



# How AI is about to Transform Investment Management

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Arnaud de Servigny, PhD

## Introduction

The investment management industry stands at a pivotal juncture in 2025, where artificial intelligence (AI) is not just an enhancement but a fundamental disruptor reshaping the core principles of asset selection and allocation as well as portfolio optimization. Traditionally viewed as a domain reliant on human expertise and intuition, money management in liquid assets is evolving away from being a pursuit that can be effectively conducted in isolation or within a small-scale operation. Today, it requires upfront investments in advanced technology infrastructure, data acquisition, and AI-driven analytics to handle the complexity and velocity of modern markets. This shift raises the barriers to entry, as traditional players without dedicated resources will struggle to compete in a timely manner against tech-savvy firms equipped with machine learning models and meaningful computational capabilities.

Furthermore, AI unlocks profound economies of scale, enabling firms to automate processes, enhance predictive accuracy, and reduce operational costs at unprecedented levels. Already, in this environment, traditional actively managed funds must rigorously demonstrate tangible benefits to investing clients, such as superior risk-adjusted returns or personalized strategies, to maintain credibility against the rising tide of passive investing. Passive strategies, bolstered by AI's efficiency in tracking indices and minimizing fees, continue to deepen the divide, compelling active managers to leverage AI not just for survival but to justify their value proposition in a cost-conscious landscape.

Finally, AI's versatility fosters a proliferation of diverse investment approaches, from algorithmic trading to sentiment-driven models, democratizing access to sophisticated strategies that were once proprietary. This multiplicity intensifies market competition, leading to the erosion of traditional alpha sources as current practices that appear effective today face diminishing excess returns. As AI enables refinement of strategies, historical edges vanish, pushing the industry toward continuous innovation to sustain performance in an increasingly efficient marketplace. These transformations herald a new era where AI not only augments but redefines investment management, promising greater precision while challenging established paradigms.

## **Part 1: Expanding the Spectrum of Input Data**

Artificial intelligence is fundamentally altering the landscape of input data in investment management, broadening the spectrum far beyond traditional boundaries. Historically, investment strategies have been anchored in structured data such as financial statements, earnings reports, and economic indicators derived from fundamental analysis. However, AI's advanced capabilities, including machine learning and natural language processing, now enable the integration of unstructured data sources at unprecedented scales and frequencies. This includes textual data from news articles, social media feeds, regulatory filings, and even multimedia elements like images and videos, which can provide real-time signals on market dynamics. For instance, AI tools can analyse satellite images to assess agricultural yields or retail parking lot occupancy, offering insights into supply chains and consumer behaviour that were previously inaccessible or too labour-intensive to process manually.

The variety of these sources has increased dramatically, allowing for a more holistic view of investment opportunities. Synthetic data generation, a key AI innovation, further enhances this by creating simulated datasets to fill gaps in real-world information, improving model training without compromising privacy or regulatory compliance. In 2025, early adopters are leveraging large language models (LLMs) to extract investment insights from vast textual datasets, representing a step-change in how data is processed and utilized. This expansion not only accelerates decision-making but also uncovers hidden patterns, such as dependencies between geopolitical events captured in images and asset price fluctuations. As a result, portfolio managers can consider high-frequency data streams, from intraday trading signals to global sentiment shifts, fostering more agile and informed strategies. The integration of these diverse inputs reduces reliance on outdated models, positioning AI as a catalyst for transforming data from a static resource into a dynamic asset in investment management.

Moreover, AI's ability to handle multimodal data—combining text, images, and numerical inputs—enables predictive analytics that anticipate market shifts with greater precision. For example, machine learning algorithms can process visual data from earnings call videos to gauge executive confidence, supplementing traditional metrics. This dramatic increase in data variety is expected to drive efficiency gains in asset management economics, as firms adopt AI to sift through noise and highlight actionable intelligence. Ultimately, this transformation democratizes access to sophisticated analysis, empowering smaller investors and firms to compete on a level playing field previously dominated by resource-heavy institutions.

## **Part 2: Enabling Adaptive Memory in Investment Decisions**

AI introduces adaptive memory mechanisms that revolutionize how investment decisions are made, freeing them from the constraints of human cognitive limitations. Unlike human analysts, who are prone to biases such as recency bias or overconfidence, AI systems can objectively draw from both recent and historical data without emotional interference. This capability allows for a fluid, context-aware approach to decision-making in an environment

where market "laws" are fluid and influenced by unpredictable factors like policy changes or technological disruptions. Adaptive AI, through self-learning systems, continuously updates its knowledge base, responding to new information in real-time while retaining lessons from past events.

The agility provided by AI is particularly advantageous in investment management, where stable natural laws are scarce, and volatility is the norm. Machine learning models can mitigate common psychological errors by developing algorithms that anticipate market movements shaped by collective biases, ensuring decisions are data-driven rather than intuition-based. For example, AI can analyse vast datasets to identify patterns from decades-old financial crises alongside current economic indicators, reducing the impact of human biases like loss aversion or herding behaviour. Research indicates that well-calibrated AI systems not only amplify but can also help mitigate human cognitive biases, leading to more rational portfolio adjustments.

In practice, this adaptive memory enables AI to evolve with market conditions, making it a powerful tool for dynamic asset allocation. As adaptive AI reduces the need for manual interventions, businesses can respond faster to disruptions, enhancing overall decision agility in uncertain domains. This shift promises to transform investment management into a more resilient and efficient practice, where decisions are informed by a comprehensive, bias-free memory that spans temporal boundaries.

### **Part 3: Capturing Investor Sentiment and Preferences**

Investing in a stock transcends mere evaluation of a firm's fundamentals; it involves understanding the collective assessments and preferences of investors, where asset prices emerge from the interplay between investments and investor sentiment. AI excels in deciphering these relative preferences, offering substantial advantages over traditional methods through sophisticated sentiment analysis powered by natural language processing (NLP). By processing vast amounts of data from news, social media, earnings calls, and forums, AI can gauge optimism, fear, or neutrality in real-time, reshaping how market moods influence investment strategies.

This focus on sentiment capture is central because prices reflect not just intrinsic value but the aggregated expressions of investor behaviour. AI-driven tools summarize investor sentiment, enabling predictive insights that traditional analysis often misses. For instance, generative pre-trained transformers (GPTs) can analyse AI-related stock sentiments to inform trading decisions, demonstrating effectiveness through natural experiments.

The immense advantages of AI lie in its scalability and speed, allowing for real-time sentiment analysis that enhances risk management and trading precision. Unlike human-led approaches, which are limited by volume and subjectivity, AI models can process unstructured data to reveal hidden investor preferences, driving more accurate price forecasting. This transformation positions sentiment as a core pillar of investment management, where AI

bridges the gap between raw data and actionable insights into human-driven market dynamics.

## **Part 4: Advancing Forward-Looking Risk Management**

Effective risk management in investment cannot rely solely on historical data, akin to driving while fixated on the rear-view mirror; it demands a forward-looking perspective. AI significantly enhances this by assessing prospective investor attitudes, degrees of consensus, and dissent, moving beyond traditional historical distributions to predictive models. In this respect, there is a lot of information that is forward-looking nowadays especially in the option world where investors pay to express forward-looking views. Without having to invest in these products, already accessing and analysing the information they provide gives very strong forward-looking insights on risk.

From there, generative AI in particular, enables scenario simulations and real-time risk assessments, evaluating future market behaviours based on current data trends rather than past events alone. This forward orientation helps in scrutinizing transactions and events more thoroughly, improving security and resilience.

By analysing consensus and dissent among investors, AI provides nuanced risk profiles, allowing for more accurate management of portfolios in volatile environments. This shift to proactive, data-driven strategies not only boosts operational efficiency. As AI continues to evolve, it promises to make risk management a predictive science, safeguarding investments against emerging threats with unprecedented accuracy.

## **Part 5: Consequence on the Product Range Offering**

The integration of AI into investment management will be impacting the product landscape, particularly in the United States, which continues to set global trends in financial innovation. Actively managed exchange-traded funds (ETFs) are experiencing significant growth, driven by two primary factors: a favourable tax treatment and a streamlined transaction process compared to traditional mutual funds. ETFs generally offer greater tax efficiency, as they minimize capital gains accounting reducing on-the-run investors' tax liabilities significantly relative to mutual funds. Additionally, the lighter suitability and regulatory requirements for ETFs facilitate easier access and trading, akin to stocks, without the end-of-day pricing constraints of mutual funds, accelerating adoption among retail and institutional investors alike. As of mid-2025, active ETFs have captured 29% of global ETF net asset inflows, marking a substantial increase from previous years and underscoring their momentum.

Soon, within the taxable US space for liquid assets, the product range is expected to segment into four distinct categories: (a) passive ETF investing, (b) AI actively managed ETF investing, (c) actively managed ETF investing, and (d) legacy mutual funds. Pricing structures, measured by total expense ratios (TER), will reflect these differentiations, with passive ETFs capped at

up to 25 basis points (bps) to maintain their low-cost appeal. AI-driven active management is anticipated to command fees between 40 and 80 bps, balancing advanced technology costs with value-added performance. Traditional actively managed ETFs may exceed 75 bps, while legacy mutual funds could surpass 100 bps, highlighting the fee compression driven by competition and efficiency gains. This segmentation arises as AI enables more sophisticated, scalable strategies, pressuring higher-fee products to justify their premiums through demonstrable outperformance or specialized features.

Within the AI actively managed ETF space, three primary types of instruments are poised to emerge, each addressing distinct investor needs. First, ETFs designed to outperform main market benchmarks will leverage AI for predictive analytics and dynamic allocation, as seen in funds like those focusing on AI-enhanced equity selection to beat indices such as the S&P 500. Second, risk-controlled market exposure ETFs will utilize AI to mitigate volatility, offering downside protection through adaptive hedging and factor-based adjustments in uncertain environments. Third, ETFs occupying the hedge fund market-neutral space will provide enhanced liquidity, lower fees—potentially limiting itself to around 25% of alpha rather than the traditional 50%—and tax advantages, democratizing access to alternative strategies previously confined to high-net-worth individuals.

Projections indicate that global active ETF assets could triple to \$4.2 trillion by 2030, fuelled by AI innovations that blend active management with ETF efficiencies. This evolution not only expands product offerings but also intensifies competition, compelling providers to innovate continuously to meet evolving investor demands<sup>1</sup>.

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<sup>1</sup> The projection on global active ETF assets tripling to \$4.2 trillion by 2030 originates from BlackRock's latest analysis (via their iShares division), based on data as of June 2025 where current assets stood at \$1.4 trillion. This growth is attributed to factors like rising investor adoption of active strategies within the ETF wrapper for benefits such as tax efficiency, transparency, and real-time adaptability to market volatility and dispersion. While the report highlights thematic investing in areas like artificial intelligence (AI) as part of structural changes driving opportunities, the broader evolution in product offerings and competition is a logical extension of these trends, as active ETFs increasingly capture inflows (29% of global ETF net assets in mid-2025) and launches (51% globally), pressuring providers to innovate amid shifting investor preferences toward efficient, outcome-oriented vehicles