

Last year, The Economist reflected on how algorithms have come to dominate financial markets, reporting that 'funds run by computers that follow rules set by humans account for 35% of America's stock market, 60% of institutional equity assets and 60% of trading activity.' For some, AI and machine learning in particular is the next frontier; algorithms that act like humans, learning and adapting their behaviour as market conditions change.

In 2019, a joint survey by the Bank of England and Financial Conduct Authority on the use of machine learning in financial services revealed that:

- two-thirds of respondents use it in some form and expect machine learning use to double in the next three years
- firms mostly design and develop capability in-house but sometimes use third-party platforms and infrastructure e.g. cloud computing
- benefits include efficiency gains, product customisation and more effective fraud prevention and anti-money laundering

At the same time, the CFA Institute examined trends and use cases of AI and big data technologies in investments. They reported that relatively few investment professionals are currently exploiting AI and big data applications in their investment processes but identified three themes:

- natural language processing, computer vision and voice recognition to process text, image and audio data
- machine learning techniques to improve the effectiveness of algorithms used in the investment process
- AI to process big data, including alternative and unstructured data sets for investment insights

Investment managers manage approximately \$90 trillion in assets. Yet there are currently only around 300 funds globally managing approximately \$17 billion that use AI in some part of their investment process, less than 0.02pct, a tiny proportion of the overall industry.

So, it is early days in terms of AI and investment management, but some bets both big and small are being placed on the future applications of AI and machine learning.

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