

AI in Investment Management

Beyond Efficiency Gains

Authors



Helen Krause
Head of Citi Global
Data Insights
helen.krause@citi.com



Sharon Tsao
Analyst, Citi Global
Data Insights
sharon.tsao@citi.com



Savina Chahal
Analyst, Citi Institute
savina.chahal@citi.com

Contributors

Martin Moeller
Head of AI & GenAI
for Financial Services,
EMEA, Microsoft

Lee Smallwood
Citi Markets

Alex Tamburov
Citi Markets

Siris Singh
Citi Markets

Catherine Zhai
Citi Markets

Pratyush Singh
Analyst, Citi Global
Data Insights

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Key Takeaways

1

Generative AI and agentic AI are fundamentally reshaping investment management, moving beyond simple efficiency gains to enable advanced research, analysis, and decision-making by processing unprecedented data volumes and automating complex workflows.

2

The focus of AI adoption in investment management has evolved from primarily improving operational efficiency to actively contributing to alpha generation through sophisticated data analysis and autonomous execution of tasks.

3

AI applications are expanding across investment, distribution, and operations, with new use cases emerging and a growing “wishlist” for future potential uses, including research assistants, predictive analytics, and automated decision-making support.

4

AI and GenAI are pivotal in accelerating the electronification of financial markets, transforming trade execution, data handling, and streamlining voice-to-electronic communications, particularly in less electronified asset classes like fixed income and derivatives.

5

Despite rapid advancements, significant challenges persist, including concerns about over-reliance and cognitive debt, confirmation bias, data privacy, security, and the need for robust regulatory frameworks and talent upskilling.

6

Investment firms face strategic decisions regarding developing AI capabilities in-house versus partnering with fintechs – the “buy vs. build” dilemma. AI accelerates the consideration for modularization of investment processes and leveraging external expertise where efficient.

7

Future developments in AI for investment management include applications in longer-term strategic signal generation, deploying agentic AI for time series forecasting and uncovering complex relationships through graph neural networks.

Executive Summary

The way artificial intelligence (AI) is used by the investment management industry is rapidly shifting from a focus on operational efficiency to enabling more sophisticated investment-centric applications. This is being driven by AI's ability to handle vast amounts of data, generate insights, and automate complex tasks.

This report highlights the transformative impact of AI, particularly generative AI (GenAI) and agentic AI, on the investment management industry.

The integration of agentic AI, which allows systems to autonomously plan, execute, and adapt tasks, is further accelerating this transformation. This shift is enabling AI to move beyond being a mere tool for efficiency to becoming a genuine collaborator in generating alpha. While the potential benefits are significant, challenges related to trust, talent adaptation, data security, and regulatory frameworks remain crucial considerations for broader adoption.

The report delves into the accelerating electronification of financial markets, where AI and GenAI are key catalysts in moving trading from traditional manual processes to data-driven e-platforms, enhancing speed, accuracy, and scalability.

AI Leads the Industry's Transformation

Since OpenAI's ChatGPT 3.5 launched in November 2022, generative AI (GenAI) has fundamentally transformed many industries. The widespread adoption of large language model (LLM) technology has led to a profound rethinking of what is possible.

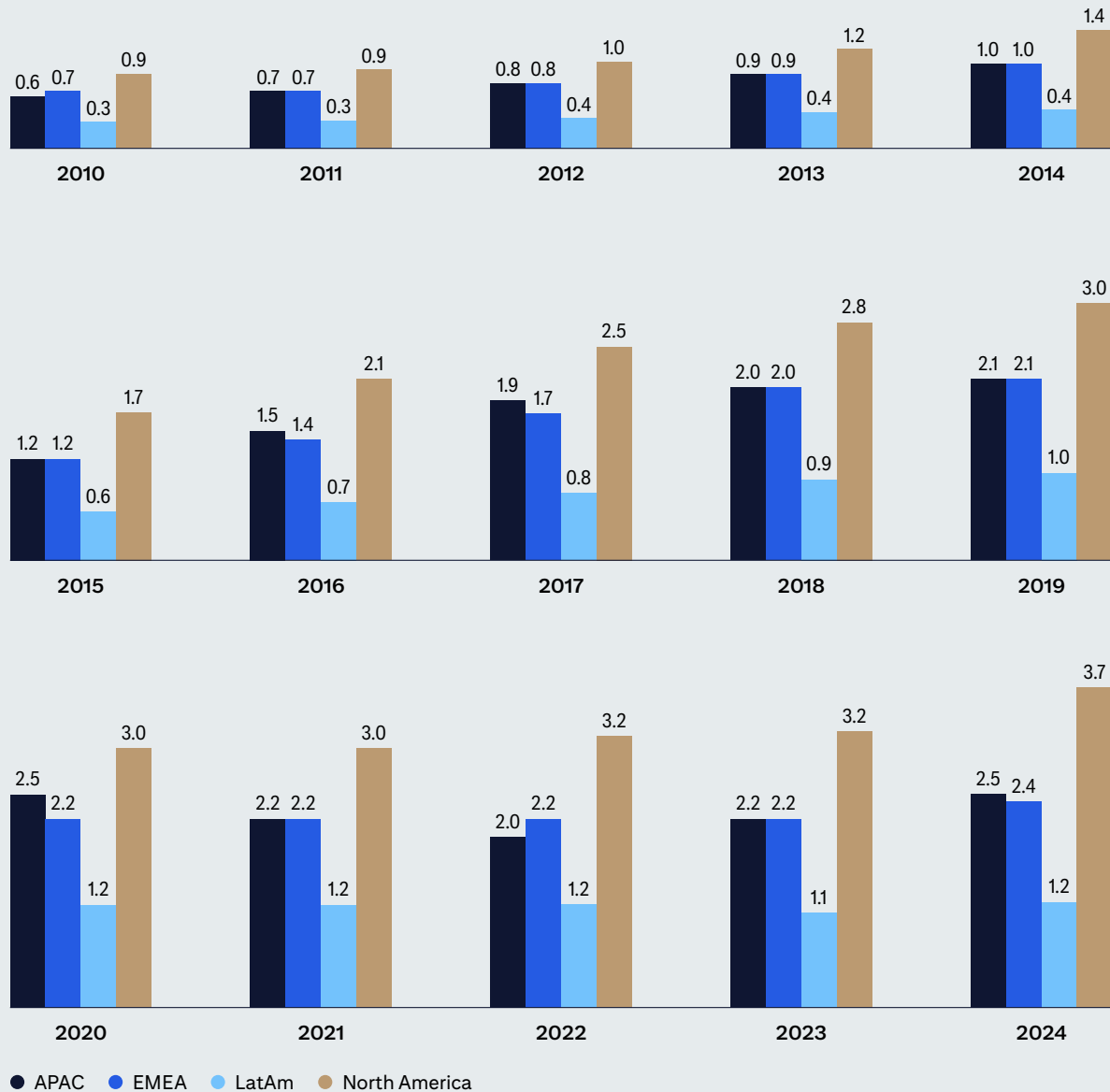
The scalability of LLMs, initially through GenAI and now with agentic AI, has made AI success a key deliverable for many C-suites globally. A recent Harris Poll survey of 500 CEOs worldwide, published by Dataiku¹, revealed that 74% of CEOs believe they could lose their jobs within two years if they cannot demonstrate measurable AI-driven business outcomes. The global adoption of GenAI has been rapid, with significant growth in financial services in 2024. For example, an Nvidia survey showed that 52% of financial services respondents actively use the technology, up from 40% in 2023.² Similar trends are seen in worker profiles, with marked increases in AI-related roles worldwide, particularly in North America (figure 1).

Our June 2024 report [AI in Investment Management – the Pursuit of a Competitive Edge](#)³ included over 40 in-depth interviews with C-suite executives from investment firms ranging from pension funds and sovereign wealth funds to hedge funds and large and mid-sized asset management firms. We found that while most firms were exploring the technology, AI adoption was still at an early stage. Many companies said they were “dealing with the unknown” in terms of establishing guardrails and determining the strengths and weaknesses of the technology. The report found that the focus was therefore on operational efficiency and productivity gains, with limited AI usage in front-office investment decision making.

However, things have changed substantially since the original report. In our follow-up work we spoke to a host of investment executives about their AI journey and the incorporation of agentic AI in their use cases. The message from them is clear: the question is no longer whether to adopt AI but how to incorporate the technology into the investment process in a transparent and risk-controlled way, while also demonstrating tangible return on investment (ROI). A recent study shows the promise of such endeavor – researchers from Stanford University recently created an AI ‘fund manager’⁴, which they found outperformed 93% of mutual fund managers by an average of 600% over a 30-year period by using only public information and making small adjustments to existing portfolios.

This report aims to highlight the transition from efficiency-focused use cases to investment-centric applications and also address some of the key issues with AI, from initial adoption to full implementation. Separately, we will discuss the impact of AI on electronification.

Figure 1. AI jobs as a percentage of all jobs



Source: Citi Global Data Insights, Revelio Labs

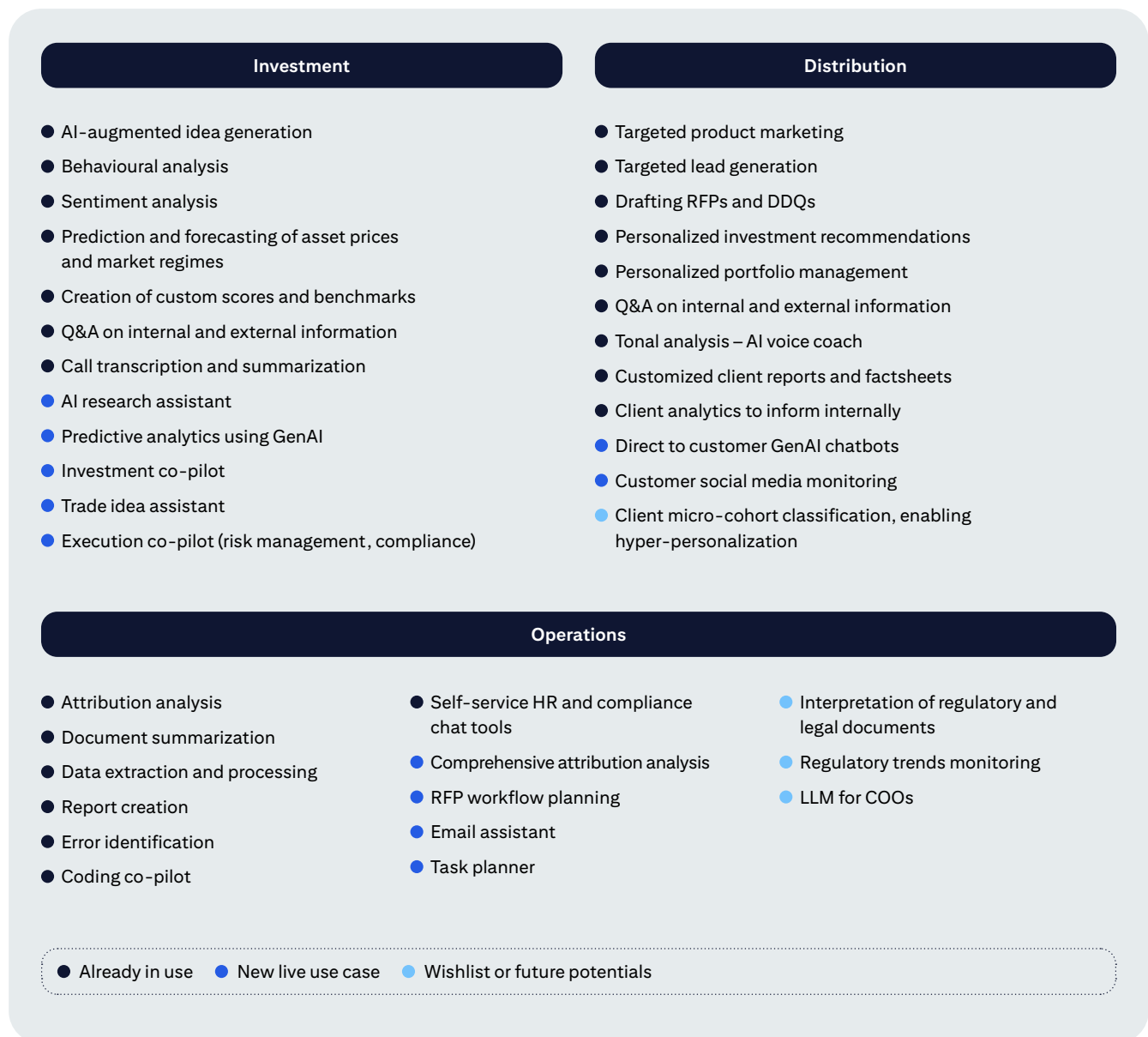
The Combined Force of GenAI and Agentic AI

Moving beyond basic data processing, advanced AI capabilities are transforming research, analysis, and decision-making processes. They enable investors to handle unprecedented volumes of information, uncover deeper insights, and automate complex workflows at scale.

[AI in Investment Management](#) discussed use cases primarily operations and distribution oriented. This showed the cautious steps asset managers were taking to explore and understand the technology. The focus on operating efficiency and productivity gains by automating repetitive tasks made sense, as firms learned to navigate the AI regulatory landscape and set guardrails. Figure 2 summarizes 2024's use cases, updated with new, live ones and a wish list for the future.

The previously cautious stance in leveraging Gen AI for front-line investment decision-making has shifted towards embracing the technology, especially when combined with agentic AI. The emergence of agentic AI allows AI systems to not only generate content or insights, but also to autonomously plan, execute, and adapt multi-step tasks to achieve a defined objective. The combination of GenAI, agentic AI and open-source AI tools democratizes access to the technology, making models, tools, and knowledge more widely accessible. As internal risk and control frameworks mature, asset managers are more inclined to experiment with front-office use cases in sandbox environments. For some, working alongside research agents powered by AI is already a reality.

In addition to a significant increase in investment use cases, the applications in operations and distributions continue to expand. AI advancements allow sophisticated and comprehensive applications in attribution analysis and report generations. Workflow planning is a regularly mentioned use case. Applications in distribution and marketing are also growing, including multi-channel marketing and monitoring, and the steady move from search engine optimization (SEO) toward generative engine optimization (GEO), as GenAI interfaces start to replace traditional search engines. Indeed, companies now need to consider how their firms and products show up in the LLM's responses, in addition to the traditional search engine result rankings.

Figure 2. Current AI use cases in investment management

Source: Citi Institute



Investment Use Cases in Focus – Fundamental vs Quantitative

Historically, fundamental investing has relied heavily on human analysis of financial reports, news, and expert or analyst opinions. While traditional AI has played a role in data aggregation, GenAI and agentic AI are opening up a new era where AI forms an integral part in the entire investment process.

For quant investors, traditional machine learning (ML) models, including regime-switching techniques and natural language processing (NLP) for signal detection, have long been an investment cornerstone. Those investors were initially less convinced by GenAI's promise, but the arrival of agentic AI marks a significant shift for quant investing.

The key differentiator is that the combination of these two AI technologies enables autonomous full-cycle signal research with unprecedented speed and reach. Their ability to not only process but also synthesize vast amounts of information, build hypotheses, and conduct analysis through backtests leads to deeper insights and faster decision-making.

This combination is seen as a game changer. The core shift is from AI as a tool for efficiency to AI as a genuine collaborator in generating alpha, which was not the case when our first report was conducted. This also clearly indicates how fast the space has evolved as firms rapidly adopt AI capabilities, combined with appropriate risk and control frameworks.

Figure 3. Generative AI enablement in fundamental vs quantitative investment research

GenAI	Fundamental	Quantitative
Research and information synthesis	• Vast amounts of information analyzed which previously was deemed impossible without AI tools • Uncover hidden insights • Data internalization with a 'chat' interface	• Rapid insights generation by synthesizing information • Uncover hidden insights • High quality drafts of investment theses
Efficiency & Democratization of Tools	• Automated tagging and streamline the preparation phase of research • Insights democratization	• Factor research automation • Insights democratization
Enhancing Depth of Analysis	• Behavioral analytics for alpha generation • Near real-time results • Forensic accounting and screening	• Memory and synthesis • Comprehensive scenario analysis • Hallucination seen as an opportunity for deeper analysis
+ Agentic AI	• Autonomously perform deep research on specific companies or industries • Monitor newsfeed and market sentiment in real time and react autonomously • Can be trained to detect warning signs in behavioral cues	• Autonomously perform deep research on factors/signals for investment purposes • Manage the entire research pipeline • Continuously monitor portfolio against risk factors and market shifts nearly instantaneously

Source: Citi Institute

Revolutionizing Research and Information Synthesis

Unprecedented information analysis: GenAI allows fundamental investors to analyze vast amounts of information that would be humanly impossible to process manually. This includes sell-side research reports (e.g., 30+ analyst reports simultaneously) and various data types like news articles, 10K filings, call transcripts, and internal research notes. For quantitative investors, GenAI tools can analyze alternative or obscure datasets faster and more effectively than human analysts, significantly broadening the scope of investable information sources.

Rapid insight generation: Historically, synthesizing information to understand complex impacts (e.g., tariff impact on a portfolio) could take weeks. GenAI enables this analysis in hours, allowing quicker portfolio adjustments and faster reactions to changing market conditions, potentially leading to trading decisions.

Hidden insights: By combining multiple analyst reports and various data sources, GenAI can act as a powerful supplement, surfacing insights and interconnections a human might miss. This leads to a more comprehensive and nuanced understanding of companies and markets. It also helps validate hypotheses and explore new angles, ultimately leading to more informed investment decisions.

Investment thesis articulation: GenAI can internalize all available data, allowing investors to “chat” with it, ask questions, and get responses based on a holistic view of the information. It can also quickly generate high-quality drafts of investment theses, a task that traditionally takes days for human analysts, freeing up time for more strategic thinking and value-adding activities. This includes cross-referencing information from various sources to check for consistency (e.g., verifying if management statements align with other public information).

Agentic AI's contribution: An agentic AI system could autonomously perform deep-dive research on a specific company or industry. It can monitor economic indicators, identify potential impacts, highlight key trends, and then automatically initiate a GenAI-powered analysis of relevant company filings and news. The findings could be synthesized into a preliminary report and even suggest portfolio adjustments based on pre-defined risk parameters, flagging anomalies for human review and exploration. This moves beyond simple summarization to intelligent, proactive information gathering and synthesis.

Driving Efficiency and Democratization of Tools

From efficiency to analysis: Initially, AI adoption focused on efficiency gains in operations, with some firms reporting up to 50% workflow improvement. This automation has extended beyond middle-office activities, with a shift towards using AI for more complex analytical tasks on the investment side.

Automated tagging and data ingestion: AI can remove manual tagging from reports and automate the ingestion of diverse datasets, significantly streamlining the preparation phase of research. For instance, an investor researching a drug can drop all relevant sell-side reports into an LLM for immediate analysis and survey generation. Large hedge funds are investing heavily in GenAI to automate factor research, allowing them to mine for new, unseen signals from unstructured data.

Democratization of insights: The GenAI tools released since November 2022 are democratizing access to deep analytical capabilities. Analysts can ask a wide range of questions and receive comprehensive answers, enabling more informed decision-making across the team. This allows analysts to spend more time on deeper insights and reallocate time to higher-value activities.

Agentic AI's contribution: Instead of merely automating a single step, Agentic AI can monitor news feeds and market sentiment in real time. If a significant event occurs for a portfolio company, it could autonomously trigger a chain of actions: updating relevant internal reports, analyzing the impact using GenAI, and then flagging the most relevant changes in the news flow directly to the analyst's desk. This effectively acts as an automated research assistant that proactively delivers critical, synthesized information. This end-to-end automation significantly reduces human intervention in multi-stage processes.

Enhancing Analytical Depth and Behavioral Insights

Behavioral analytics: AI is used by fundamental investors, in conjunction with forensic linguists, to analyze cues in earnings calls and reports. It identifies behavioral indicators such as “overconfidence” or “avoidance” in management’s responses. For quants, GenAI addresses the flaw in human memory by retaining and synthesizing huge volumes of historical information (e.g., 20+ years of earnings calls). It can access and process this historical data accurately, providing a comprehensive context that far surpasses human recall. This can provide a new source of alpha generation.

Real-time results: AI can deliver results from complex behavioral and linguistic analyses in almost real time, allowing for rapid reactions to market signals. It also helps identify blind spots in risk management and provides a comprehensive view of potential scenarios, augmenting existing knowledge, especially when combined with alternative data sources.

Forensic accounting and screening: Some fundamental managers use AI to ingest forensic accounting datasets and apply them as a screening tool for financial statements, automatically labeling anomalous entries. This significantly cuts down on manual review processes. Quant investors also increasingly use AI to systematically leverage accounting insights.

Hallucination mitigation: While GenAI still experiences “hallucinations”, the recently enabled web search function, which also provides links to sources, should mitigate the fear of completely made-up responses. Increasingly, investors are leveraging hallucinations positively to explore additional considerations and dimensions not previously thought about, transforming a limitation into an opportunity for deeper and more creative analysis.

Agentic AI’s contribution: Agentic AI can be trained to continuously analyze fundamental information from companies, including earnings announcements, for specific behavioral cues identified by linguists. If it detects a “red flag” or a significant change in management’s communication style, it could autonomously generate a warning, provide a summary of relevant sections, and cross-reference this behavior with historical stock performance before presenting it to analysts for deeper investigation. More generally, Agentic AI could continuously monitor a portfolio against various risk factors, autonomously pulling in new data, such as macroeconomic and company-specific news, performing GenAI-powered scenario analysis, and then initiating pre-programmed actions like hedging recommendations or alerting portfolio managers to potential breaches of risk limits. It can proactively identify and respond to evolving risks without constant human oversight.



From Wow to How – Practical Tips for Broader Adoption

Following the publication of our report [AI in Investment Management – The Pursuit of a Competitive Edge](#) in 2024, we have had over 100 meetings with investors globally to discuss our findings and gain their perspectives on AI adoption. For those already on their AI/GenAI journeys, discussions focused on comparing notes and understanding peer progress. However, for firms that had not started, it seemed daunting, often due to a lack of a clear data strategy or centralized data lake, making it unclear how to explore and deploy AI.

Our previous report showed that the future of AI in investment management depends on a solid data strategy. The arrival of agentic AI supercharges this requirement and accelerates the orchestration of an integral structure for investment management. With the help of GenAI and agentic AI, these interlinked functions can broaden and deepen AI deployment at an unprecedented pace.

In order to reap the benefits of AI, investment management firms should consider several factors:

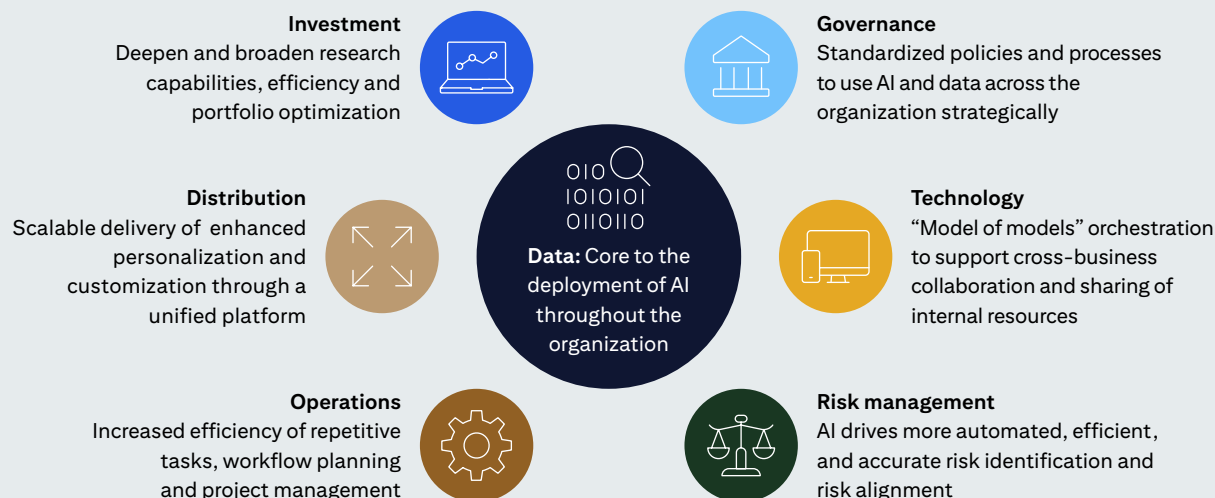
“Buy vs build” dilemma: Firms face decisions on whether to develop AI capabilities in-house or purchase third-party solutions. Security concerns over external systems are prominent, requiring rigorous vetting. However, building everything internally can be resource-intensive, especially for integrating non-AI-native functions. Modularization is one answer, where firms determine which aspects to keep in-house versus outsourcing to external specialized firms for efficiency. Modularizing investment processes allows companies to focus resources on differentiating activities, leaving other functions to outside experts or fintech partnerships.

While many fintechs offer products to revamp investment processes with AI, the industry is still maturing in identifying tools that can handle agentic functions. More developed areas currently involve data gathering, distribution, sales and marketing, and faster signal identification rather than portfolio construction, which can be addressed by traditional AI and machine learning automation.

Figure 4 incorporates considerations that investment management firms should bear in mind.

Figure 4. Data is at the core of successful AI deployment in investment and wealth management

Source: Citi Institute

**Buy vs build revisit: updated fintech landscape****Alpha generation and investment process enhancement**

- Axyon
- AI for Alpha
- Boosted
- Essentia Analytics
- MDOTM
- Intellicore

Investment research and market intelligence

- Aiera*
- AlphaSense*
- Auquan
- Finster AI
- Rogo
- Portrait Analytics
- Intrinio
- SigTech
- Triton Research
- Theia Insights
- Acuity
- Finpilot
- Unique AI
- Sakana

Alternative Data:

- Atlas AI
- MKTMediaStats
- Markets EQ
- Neural Alpha
- RavenPack
- SmartKarma
- StockSnips
- EILLA

GPUs and cloud

- CoreWeave
- Crusoe
- Vast Data
- Nebius

Document intelligence

- Arch
- Arteria*
- Clair*
- UI Path
- Sensible

Data management

- Databricks
- Dataiku
- DataRobot
- Domino
- Knoema
- Linedata
- Riskspan
- Snorkel
- Xceptor
- Starburst
- Atlan
- Dremio

Enterprise search

- Glean*
- iGenius
- Coveo
- Guru
- Vectara
- Nuclia
- Dashworks
- Cogniaze

External Search:

- Blueflame
- Hebbia
- ModelML
- Needl
- Rogo Data
- Cohere

Communication and distribution

- Digital
- Kasisto
- YourStake
- Vise AI
- Lavender

Sales and marketing

- Groove
- Clay
- Hubspot
- Apollo
- Tavus
- Unify
- CortexClick
- Regie.AI
- Peec
- Gong

SEO/GEO:

- Scrunch
- Jasper
- Geohero
- MarketMuse
- Otterly
- Goodie
- Writesonic
- Serpho
- Sqli
- Daydream

Regulatory and compliance

- Norm AI*
- Wequity
- Sherpa AI
- Dynamo
- Abstract
- Hadrius
- Holistic AI
- Zenity
- Enzai
- Relyance AI

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Data quality and (de)centralization: The effectiveness of AI models depends on the quality of their training data. The importance of clean, relevant, and comprehensive data inputs cannot be overstated. Many firms mentioned that a centralized data infrastructure was a major stumbling block for starting their AI journey. However, this has changed with agentic AI, especially when deployed with a data mesh.

Data mesh: A decentralized approach to data management, a data mesh addresses the challenges of traditional centralized data systems, which often bottleneck scalability and real-time insights. A data mesh allows domain-oriented teams, such as product management, sales or marketing, to be responsible for their data. A data mesh reduces reliance on central IT resources and allows business teams to deliver data products more quickly. This approach could improve data quality, which is crucial for training generative AI models and reducing hallucinations. When combined with agentic AI, it can power scalable and decentralized analytics, automate data management tasks, and enable integration and deployment of LLMs on primed internal data sources.

Security and human in the loop: There are legitimate concerns about uploading proprietary models and sensitive data to external, autonomous AI systems. This demands robust security, explainability, and audit trails to ensure compliance, risk management, and trust. This is why the judgment of a “human in the loop” remains critical, requiring a kill switch if any red flags are raised.

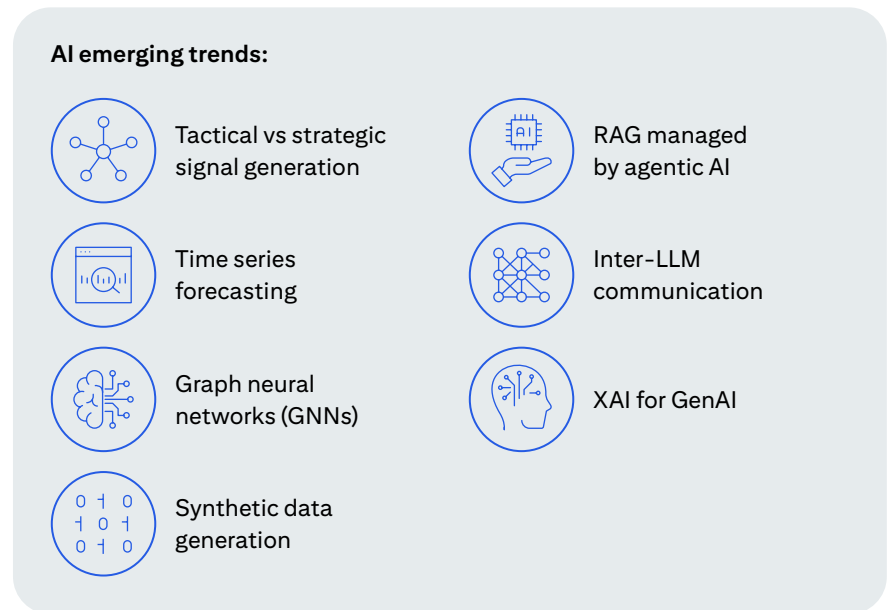
A checklist for success

- **Start using the tools:** Firms should begin experimenting and adopting AI tools. Even if they are not perfect, the rapid rate of improvement means firms could fall behind if they delay adoption.
- **Embrace experimentation:** There is no perfect implementation plan from the outset. Success will come from trial and error and continuous exploration of what AI can solve.
- **Focus on use cases:** Adoption rates are use-case dependent. Firms that identify bright spots or success stories champion them internally to drive broader interest and overcome initial apprehension.
- **Integrate into infrastructure:** While productivity tools can be developed quickly, integrating AI into core infrastructure for client insight is a significant undertaking.
- **Senior management set example:** The fastest impact on organizations will be achieved by pairing developers with senior employees who understand the business. It goes a long way if senior management shares their use cases with employees – it will set the standard for how AI tools can be adopted.
- **Prepare for workforce evolution:** New employees need to be tech-savvy. AI will increase productivity and potentially reduce reliance on outsourcing. The workforce must be upskilled and trained on how “not to be misguided”. A human in the loop remains critical.

Emerging Applications and Future Directions

The use of GenAI in investing continues to evolve quickly, with the introduction of agentic AI accelerating the emergence of new applications.

Figure 5: Emerging applications and future directions



Source: Citi Institute

- **Tactical vs. strategic signals:** GenAI is particularly effective for tactical signals, especially those related to sentiment and momentum, which operate on shorter horizons, e.g. next-month forecasts. Further research is trying to determine if GenAI-derived factors can also predict and maintain effectiveness over longer horizons.
- **Time series forecasting:** Academic research is progressing on using GenAI for time series forecasting, which holds significant promise for financial applications. Agentic AI could autonomously select the best LLM model for a given time series, fine-tune it with new data, evaluate its predictive performance, and dynamically switch to a more accurate model if performance degrades.
- **Graph neural networks (GNNs):** GNNs are being explored to understand complex relationships between entities, offering a new dimension to market and cross-company analysis. Using Agentic AI, we can construct and update financial knowledge graphs from disparate data sources, identify new, complex entity relationships using GNNs, and then use GenAI to explain the implications of these relationships for specific investments.

- **Synthetic data generation:** A long history of untapped investment signals is hard to come by and often comes with inherent biases, which need to be addressed before starting with proper signal testing. GenAI can potentially generate synthetic data bias-free for research and testing purposes, enabling more robust model development and validation without relying solely on historical data. Agentic AI could autonomously identify data gaps. GenAI could then be used to generate synthetic data with specific characteristics for integration into model training and validation pipelines.
- **Retrieval-augmented generation (RAG):** RAG is often regarded as the main method to mitigate GenAI hallucinations. RAG systems can enhance the precision and relevance of GenAI outputs, generating more robust and reliable forecasts. Agentic AI could manage the entire RAG pipeline, from identifying relevant internal knowledge bases, querying them, integrating the retrieved information with GenAI for coherent responses, and even learning to refine its queries for better results over time.
- **Inter-LLM communication:** Developers are exploring systems where different LLMs can “chat” with each other, critiquing responses and collaborating on complex analyses, potentially generating better insights. In quantitative research, this could help to uncover and finetune investment signals that are truly differentiating. This could lead to the development of complex systems where different LLMs specialize in different tasks, e.g., one for factor research and another one for macro research or risk assessment. These systems could autonomously exchange information and critique each other’s findings before arriving at a comprehensive investment recommendation.
- **Explainable AI (XAI) for GenAI:** In our 2022 report [AI Time – 10 Ways Artificial Intelligence is Getting Real](#)⁵, we discussed XAI as an AI development to watch. The rapid adoption of GenAI across the investment management industry and beyond requires more explainability, giving rise to XAI for GenAI⁶. Compared to the XAI from the pre-GPT era, it attempts to answer the complex question “why did the model create this specific content in this particular way?”. It aims to demystify the ‘black box’ nature of models by adding a layer of transparency and accountability.



AI Concerns and Challenges

AI has a strong potential to transform the investment management industry. Some argue that it is already well underway and that AI is a necessity to stay competitive. However, concerns over an over-reliance on AI and challenges about data privacy and security must not be overlooked. The transformative impact on jobs and talent management is also clear, with widespread adoption expected to become standard in the industry.

Over-reliance and cognitive debt: AI tools are designed to assist humans, acting as copilots rather than autopilots. Over-reliance on the tools could come with an unintended cost – cognitive decline – as users simply accepting outputs rather than treating them as a starting point. A recent MIT study⁷ on the brain and ChatGPT found “robust evidence that LLM, Search Engine and Brain-only groups had significantly different neural connectivity patterns, reflecting divergent cognitive strategies”.

This highlights concerns about the long-term educational implications of LLM reliance and the need to consider AI’s role in learning, which is equally applicable in professional lives. There are also worries about the lack of creativity or the introduction of groupthink if users become overly dependent on the tools for critical thinking.

Confirmation bias and ethical AI: Another concern is AI reinforcing confirmation bias by telling users what they want to hear. From a sales and distribution perspective, GenAI enables more targeted, hyper-personalized marketing efforts at scale. In our research, many investment management firms noted the danger of being inundated with viewpoints they already know, as LLMs tend to tell users what they want to hear, reinforcing confirmation. True value comes from independent and impartial opinions and insights into what might have been missed. AI models trained from user and client interactions require careful guidance and ethical frameworks to ensure they act as “devil’s advocates”. Benchmarking and baselining are essential for objectivity. Some recent developments include using deepfakes to create avatars for hyper-personalized experiences. The ethical implications and user reception of this practice are still debated.

Regulatory awareness: Integrating AI into day-to-day operations requires a significant change for many firms and needs thoughtful regulatory and legal consideration. GenAI's rapid advancement has prompted governments and regulatory bodies globally to develop frameworks and legislation to address the potential societal and ethical implications – an area many investors are watching closely.

The European Union's AI Act, which came into force in February 2025, is considered the most comprehensive AI regulation globally, with fines of up to €35 million or 7% of annual worldwide turnover for non-compliance. In contrast, the U.S. has a more fragmented approach with a mix of state-based and executive orders, while UK and Singapore have taken a pro-innovation approach to set guiding principles rather than prescriptive legislations on AI use. South Korea adopted comprehensive AI legislations in January 2025, effective from the beginning of 2026. Japan enacted its landmark AI Promotion Act in May 2025. China also released three national standards aimed at enhancing security and governance of GenAI. The country's new labeling rules require all AI-generated content to be identified.

Agentic AI has introduced a step change in capabilities and sophistication. Conventional AI and machine learning operate within constrained and predetermined parameters; AI agents' dynamic tool integration, adaptive cognitive processes, and capacity to address ambiguous situations requires less human intervention. This highlights the continuous need for regulators to keep pace with technological advancements.

Talent adaptation and upskilling: Most investment management firms we spoke to agreed that the integration of AI does not necessarily mean replacing people, but rather shifting their roles to perform more value-adding tasks. Ideally, employees would work more efficiently, rely less on outsourcing, and become more tech-savvy. The rise of AI requires a new approach to talent development. Firms must upskill their employees by providing relevant AI training. Learning to trust, interrogate and adapt to AI tools, akin to the adoption of internet search engines, is crucial.

Many firms appear to have overcome the initial apprehension of “dealing with the unknown” and are able to motivate their employees to explore the possibilities beyond efficiency gains in search use cases that boost returns on investment (ROI). This could alleviate the fear of job losses as firms strike the right balance of ‘human + AI’ through nurturing talent. Employees need to be equipped with the ability to trust a system to execute complex, multi-step investment processes autonomously. Agentic AI will require workers to become more like “AI system managers” or “orchestrators” rather than just users.

Recent Industry Trends

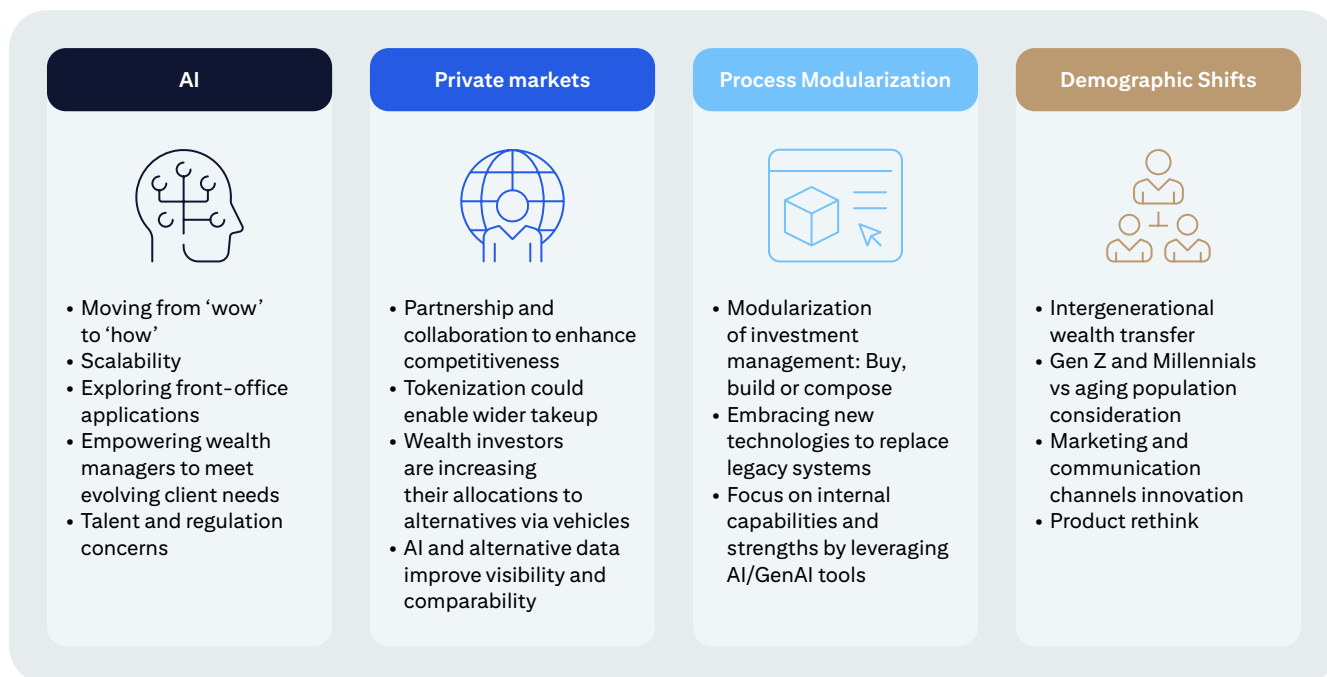
In addition to AI, three other key topics that we discussed with investors include private markets, process modularization and demographic shift, all of which contain elements of AI.

Private markets: There has been a flurry of partnership deals as cooperation is one key pathway being used to provide a competitive offering and meet client demands. AI and alternative data has improved information on private assets, promoting transparency and comparability. While in its infancy, tokenization's potential to enhance liquidity is also a hot topic.

Process modularization has been accelerated through the rapid development of AI tools. The focus on ROI means that many investment management firms have focused on front-office applications, seeking tangible revenue-generating opportunities, partnering with fintechs or outsourcing to external specialized firms for other functions and operations.

Demographic shifts: Investment managers are increasingly considering intergenerational wealth transfers and the divergent preferences of different age groups. Younger generations tend to be AI-native and prefer different types of assets, e.g. thematic and blockchain-related. Distribution and communication methods also need to change to attract Gen Z and Millennials. Efforts have been dedicated to the digitization of investment processes where component building is key to customization at scale to suit diverse investment appetites, powered by the combination of generative and agentic AI.

Figure 6. Key trends in investment management



Source: Citi

AI and GenAI: Accelerating Electronification in Financial Markets

Market electronification is another key element of the AI-driven transformation of financial services. AI is the catalyst for the shift from traditional voice and chat-based interactions to data-driven e-platforms. It can enhance efficiency across the trade lifecycle, address challenges in less electronified asset classes like fixed income, and help navigate the evolving regulatory landscape.

Electronification in trading aims to replace manual, voice-based processes with automated, computer-to-computer transactions, improving speed, accuracy and scalability. The market has rapidly evolved from human traders shouting orders on trading floors to a high-speed, algorithm-driven ecosystem.

Key Areas of AI's Impact on Electronification

Transforming Trade Execution and Data Handling

- **From informational to agentic AI:** The industry is moving beyond simple informational AI (like using ChatGPT for brainstorming) to agentic AI, which performs actions and learns by doing tasks. AI could, for example, predict potential failed trades by reading chat logs and eliminate manual processes. Agentic AI can automate complex workflows, handling tasks like expense management, compliance monitoring, and cash flow forecasting without human intervention.
- **Unstructured data processing:** LLMs can process unstructured data, such as quotes from chats, eliminating the need for manual logging and extracting valuable text information. This capability is critical for digitizing previously manual interactions. GenAI can synthesize and summarize large volumes of market data, monetary policy discussions, and research.
- **Streamlining voice-to-electronic:** AI excels at transmitting voice communications to text, which can then be fed into a machine to generate quotes or execute trades. While AI is not yet widely used for real-time client calls for pricing, it is a desired capability for seamless client interaction in the future.
- **Enhancing structured products trading:** Traditionally, structured products are difficult to trade electronically. AI is now enabling parameter inputs at scale, making it easier to automate these complex trades.
- **Optimizing order routing:** AI-powered intelligent order routing systems can determine the best venue for executing a trade by considering liquidity, transaction costs and execution speed. Some platforms, for instance, use deep reinforcement learning to adapt to changing market conditions in real time, aiming to reduce slippage and minimize market impact.

Optimizing Middle Office and Post-Trade Operations

- **Automation of workflows:** GenAI is significantly impacting operations and middle office workflows, automating tasks like trade matching, settlement, and execution. It can read and extract data from legal documents, confirmations, and clauses, feeding this into LLMs for repetitive data processing. This is helpful for predicting tasks like margin calls or asset transfers based on past trading patterns. Automation can lead to substantial operational efficiency improvements, estimated up to 50% in areas impacted by T+1 settlement.⁷
- **Client reporting and statements:** AI can explain exceptions in highly automated settlement networks (DTCC, Swift), improving accuracy from 80-85% to 98-99%⁸ and significantly speeding up client reporting and statement tasks.

Driving Electronification in Fixed Income

- **Closing the electronification gap:** Fixed income has historically lagged equities in electronification due to its complexity, fragmentation and more bespoke instruments. GenAI is helping to actively close this gap.
- **Addressing transparency and liquidity:** In illiquid bonds, AI can estimate pricing by processing information from news about bond issuances, macro reports, equity prices of issuers and treasury yield movements, aiding price discovery for rarely traded bonds.
- **Accelerating matchmaking:** GenAI is being explored to more quickly match buyers and sellers by analyzing historical data to identify ideal pricing partners.
- **Transforming credit markets:** Only around 40% of credit markets are electronic, with GenAI poised to tackle most of the remaining 60%⁹. LLMs can parse legal documentation for complex instruments like collateralized debt obligations (CDOs) and credit default swaps (CDS), extract key features, and even suggest new structured products, automating parts of the process. Handling heterogeneity of data and documentation was a big barrier to automation before. With the advancement of GenAI, it helps traders make faster decisions in credit markets.
- **Equity-like trading for fixed income:** GenAI is expected to gradually transform fixed income trading to resemble equity trading more closely, albeit with human checks to minimize hallucinations.

Paving the Way for Electronification in Derivatives

- **OTC derivatives set to benefit:** GenAI can improve the pricing and strategy development of over-the-counter (OTC) derivatives. An options trader can use an LLM to generate a trading strategy based on volatility, for example, by suggesting a call on a healthcare index. AI can also summarize risk profiles for salespeople. LLMs can parse large amounts of information and help draft documents. They can even consider weather forecasts for commodities or tariffs for foreign exchange and help create more robust hedging strategies.
- **Cognizant of regulators' concerns:** Regulators have voiced concerns about AI usage for derivatives pricing. The Securities and Exchange Commission (SEC) in the U.S. requires firms to eliminate or neutralize any conflicts of interest from AI tools, while the Commodity Futures Trading Commission (CFTC) focuses on AI's role in trading and clearing, emphasizing the importance of kill switches. The Financial Industry Regulatory Authority (FINRA) said solutions should be tech-neutral – firms cannot blame AI when things go wrong, and there must be appropriate supervision of AI tools.

AI is a Seismic Shift for Financial Innovation

Generative AI is not merely an incremental improvement; it represents a seismic shift in how investment management firms operate regardless of whether they are fundamental or quantitative investors. It provides unparalleled capabilities in data synthesis, automates labor-intensive tasks, augments human analytical power, and helps overcome cognitive biases. The integration of agentic AI elevates this by enabling the autonomous, goal-directed execution of complex financial processes, moving from “assistive” to “proactive” AI systems.

Challenges related to trust, talent, explainability, and data security remain, particularly with the increased autonomy of agentic AI, but the investment management industry is rapidly committing to these advanced AI forms. They are viewed as powerful business transformation tools that will continue to drive efficiency, uncover new insights and ultimately lead to better and potentially faster investment outcomes.

The continuous integration of GenAI and agentic AI with alternative data sources is testament to their growing importance and transformative impact on the future of investment research and ultimately better decision-making.

AI and GenAI are the fundamental catalysts for the accelerated electronification of capital markets. By analyzing unstructured data, streamlining middle and back-office operations and democratizing complex analytics, AI is closing the electronification gap in challenging asset classes like fixed income and derivatives by transforming trading from manual to increasingly data-driven. While strategic investments in tools, workforce upskilling, and robust regulatory frameworks are necessary, the opportunity for efficiency, enhanced decision-making, and competitive advantage is too significant to ignore. Firms that embrace this transformation will be at the forefront of the next wave of financial innovation.

Endnotes

- ¹ <https://pages.dataiku.com/global-ai-confessions-report>
- ² <https://www.statista.com/statistics/1557104/generative-ai-adoption-financial-services-worldwide/>
- ³ [AI in Investment Management – The Pursuit of a Competitive Edge](#), June 2024, Citi
- ⁴ <https://news.stanford.edu/stories/2025/06/ai-stock-analyst-analysis-performance-human-mutual-fund-managers>
- ⁵ [AI Time: 10 Ways Artificial Intelligence is Getting Real](#)
- ⁶ <https://arxiv.org/html/2404.09554v1>
- ⁷ Based on discussions with Citi Markets colleagues
- ⁸ Based on discussions with Citi Markets colleagues
- ⁹ Based on discussions with Citi Markets colleagues

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