexity of products, legal entities, vehicles, and markets, economies of scale are coming under pressure. In response, asset managers are looking for ways to increase the productivity of their middle- and back-office functions through advanced analytics-driven solutions. Two particular areas of focus are:

- **Process automation of time-consuming tasks:** Asset management firms are using NLP and other techniques to analyze text and voice communications and to recommend optimal actions for certain processes, such as suggestions for how to deal with policy breaches picked up in conversations and

Exhibit 3

## Asset managers are turning to new sources of investment research.



Source: McKinsey Wealth & Asset Management Practice

deploying machine-assisted conversations to answer common operational questions. One leading asset manager recently implemented a solution that automatically uploads hundreds of documents into a central repository and uses NLP techniques to transfer relevant information into a customizable and searchable reporting interface. The solution extracts over four million unique data elements and has led to a 60 percent reduction in the time required to generate relevant reports. This type of analytics-driven automation has the potential to significantly improve the efficiency of core functions within asset management.

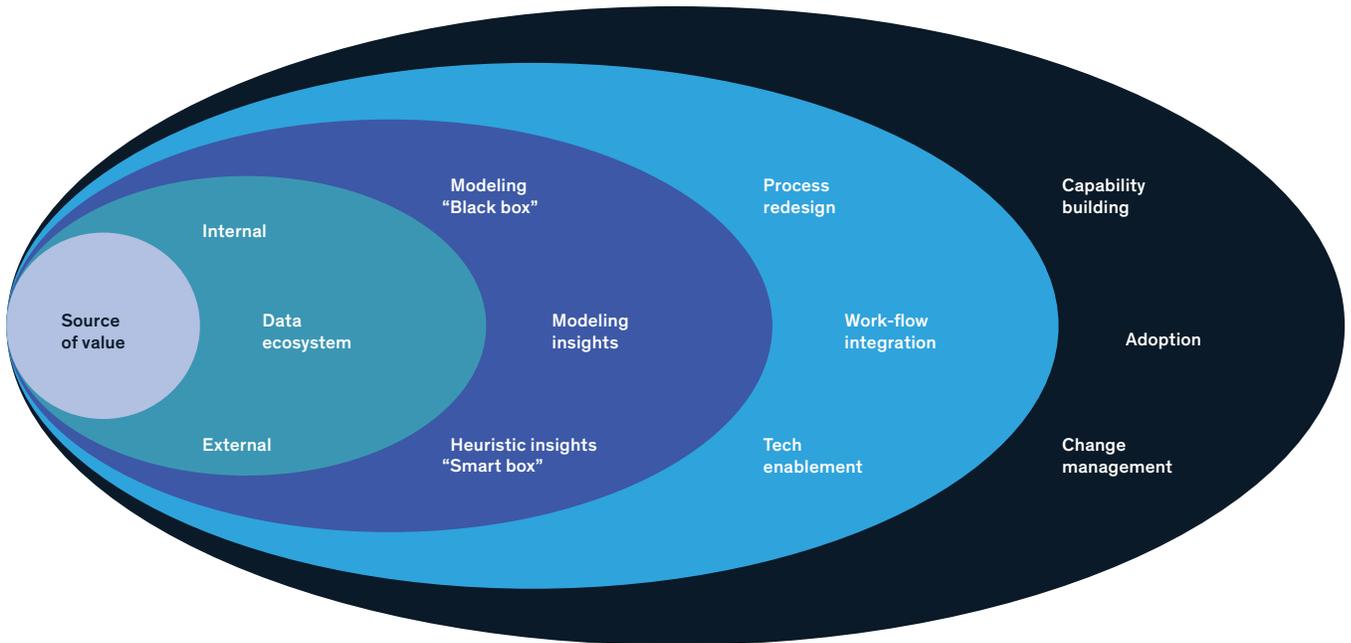
- **Improving quality of risk management:** New US trading regulations (e.g., those preventing traders from benefiting from old proprietary trades) are leading to the need for heightened compliance in asset management. Some firms are deploying forensic analytics to monitor traders and cross-check transactions with personal data to uncover instances of misconduct, scanning communications for anomalies or breaches of ethical divides, and building data sets across trading data, external data, and personal employee data to increase the flexibility to expand the number of checks or run different scenarios. Asset managers that have implemented these techniques have seen a 55 to 85 percent reduction in time spent on trade surveillance activities and, more importantly, improved risk identification. In one case, an asset manager found that its machine-learning algorithm was significantly better at detecting risks than a seasoned expert reviewing the same underlying materials.

## Markers of success

Asset managers that have extracted meaningful value from data and advanced analytics share a number of characteristics:

- **Ruthlessly prioritize based on business value:** Asset managers that have derived value from analytics begin with a focus on a small set of analytics use cases where there is business demand and potential for measurable business impact. They typically engage multiple stakeholders in a rigorous prioritization of potential use cases against a set of “hard” criteria (e.g., business value, time to implementation, data availability, committed business sponsor).
- **Recognize that analytics is a team sport:** Successful analytics efforts require cross-functional skills (e.g., business, data, technology, operations, compliance), and work best when led by small, agile teams with end-to-end responsibility for delivering an analytics product. Teams are most effective when the product owner is a business person who will be the direct beneficiary or user of the product, and when analytics resources are embedded within and seen as part of these teams, as opposed to operating in a more centralized model.
- **Focus on “last mile” adoption:** A common pitfall in the development of analytics capabilities by asset managers is focusing on underlying data and model building but treating the adoption of analytics assets by end users as an afterthought. The question of how end users will actually engage with analytics should be addressed at the very beginning of the process. Thinking these questions through, and planning for how analytics will be integrated into existing workflows, and what chain of actions they should trigger, significantly increases the likelihood of sustained long-term impact. Visible sponsorship by key influencers (e.g., portfolio managers or top sales professionals) is also vital in the change-management effort. The power of advanced analytics is unleashed when data and models are adopted by end users to deliver business impact (Exhibit 4).
- **Adopt a “minimum viable product” mentality:** Successful data and advanced analytics capabilities rely on a test-and-learn mindset. Rather than waiting until they have the full set of talent and data resources needed to build a robust advanced analytical model, asset managers that have successfully embraced advanced analytics have a bias to action and are willing to test and learn—and fail—quickly. In other words, firms learn more from playing the game than from standing on the sidelines.
- **Invest in next-level data and analytics talent:** One of the greatest challenges asset managers face is in recruiting and retaining distinctive data and analytics talent. Those who get it right recognize that business-as-usual analytics resources are typically not sufficient, and that attracting and retaining distinctive talent typically requires a vibrant community and a strong talent plan (e.g., career paths, robust professional development).

**The full power of analytics is only unleashed when tools are embraced by end users.**



— **Create an integrated target-state vision for data and analytics:** The most mature organizations go beyond individual use cases to create a self-sustaining data and analytics engine that drives measurable business value. While the development of a capability typically happens incrementally, having a clear vision of what the integrated target end state looks like—across data management and governance, analytical tools, technology development, and business adoption—helps to avoid duplication and speed development.

In the last few years, the application of advanced analytics in asset management has moved from the realm of science fiction to, simply, science. Leading firms are applying these tools and insights to improve distribution effectiveness, investment

performance, and productivity in the middle and back office. While some firms are using analytics to enhance productivity of existing practices, others are taking advantage of these new capabilities to ask more fundamental questions about their operating models. What could an analytics-driven distribution approach look like? How might research organizations change with the use of new tools and the availability of alternative sources of data? While there is still some uncertainty around the extent and pace with which analytics will impact asset management, it is our view that superior analytics capabilities will be a key driver of success in the industry going forward.

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