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AI Funds Decline—Then Recover—During Market Turmoil

Traders that use machine learning have had to adjust strategies and rely less on historical data to train models

Hedge funds that use artificial intelligence models to suggest trades and stock picks declined when stock markets unraveled in early March, but now have largely recovered. Pictured, a man walking past an electronic stock board showing Japan's Nikkei 225 index at a securities firm in Tokyo earlier this month.

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By James Rundle

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Hedge funds that use artificial intelligence models to suggest trades and stock picks declined when stock markets unraveled in late February, but now have largely recovered, according to benchmarks tracking these strategies.

Yet market experts warn the unpredictable nature of the economy these days could trip up some algorithms that continue to rely on data gathered during better times.

Models trained on historical data from a decadelong bull market haven't dealt well with the market's recent tumult, these experts say.

Data from Mizuho Financial Group Inc.'s Eurekahedge business show that funds using AI in their investment process lost money after a marketwide selloff began on Feb. 19.

An index published by the company that tracks 23 funds showed a loss of 2.62% in February, while the Eurekahedge Hedge Fund Index, which tracks the industry as a whole, lost 1.87%.

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The wider index continued its downward slide in March, posting losses of 6.11%, while AI funds largely recovered and had gains of 2.11%, suggesting the models began adapting to changing market conditions by incorporating new data and relying less on historical information to inform strategies. Hedge funds generally, however, fared better than the broader market: the S&P 500 index declined by 8.41% in February and 12.51% in March.

The picture is more uneven on an individual level, with some companies that comprise the AI index experiencing both double-digit gains and losses, said Mohammad Hassan, the head analyst for hedge-fund research and indexation at Eurekahedge. The constituents of the index also run the gamut between firms that are essentially quantitative or systematic managers using some AI through to technology-focused funds developing neural networks and deep-learning models.

The coronavirus pandemic has thrown many of the old rules out of the window, resulting in shocks ranging from the effective closure of the retail and hospitality sectors to a collapse in crude oil prices and the airline sector. Wild swings in benchmarks such as the Dow Jones Industrial Average occur on almost a daily basis.

"It's like having a string of 100 Brexits in a row," said David Aferiat, co-founder and managing partner of Trade Ideas LLC, referring to the market shock that followed the U.K.'s referendum vote to leave the European Union on June 23, 2016. Trade Ideas uses AI analysis of stock-market data to suggest trading ideas for retail and institutional investors.

Machine-learning models are usually trained on historical data to anticipate how stocks, bonds and derivatives interact under specific market conditions and suggest trading ideas, but market stressors in the past usually were limited to single events, or a series of economically related events with a common origin.

The models don't know how to react to exogenous market shocks, said Mike Chen, the director of portfolio management at PanAgora Asset Management Inc., a Boston-based quantitative investment firm.

"Machine learning is a great tool, but it's not a magic bullet. People need to know its limitations and be humble when they use it," said Mr. Chen, a regular speaker at financial-industry conferences on the subject of AI.

The ability to avoid the trap of relying too much on historical patterns, particularly during this pandemic, is contingent on the quality of data inputs into machine-learning models and the application of a liberal amount of human intelligence to ensure algorithms don't go berserk, said Trade Ideas' Mr. Aferiat.

"There's a difference between handing over an AI and its learning process to a freshly minted grad with a degree in computer science and mathematics and saying, 'Teach this AI,' versus a stable of market veterans," he said.

Most funds that have taken heavy losses may have also fallen prey to the perils of operating "black boxes," said PanAgora's Mr. Chen. This occurs when an AI model is so complex that its developers cannot fully explain why it has produced certain outputs or recommendations.

"If you fall into the trap where you don't have a fundamental sensibility of why the machine is doing what it's doing, and you just trust it, it leads to a dangerous situation," he said.

PanAgora, which manages around $30 billion in assets, uses machine learning to forecast security prices. But the firm is able to audit and explain why the algorithm arrived at the decision it did, with explainability being a core part of the development process, said the firm's equity chief investment officer, George Mussalli.

"There's a lot of room for these strategies to grow," Eurekahedge's Mr. Hassan said. "it's heading in the right direction."

Corrections & Amplifications
The last decade was considered a yearslong bull market. An earlier version of this article incorrectly described it as a bear market. Corrected on May 1.

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