



Investment Perspective | Can AI-driven investing really improve performance?

Rather than just investing in artificial intelligence (AI) stocks, investment managers are trying out AI techniques as a way to achieve higher portfolio returns. Can it be done or is this just a fad?

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Back in 2021, the Chartered Financial Analyst (CFA) Institute, a global association of investment professionals, issued a report¹ stating, “AI (artificial intelligence) is a must-have... With growing evidence of AI’s effectiveness in helping investment professionals in their daily work, the focus has now shifted from building conviction about AI and big data to successful adoption of the technologies.”

Indeed, over the past decade, asset managers have become more open to the potential of AI tools and techniques to lift investment performance. This is because of the three key advantages that only AI can provide:

1. Coverage

According to the World Federation of Exchanges, there are over 31,000 stocks listed in Asia Pacific (representing more than half of all listed stocks), followed by Europe, Middle East, and Africa (EMEA) and then the Americas, adding up to a total universe of over 53,600 stocks².

It is impossible for any global or regional firm to hire enough research analysts to adequately cover all, or even a majority, of the stocks pertinent to their portfolios, especially when diversification is key. AI, on the other hand, can be used to analyse billions of data points related to a company’s fundamentals, past economic trends and decades-long market movements.

Therefore AI is not limited by the number of analysts or working hours in a day, but rather whether there is sufficient data available for analysis. The more data, the more effective the AI model. On the other hand, AI works less well for markets or sectors where there is insufficient data, for example, some frontier markets or penny stocks where financial reporting is not as onerous.

¹ Source: CFA Institute, T-shaped Teams - Organising to adopt AI and big data at investment firms, 2021

² Source: World Federation of Exchanges, May 2022



2. No biases

AI is based on machine learning, that is, a method of making predictions by ingesting vast amounts of data to detect patterns. The machine tests the data against changes in key variables called “features” to see how these affect outcomes going back in history. In the case of investment management, these features can be market prices, trading volumes, or company valuations, but their importance is not pre-determined. The features are then used to forecast a, a stock’s potential upside or downside, given the current investment environment.

This is different from how human analysts operate. In general, all analysts have preconceived ideas about how to achieve outperformance, including using style, geographic or technical investing strategies. This is based on their domain knowledge and experience, but as a result, analysts can overlook unusual relationships or find it hard to outperform during unfamiliar market events.

In the same way, quant strategies are often based on statistical models that reflect analyst concepts and theories. These attempt to find a set of variables that best fit past data, and project these forward into the future. This means they work in the opposite direction to AI strategies, which are designed to learn from what is happening in the real world and to adjust the key variables accordingly. The weakness with quant models is that variables that have worked in the past may not be the same ones that work in the future.

3. Scalability

AI strategies are also more easily transportable across asset classes. For example, unlike the barriers that traditionally separate equity analysts from bond analysts, the same AI methodology can be applied to both asset classes, provided that the necessary data is available.

This is because AI is driven by a bottom-up approach focused on the manipulation and transformation of empirical data. In contrast, traditional methods of bond and equity selection are based on a deep and specialist understanding of the respective market drivers.

As a result, AI strategies can be used to achieve a number of different investment outcomes, regardless of asset class. They are appropriate for security selection, but can also be used for asset allocation. In addition, AI can be used to improve risk management by identifying not only positive patterns, e.g. related securities that have the potential to outperform, but also negative patterns, e.g. related securities that have the potential to increase a portfolio’s concentration risk.

How to successfully adopt AI?

While it is clear that AI can bring many unique advantages to the investment management process, it is also clear that the enhancement of returns cannot be left to AI alone. Human analysts continue to play a crucial role because there will always be good companies that do not fit into a pattern or trend.

There is also no guarantee that the required data is readily available, and this data is, by definition, a record of what has happened rather than what could unfold in the future. Finally, risk controls will continue to be set by human managers because decisions about the acceptable amount of volatility tends to be taken at a mandate or firm level.






So in effect, the adoption of AI can be more precisely described as the integration of AI techniques into existing investment management processes. This must be done in a way that leverages existing manager expertise and yet allows for AI insights to be accommodated. As the CFA Institute report suggests, this integration can be even harder than the actual development of financial AI models!

What is AI-Augmentation@UOBAM?

It is with this understanding that UOBAM started its AI journey in 2018. The firm has long been committed to leveraging new technologies that can be shown to deliver superior outcomes to investors. Recognising the potential for AI to enhance investment performance, UOBAM began trials of its AI models since then.

However, considerable effort was spent on merging the investments data science discipline with the firm’s local and regional investment capabilities to ensure a streamlined three-stage stock selection process.

<p>Stage 1: Ideas Generation</p> 	<p>To kick start the process, data relating to the relevant investment universe is ingested from a variety of data providers to generate a short list of stocks idea. Most asset managers stop at this stage of AI application.</p>
<p>Stage 2: Security Selection</p> 	<p>On receipt of this shortlist, analysts can contribute to the shortlist and will rate all stocks accordingly. This rating will influence the final rated shortlist of stocks.</p>
<p>Stage 3: Portfolio Optimisation</p> 	<p>In the final stage, analysts will further input any relevant risk controls such as exposure limits. The model then assigns weights to each stock in the portfolio which is assessed again by the manager before being implemented.</p>



Investment Perspective

This highly structured approach has paid off with a few of UOBAM's AI-augmented funds demonstrating solid performance. To date, our Singapore office United Asia Fund is rated 4-stars by Morningstar³ and the 5 star-rated United Greater China fund recently received a Refinitiv Lipper award for the Best Performing Fund in the Greater China, 3-year category⁴.

It would appear therefore that AI can make a discernable difference to fund performance. However, we would caution that this difference comes not just from high quality AI models, but importantly, the way the models are incorporated into the wider investment management process.

³ Source: Morningstar, as of September 2023

⁴ Source: Refinitiv Lipper Fund Awards 2023 Winner Singapore, United Greater China Fund A SGD Acc. Please refer to uobam.com.sg/awards for the latest list of UOBAM awards



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