

Investment Management:

Harnessing data insights to drive innovation



Abstract

Industries today are grappling with social, geo-political, and economic impacts in addition to pandemic induced change. However, in the investment management industry, the chase to generate alpha has remained consistent. In fact, the chase has now further amplified with the dramatic growth of data as well as the ability to abstract it into fundamental elements and construct new products and services by leveraging automation, artificial intelligence (AI), and machine learning (ML) capabilities.

Besides enabling the pursuit of alpha, innovation and responsiveness are among the foundational pillars of future-readiness. They are requisite top-level constructs that help firms internalize and digest existential impacts – impacts that will only escalate into the future. Therefore, innovation and responsiveness need to be fully embedded into the investment framework.

To prepare themselves for the future, firms must readily embrace AI, ML, and natural language processing (NLP) based solutions to achieve operational and strategic targets. By doing so, they will discover how powerful data insights are when coupled with the right set of approaches and tools. In addition to highlighting the various data challenges and opportunities, this white paper also explores how data is currently being used and how it can be better harnessed to drive alpha in the investment management industry.

Data usage in the investment ecosystem: The current landscape

Multiple studies indicate that only a minuscule amount of gathered data is being analyzed though data retention has increased with the exponential growth of data. So, how can data be more effectively optimized to bear fruit? Although data is omnipresent, it's also ever-changing and becomes obsolete at an escalating rate. In the investment management industry, data which is received a minute too late and leaves you a dollar short may result in a lost opportunity running into billions. This may in turn cause cascading impacts leading to outflows unrelated to the initial event and trigger negative performance.

That said, data continues to be one of the fundamental enablers of progressive growth in investment management, going by current trends. To launch laser-focused niche funds, design auditable

solutions and offerings, meet regulatory reporting requirements in real-time, and more, data is the commodity that needs to be harnessed. Prevailing macro trends that are increasingly data-centric are further fueling the importance of data as a growth enabler:

- **Low margin reality:** Proliferation of no-fee index funds, exchange-traded funds (ETFs), and ultra-low fee active funds, assets flowing into passive as opposed to active funds
- **Sustainability as a core remit:** More than 200 funds focussed on environment, social, and governance (ESG) factors are planned within the next three years, more than double the total of the previous three years
- **Accelerated data initiatives:** Industry and government-backed data-sharing initiatives such as Financial Data Exchange (FCX) API protocols, Financial Big Data Cloud (FBDC), Legend, and many more

To act on these trends, firms will need to institutionalize within their investment psyche the rapid ingestion of data, accelerate data output, and create data monetization avenues to support alpha generation.

Clearly, leveraging data insights is no longer a matter of choice. It has emerged as an imperative. In fact, mastering and leveraging data are not just peripheral needs in the investment management industry but have now become existential. The industry's core objective of driving alpha is intrinsically linked to a firm's capacity to leverage its informational advantage. The art of identifying and converting into value anything that can be extrapolated and saved in any part of the world's data ecosystem is critical for competitive advantage and survival.

However, to successfully leverage data as a strategic alpha-generating element, the industry must accept that the future is likely to be dynamic and uncertain. Furthermore, firms will need to build a data and technology ecosystem that can absorb changes, remain flexible, infuse agility, and execute automated interventions rooted in AI and ML. The next socio-economic shock that reverberates will undoubtedly be different from those in the past. To manage the impact of such paradigm shocks while ensuring alpha generation, firms will need to invest in and remain ever diligent in the use of data and emerging tools and solutions. Firms will also need to build a team of trained associates and vendor partners that can nimbly respond to the evolving situation.

Capitalizing on existing enterprise data

The first step in the data journey is to focus on the data residing on firms' internal systems and proceed from there. Valuable investment insights can be extracted from the troves of data spanning trade execution, internal and external metrics, and internal demographics. Reviewing these vast datasets with an alpha generation lens can help uncover previously unknown insights or interconnectedness of data, which, in turn, can be used to align portfolio construction with desired targets or create novel products.

However, extracting these additional tidbits of wisdom requires the right tools and approaches. Firms will need to use data embedded solutions and technical tools, automated data discovery tools, and AI and ML tools that provide graphical representations of financial, counterparty, legal, and other structured and unstructured metrics. Intuitive visual graphical models allow non-technical enterprise users to digest the highest level of data, such as liquidity coverage ratio (LCR), qualified financial contracts (QFC) reporting, and asset liquidity ratios without the deep data science skills normally required to gain these insights. These user-friendly, emerging capabilities further democratize the usage of data, enable agility and rapid responsiveness that allow for faster remedial actions, and make investment insights readily available.

Leveraging the expanding alternative data universe

The ever-expanding data universe reveals and affirms notions — trends, behavioral changes, and spend shifts. Unstructured non-traditional alternative data such as payment transactions through mobile apps, GPS positions, social posts, press releases, patent filings, and more provide insights and identify monetization opportunities. Ingesting these datasets enables empirical validation of firms' investment hypotheses and provides auditable outcomes, as opposed to basing investment decisions on portfolio managers' discretion. Data such as web traffic exposes behaviors and reflects growth or decline in segments of the economy. By correlating this data, firms can rebalance portfolios, as the data exposes transitional client behaviors of 'browse to buy' activity. This data precedes normal cycles of quarterly financial releases and delivers 'in time' information to further bolster investment insights.

Big wins from big data

Industries, such as retail, entertainment, and hospitality, that dwell at the cutting edge of data have uncovered opportunities arising from increased data capture, progress in data manipulation, and the ability to gain detailed insights. As a result, hyper personalization, targeted scenario analysis, the ability to customize at scale, and the provision of self-service, have become possible.

By analyzing these industries and embracing the data capabilities, the investment management industry can come closer to the 'segment-of-one' concept. Asset managers can use AI and ML technology to enable distinct, bespoke offerings to differentiate their clients' experiences without expending further human effort and costs. Possible offerings emerging from this include customized treasury services, portfolio asset allocation integrated with ESG and sustainability indices, and products that leverage alternative data along with emerging open data capabilities to strengthen performance outcomes.

Digital twins, a revolutionary, data-led innovation, enables data-based mirroring of products, processes, or personas. These clones enable rapid testing of new offerings against digital representations, provide predictive insights on outcomes and acceptance rates, and reduce the total cost of go-to-market. Further enhancing the digital twin technology is the increasing ability to infuse data with external data attributes based on standardized protocols, shared cloud initiatives, and market infrastructure-enabled data warehouses. Digital twins' capabilities enable 'fail fast' product cycles and help create bleeding-edge products, test risky markets, and allow innovation-as-a-service to become possible.

By accepting these data innovation frameworks, firms are poised for continued alpha generation and monetization opportunities. Nascent markets and exchanges for industrial data sharing are emerging, and the industry is well positioned to capitalize both on its strength in modeling structured data and its increasing ability to manipulate unstructured and alternative data. Current funds and investment products can be differentiated by the degree of specificity enabled by data. As more granular cross-industry data connections are mined and applied, distinctive and customized offerings can be produced and monetized as additional avenues of growth and revenue.

Getting down to brass tacks

To make data-driven alpha generation a reality, organizations must establish certain foundational pillars, including robust data architecture, agility, and governance (see Figure 1). Building flexible and scalable data platforms provides the ability to manage traditional and alternative data. On the other hand, enabling executive sponsorship and the people, processes, and procedures create control mechanisms that ensure integrity, enable auditable actions, create a single source of truth, and

build confidence in executive decisions. To successfully leverage data and create business value, four critical constructs are required:

- Data governance including policies, procedures, metadata, lineage, and data quality
- Flexible and scalable data platform
- Agile data operations
- Business solution construct

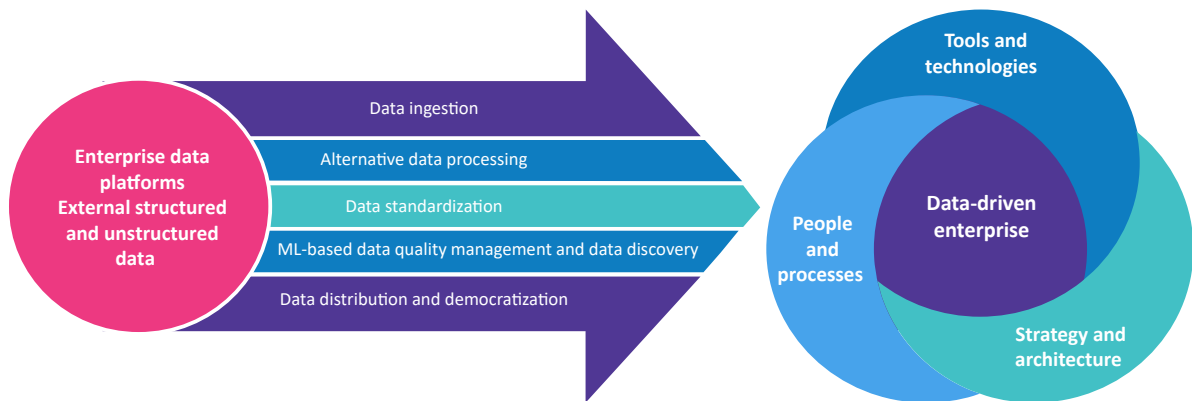


Figure 1: Transforming into a Data Driven Firm

To build these four pillars of data-driven organizations, investment management firms must:

- Create dedicated workstreams and processes
- Establish capable technical and data architecture to meet the stated objectives
- Institute policies, guidelines, and associated metrics
- Empower teams with the required contextual knowledge and address cultural impacts
- Form the right partnerships to access the capabilities required
- Ensure the requisite checks and balances are implemented to control outcomes

The path to exponential growth

Acquiring progressive data-driven capabilities and infusing agility are at the core of addressing dynamic client and market demands, as well as driving continuous innovation at optimal cost and effort. Transforming into insights-driven firms has the potential to create exponential possibilities for investment management firms, as data can be leveraged to design myriad product offerings and deliver exponential business outcomes. Furthermore, data that was previously uncharted and unconnected can now be leveraged to produce innovative client-centric solutions. As data and automation reduce the go-to-market cost, offerings previously considered too niche to chase become achievable targets, furthering differentiation and alpha generation capability in the ultra-competitive investment management landscape. The time to act is now – a great future is in store for investment management firms that act quickly to unlock the value of data.

About the authors

Azim Uddin

Azim Uddin heads the Chief Data Officer Strategic Initiatives group for Capital Markets in TCS' Banking, Financial Services and Insurance (BFSI) business unit. Azim has over 20 years of industry experience working in asset management, securitization, and the broker-dealer space. His current focus areas include evangelizing data as the foundational element of our clients' Business 4.0 transformation journeys, enhancing data's visibility in the business sphere, and promoting the acceptance of non-traditional data, unstructured data, and alternative data to increase alpha generation. Azim holds Bachelor's degrees in Psychology as well as Economics from Rutgers University, New Jersey, USA, and an MBA from Duke University, North Carolina, USA.

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Prab Pitchandi is the global head of the Chief Data Officer Strategic Initiatives group within TCS' Banking, Financial Services and Insurance (BFSI) business unit. He has over 25 years of experience in the BFSI space with specialization in capital markets and risk management. He is passionate about the potential of data to create value and efficiencies and has been leading this initiative across BFSI. He has led many front-to-back transformations and regulatory programs for leading Wall Street firms and has been involved in setting up new business functions within global banks. Pitchandi has a Master's degree in Electrical and Electronics Engineering from Anna University, Chennai, India.

Awards and accolades



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