

Key Wealth Institute

The Doctor Will See You Now

Article produced by the Key Wealth Institute's team of experts



Just as healthcare adopted AI for patients, the wealth management industry is embracing the technology for your financial wellness

Before COVID-19, most interactions with a medical professional consisted of physically being in an exam room or healthcare facility. Face-to-face diagnoses were the norm.

However, the pandemic permanently transformed that paradigm, forcing patients and providers to adopt telehealth, permanently changing how Americans consume health care. According to one source,¹ telehealth visits grew from 0.1% in 2019 to 17% of all patient visits in 2023. As a result, healthcare organizations have now significantly integrated telehealth into their care delivery.

At the same time, another powerful trend within the health care industry is taking place: the explosion of

data. A prominent healthcare institution's CEO noted that medical knowledge doubles every 73 days. He also pointed out that over 5,500 medical journals publish nearly 1 million papers annually.

But while some may view this information tsunami from a positive lens, this executive was less optimistic.

"American healthcare is in danger of being overwhelmed by data. The data explosion threatens to destabilize American medicine," he warned.

What's even more worrisome is the fact that this report² was published nearly eight years ago, suggesting that these trends have only intensified since.

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¹ <https://www.healthcarediver.com/spons/trends-in-telehealth-the-future-of-virtual-care/709544/#:~:text=After%20the%20pandemic%2C%20telehealth%20usage,straategic%20approach%20to%20virtual%20care.>

² <https://consultqd.clevelandclinic.org/dealing-healthcares-data-explosion>

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These two trends highlight the use case and also the need for technology in many important aspects within our daily lives. They also offer a useful parallel to the wealth management industry. Data is growing at an exponential rate, and new solutions are being developed to analyze this data to improve decision-making and client outcomes.

In this paper, several experts in the Chief Investment Office, spanning an array of specialized disciplines, offer their perspectives on artificial intelligence (AI). They discuss the benefits, the limitations, the risks, and the power AI can bring to our business and, ultimately, to our clients.

As noted below, the journey will not be a linear one, nor will it be without challenges. But as ardent enthusiasts and believers in human ingenuity, these

experts anticipate that the change will be profound and the opportunities will be immense.

Healthcare, despite the rise in telehealth and fewer in-person interactions, remains a team activity. The industry comprises professionals and numerous critical supporting actors spread across many distinct yet integrated specialties. They are aligned with one common goal: a person's well-being.

Wealth management is no different. As this new AI era appears poised to accelerate, our integrated business model and deeply rooted collaborative spirit will benefit our clients significantly in the future.

We are pleased to share these insights with you and welcome your feedback at any time.

A macro framework for thinking about AI

Steve Hoedt

Managing Director/Head of Equities

Artificial intelligence has risen into public consciousness and investors have clearly noticed, and for good reason. This is not merely about figuring out which companies stand to benefit the most from the adoption of AI, whether by using the technology or by providing the AI “picks and shovels” such as dedicated semiconductors or cloud-based computing platforms. This is about figuring out the impact of a potential sea change in the global economy.

In practical terms, the use of AI and automation (e.g., robotic manufacturing) presents us with an infinite scaling of knowledge (AI) combined with an endless scaling of labor (robots). This is not just a game changer. It's a revolution in the making,

If we view the economy from a 30,000-foot point of view, the equation for economic growth looks like the following:

$$\text{GDP Growth} = \text{Population Growth} + \text{Productivity} + \text{Debt Growth}$$

In a world constrained by large amounts of debt and experiencing slowing population growth, you can see immediately why AI has captured our imagination. Put simply, AI offers the potential for exponential population growth and large productivity gains. The change will not occur instantaneously, but clearly the global economy post-2030 will likely change forever due to AI.

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The constraints to adoption are also clear:

- 1) Energy
- 2) Computing power
- 3) Data storage

The race to develop AI depends on how society deals with these constraints. Lowering energy costs (access to cheap and reliable baseload power, including nuclear) should act as a powerful multiplier in accelerating adoption and change. You shouldn't be surprised that energy is the first constraint. AI-related computing power and data storage solutions consume massive amounts of energy.

Numerous semiconductor companies are engaged in a race to develop powerful chipsets designed specifically to solve the needs of AI, and cloud-based on-demand virtual machines are granting access to this power to all who can pay to use it. Cloud-based data storage continues to multiply, and costs continue to drop. You can see the pieces coming together for a true economic revolution, which may eventually have implications as great as the Industrial Revolution in the 1800s. Progress will not be linear. It will come in fits and starts. However, in short, the AI era could go down as the most consequential change over the shortest period in human history.

AI and equity security selection

Mike Sroda

Director, Equity Research

The evolution of AI tools and machine learning has the potential to benefit the process for selecting securities within an equity strategy. These tools are not necessarily new, but the recent advancements and attention surrounding AI have been noteworthy.

AI tools can improve the speed of generating new ideas and the efficiency of the analysts seeking to uncover them. Analysts can train AI to search for actionable ideas based on specific criteria and use the results as a guide for further research.

For example, if an analyst seeks to identify investment ideas for a particular strategy, the analyst could focus the AI tools on the desired criteria. The metrics could be qualitative along with traditional financial metrics such as revenue and earnings growth.

At this point, the AI tool would use the set metrics and determine which securities are best positioned for outperformance. The analyst would then review these securities and determine whether these ideas fit the strategy well.

Our view is that AI can act as another analyst on the team, generating new ideas for the strategy that may not have been surfaced or researched without the assistance of AI. This gives the analyst another differentiated source for idea generation, similar to reading a new research report or attending a conference. Overall, AI can improve the performance of the equity strategies by improving the capabilities of the analysts managing the strategies.

AI and credit research

Ester Lau

Senior Credit Research Analyst

Traditionally, the process of analyzing a company's creditworthiness and the attractiveness of a debt instrument involved diving into hundreds of pages of a company's 10-K and credit legal documents, as well as reading through earnings transcripts.

A research analyst would extrapolate data and insights and then update financial models that drive investment decisions. These models are mostly automated but still require some manual updates due to non-standardization of data and other analytical adjustments. The analyst then ensures adequate protections are in place for credit investors by sorting through masses of legal jargon in the credit legal documents. All in all, the entire process can be quite manual and time-consuming.

However, in recent years, the fixed-income world has seen an increase in the adoption of artificial intelligence. Non-analytical tasks now require less of an analyst's time. For instance, in a few seconds, AI can quickly generate summaries of a company's financial performance — a task that would normally take a human much longer. Similarly, AI can easily parse through credit

agreements to detect covenant protections while an analyst may become cross-eyed trying to decipher legal language.

In addition to saving time, AI can generate insights that analysts previously found difficult to structure. For example, AI can perform sentiment analysis of a company by sorting through the number of times the management team has spoken words with negative or positive connotations on earnings calls. This analysis can provide a direction on the company's financial projections.

AI can even gather a company's sentiments toward investors through its language usage. A company may state on an earnings call that it would like to conserve cash or fortify its balance sheet. AI would read this as a typical credit-friendly strategy and indicate a possible preference for credit investors over equity investors at the time.

As AI continues to evolve, technology undeniably will continue to optimize workload efficiencies and generate additional new insights for the fixed-income world.

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Will AI replace financial advisors and disrupt the wealth management industry?

Justin Tantalo

Director and Investment Consultant

Let's start by defining the wealth management industry's value proposition in fundamental terms: delivering financial planning and investment advice to institutions, individuals and families, helping them achieve their financial goals.

That definition might lead you to conclude that wealth management firms are in the money business. However, longtime practitioners would nuance it and suggest that wealth managers are ultimately in 'the people business.' To them, the interpersonal relationships and trust between a client and their wealth management partner are more important than efficient frontiers and advanced portfolio construction techniques.

Trust matters because it helps keep a plan on track and a portfolio invested when risk is high by minimizing behavioral mistakes that might otherwise happen.

It follows, then, that if AI is to replace humans in the role of financial advisor and disrupt the wealth management industry, it must provide more than simply reciting optimal investment theory. AI agents would need the capability to build and maintain trusted interpersonal relationships with clients. They, in turn, must be willing to trust their advice during market stress. Will individuals trust the advice of an AI agent when their 401(k) is down 28%?

The best financial advisors do more than dispense investment advice. They listen to their clients in the same way good doctors listen to their patients. Successful human advisors respond with a nuanced tone of voice and a sense of calm when necessary. They show empathy to a client's concern when it matters most. In other words, the best financial advisors today have as much behavioral EQ as they have financial IQ. Will AI evolve to mimic this empathy? It's probably too early to tell.

But maybe we're missing the point and focusing on false dichotomy. AI need not replace financial advisors in the wealth management industry to be disruptive. Financial advisors armed with AI tools can elevate their competency to the next level and benefit their clients' financial goals. Advisors leveraging AI in their workflows should be able to increase productivity and accuracy and add historical context while delivering face-to-face advice to their clients with the empathy and emotional intelligence that humans excel at.

Forecasting is hard. But here's one prediction: Expect the value of financial advice to remain high, and with AI expect the quality of the advice to improve.

The best financial advisors listen to their clients in the same way
good doctors listen to their patients.

Trading and execution with AI

Kathy Hutka

Senior Equity Trader

We now trade seamlessly via electronic means. Today's vast array of order management/execution management systems (OMS/EMS) manage the trading process from start to finish. As a result, the U.S. markets moved to T+1 settlement in May 2024 (trades now settle in one day).

With these improvements to the trading process, small orders can be set to auto-execute so that traders can focus their attention on larger orders. Buy-side traders can send trades to their sales traders via Financial Information Exchange (FIX) connectivity or work orders on a broker's proprietary algorithms using various strategies to seek the best execution.

Trading has advanced further by incorporating artificial intelligence into electronic trading strategies. Machines can uncover trading patterns before the trade is placed based on a stock's

historical or macro data that cause stocks to move in predictable ways, improving execution quality and lowering trading costs. Trade cost analysis (TCA) tools also play a role in improving execution quality by reviewing post-trade results — in aggregate or individually — to improve execution quality on future trades. Learning what broker, venue or strategy was most effective for different order types also lowers trading costs.

AI is not static. It continues to evolve and adapt, becoming an increasingly effective collaborative tool for traders. It assists in choosing the appropriate venue or strategy for trading, always seeking the best execution. By embracing this evolution, we can look forward to further improvements in processes and a continued reduction in trading costs for our clients.

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AI's role in the trade settlement process

Cynthia Honcharenko

Director, Portfolio Management

AI can play a significant role in trade settlement within the financial services industry by streamlining processes, enhancing accuracy, and reducing operational risks. Here are key aspects of AI's role in trade settlement:

Automation and settlement tasks	Automating various manual tasks involved in the trade settlement process — such as data entry, reconciliation and documentation processing — reduces the time and effort required for settlement.
Efficient trade matching	AI-powered systems can match trade details accurately and quickly, reducing discrepancies and error in trade settlement instructions between counterparties.
Data validation	Validating trade data against reference data sources and regulatory requirements ensures accuracy and compliance with settlement rules.
Trade confirmation	AI systems can automate the confirmation process, ensuring counterparties agree on trade terms and facilitating a smoother and timely settlement.
Straight-Through Processing (STP)	Enabling STP systems can execute trade settlement processes without manual intervention — improving efficiency, reducing the risk of errors, and ultimately leading to cost savings.
Risk assessment	Assessing settlement risks by monitoring market conditions, counterparty creditworthiness, and transaction history provides insights into potential risks and recommendations for risk-mitigation strategies.
Error detection and resolution	Identifying and flagging settlement discrepancies or exceptions for human operators to investigate or resolve reduces the risk of failed settlements.
Operational efficiency	By automating and optimizing settlement processes, AI reduces operational costs and minimizes the need for manual intervention, ultimately leading to cost savings.

Implementing AI in operation departments of banks and financial institutions can be highly beneficial, but it also comes with several challenges. AI relies on high-quality and structured data. Banks often have vast amounts of data, but ensuring clean, accurate, and accessible data can be difficult.

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Integrating AI systems with existing legacy systems and databases can also be challenging. Banks have complex IT infrastructures, so ensuring seamless integration is critical.

Financial institutions must also contend with data privacy, security and regulatory compliance hurdles. Banks handle sensitive customer information. When implementing AI, maintaining strict data privacy and security standards is essential to prevent data breaches and regulatory violations. Ensuring AI systems comply with financial regulations such as Know Your Client (KYC) and anti-money laundering (AML) is complex and requires ongoing monitoring and adaptation.

Overall, AI's role in the trade settlement process is to optimize and streamline the end-to-end settlement process — from trade confirmation to reconciliation and reporting. By leveraging AI technologies, financial institutions can reduce operational costs, minimize settlement risks, and enhance the efficiency and accuracy of their settlement operations. However, privacy and regulatory requirements also need to be considered during the planning and implementation phases.

Opportunities with AI

James Kerrigan

Senior Portfolio Manager

Developments in artificial intelligence, machine learning and large language models (such as Open AI's ChatGPT and Google's Gemini) will present numerous opportunities within wealth management. We have started to see AI integrated into aspects of the wealth management industry, with robo-advisors, but we are still only in the early innings. The integration of AI and machine learning into full-service wealth management institutions can provide many benefits and new opportunities, including these:

Enhanced personalization – AI can analyze large amounts of data, such as personal investment preferences, risk tolerance, tax requirements, and goals. This will allow for extreme personalization in the construction and ongoing management of portfolios.

Improved decision-making – AI and machine learning work best when using very large data sets. Automating and streamlining parts of the

investment research process will help identify new investment opportunities and assess risk in a much shorter time frame.

Increased access to information – Integrating AI and large language models into the client portal's chatbot capabilities can improve the client's ability to get personalized answers to their questions. Rather than having a generic group of FAQs, the client will be able to access personalized information around account maintenance, investment definitions, and asset allocation, to name a few.

These items just scratch the surface of the opportunities and changes that we will see as AI, machine learning, and large language models are further integrated into the systems and platforms used in the wealth management industry. While these advancements will create operating efficiencies for wealth management firms, the largest benefits will be felt by clients having a more personalized and efficient wealth management relationship.

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Risks with AI

Don Saverno

Director, Multi-Strategy Research

Artificial Intelligence poses many risks for the asset management industry when implemented into existing systems. AI acts as a disruptor with its own set of challenges to work through. As part of any successful implementation, risk parameters and mitigation techniques must be processed before integration begins. These risks fall into three main categories: model and data risks, security risks, and adoption risks.

Model and data risks: This category encompasses the traditional risks associated with new technologies and models, centering around data integrity and system complexity. For AI to work successfully, the data used to train it must be pristine. These models rely on quality data. Any false step can lead to spurious model results and incorrect output. Early computing pioneers termed uneven data quality GIGO (garbage in, garbage out). Bad data lead to bad conclusions. Correcting that in a teacher-student system would be onerous. One reality of AI is that the system and its inferences are opaque and regulating and mitigating poor data sets is difficult.

There's also a potential risk in the model's reliance on low-frequency data, which could affect investment signals. AI models don't reveal their work process. Understanding how the model arrives at its conclusions from the data set is crucial. Without this understanding, these inferences may go unnoticed.

The underlying theme in this category is complexity. The way AI learns and processes data often makes human supervision ineffective. Even experts may be unable to determine the logical steps AI takes or to curb potential hazards without seeing such results themselves. By then it may have led to a poor decision.

Security risks: AI systems have privacy concerns along with any network system. Cybersecurity is paramount because of the potential for data poisoning attacks, which would teach the system to look at erroneous data sets and build capabilities off of them. Any breach to the learning modules leads to strong disincentives to use the model. How can you be sure that cleansing the poisoned data made the AI forget what it learned? Could the poisoned data lead to additional inferences in the model even after it has been wiped out?

Along with these system concerns are legal risks involving intellectual property. Using copyrighted data sets or teaching based on trademarked or copyrighted material may leave an organization open to lawsuits in the future as industry regulations evolve.

Adoption risks: The concept of Generative AI is relatively new in asset management or real-world usage. The regulatory landscape is in a state of flux, evolving as more information becomes available. An organization might rush into an implementation plan that could be overtaken by new regulations. Experts must understand the expected parameters in the industry and adopt a conservative approach.

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Limited experts and limited systems are available in AI now. The variability of method used to train the AI is also limited. When there is limited variability in the early-stage algorithms, teaching methods can lead to similar model results across a myriad of environments. When similar model results infiltrate a market, any market disruption or black swan event would lead to similar investment decisions across AI tools. This situation could exacerbate market movement just as similar quantitative models fueled the “flash crash” on May 6, 2010, when

markets plunged dramatically at 2:45 p.m. before rebounding within the hour. Homogeneity leads to wider market swings. Testing how different AI algorithms will react to future unknown market environments will be at the forefront of AI risk management.

These risks are daunting but are within the scope of any new technology. The key to success lies in creatively budgeting for and managing future risks. This proactive approach will distinguish organizations that successfully implement AI models from those that ultimately fail.

For more information, **please contact your advisor.**

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