Key Questions

Will Robots Replace Human Investment Managers?

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We envision a future where artificial intelligence and human fund managers coexist.

Asking this week's Key Question in the early to mid-1990s would have been preposterous. At that time, Artificial Intelligence (AI) had just endured the latest of its many false dawns or "AI winters." This was a period when AI's immense potential to revolutionize every facet of human endeavor fizzled from lack of funding, paucity of data, and the powerful influence of naysayers who argued that AI belonged in sci-fi movies, not the real world. It would have sounded heretical for the leading organization of investment analysts and portfolio managers to ask such a question back then. Not in 2019, however, because this week's question comes from the first line of a recently published report by the CFA Institute titled "AI Pioneers in Investment Management."

Those who are old enough might get nostalgic when remembering the 1990s: This was the apex of the era of the star investment manager. In 1990, for instance, Peter Lynch of Fidelity Magellan fame was wrapping up a stellar 13-year career averaging almost 30% each year while running the largest mutual fund in the world. Two years later and before he became a constant target of the wrath of many conservatives, George Soros was profiting from a $1 billion bet in one of the greatest trades ever made, bringing the Bank of England to its knees in the process. In 1995, Ohio native John Neff, who passed away in June of this year, was celebrating the sunset of a remarkable 31-year career during which he outperformed the S&P 500 by over 3% each year while running Vanguard's Windsor fund. Bill Gross, another Ohio native, earned his "Bond King" nickname during this era, and the legendary Warren Buffett cemented his legacy as arguably the greatest investor of our time. In the intervening years, as computing power and data accessibility became more democratized, a new wave of investors known as quants ascended to the throne, eclipsing the exploits of many of the star managers of the 90s.

Quants fall into two broad categories. There are those, much like the star managers, that focus almost exclusively on company fundamentals to determine the stocks to buy or sell. What makes them distinctive is their reliance on an unemotional or systematic process that augments the power of computers, data, statistics, and finance to manage portfolios. The portmanteau "quantimental" is often used to refer to these types of quants, highlighting their integrated quantitative and fundamental process. They are generally transparent about their investment process and only embrace elements of AI at the fringes. Examples include household names like AQR, LSV, and Acadian.

The second group of quants are today's uber-secretive masters of the universe: They fully embrace and exploit the power of natural language processing, computer vision, voice recognition, machine learning, deep learning, and big data. Pattern recognition is at the core of their process and, unlike the fundamental quants, there is often no requirement for an economic rationale to justify a trade. In fact, these AI quants purposely hire PhDs with non-finance backgrounds in subjects like physics, mathematics, statistics, and computer science so they are unencumbered by what they consider to be flawed financial theories. Examples include DE Shaw (Jeff

Bezos worked here before starting Amazon), Two Sigma, and Renaissance Technologies (RenTech).

RenTech may be familiar to readers as it is the subject of a new book published earlier this month by Wall Street Journal writer, Gregory Zuckerman. The Man Who Solved the Markets: How Jim Simons Launched the Quant Revolution is a book that tells the story of how Jim Simons, a mathematics professor and former code-breaker with little to no knowledge of financial markets, was able to use quantitative techniques to build the most successful hedge fund ever. RenTech's flagship strategy, the Medallion Fund -– which is hard closed to external investors and only available to employees -– has generated an annualized gross return of 66% per year since 1988, besting the performance of all the star managers mentioned earlier. With such an impressive run, it doesn't seem preposterous today to ask if robots could someday replace humans as fund managers.

Despite the exploits of AI, which admittedly is still at its infancy in investment management, we do not think human fund managers will ever be replaced, at least not entirely. We envisage a future where AI and human intelligence coexist to build better portfolios geared toward an investor's long-term risk/return expectations. We think it is unwise to dismiss AI and the quant revolution as a fad or to avoid a black box, as some investors currently do. We argue that the human mind is the blackest of all boxes.

We also do not think AI is a panacea for the many issues that face the investment management industry, especially the inability of most active managers to outperform passive benchmarks. Instead, we advocate for a little dose of AI sprinkled on good old human intelligence. The robots will come of age one day, and we will all be better for it.

For more information, please contact your Key Private Bank Advisor.

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