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AI’S EXPANDING ROLE IN TRADING

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As the buy-side grapples with higher costs, fee compression and ever-increasing regulation, many industry participants are turning to Artificial Intelligence (AI) and machine learning technology as they hunt for further efficiencies in their trading processes. Building these new processes in-house or outsourcing to technology providers has now become increasingly common.

AI and machine learning have been used by the sell-side for a long time to automate menial tasks performed by sales traders. Buy side participants are now starting to use these technologies in a variety of additional ways, such as creating new processes for price, liquidity discovery and execution algos. More recently, AI and machine learning technologies have been used to improve transaction cost analysis (TCA) at a time when asset managers are legally obliged to show regulators that “all sufficient steps” have been taken to achieve best execution.

The Markets in Financial Instruments Directive (MiFID) II which went live across the Europe Union at the beginning of 2018, has further spurred on firms to explore different solutions for performing TCA as a means to improve the execution decision making process, and meet their legal requirements at the same time. Coupled with TCA becoming more deeply entrenched in the trading process, a 2018 report from consultancy Aite Group entitled ‘MiFID II Best Execution: Multi-Asset-Class TCA Goes Mainstream’, revealed that AI and machine learning technologies are emerging trends that will continue to galvanize the investment sector.

“The use of AI will continue to influence the TCA space. Firms with the budget, staff, and technological resources to make the investment into AI will automate the aggregation, cleaning, and analysis of more and more data for the purpose of research cost analysis,” said Aite’s senior research analyst Audrey Blater in the report.

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EQUITY AI TCA

Already on the market are equity-specific TCA tools that enable the buy-side to analyse performance on a pre-trade and intra-trade basis. These technologically advanced tools take into account a myriad of real-time data points to help traders determine if they are achieving best execution for their orders by monitoring costs along the lifecycle of the trade.

In 2017, TORA launched a pre-trade equity TCA solution that uses machine learning to examine the core attributes of an equities trade, including spread, volatility and volume consumption. This has the power to estimate market impact before the trader enters the market.

An AlgoWheel or broker selection process in particular, have grabbed the attention of the buy-side. TORA's AlgoWheel, uses AI to help firms identify the best broker algorithm for an order via an analysis of both historical and real-time prices, and volume time series. This is combined with properties of historical equity trade execution of orders with similar market capitalisation, sector and volume consumption has revolutionised transparency and the process of trading within the market

TCA providers as well as buy-side and sell-side research teams are continuously looking at new ways equity TCA can be developed. For example, building pre-trade TCA and recommendations based around live market volatility and liquidity characteristics throughout the day.

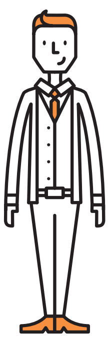
NON-EQUITY AI TCA

With MiFID II extending best execution requirements into other asset classes and requiring more transparency and post-trade reporting in fixed income for the first time, there has been great interest in how AI and machine learning may be able to benefit other asset classes.

Post-trade TCA for equities has been available since the 1990s and has reached a certain level of maturity, but the same cannot be said for FX and fixed income TCA. According to a 2019 report from Greenwich Associates, 88 percent of equity trading desks now use TCA, but only 60 percent of FX and 38 percent of fixed Income desks have it as part of their investment processes. Further Ms. Blater said in the 2018 Aite report that a lack of usable market data has been a source of frustration, particularly when it comes to over the-counter (OTC) instruments.

For Non-equity, AI and TCA are increasingly being looked at from the perspective of transaction cost analysis rather than for the algorithms themselves. While increased regulatory scrutiny has created interest in using these technologies for TCA across all asset classes, according to Aite's report there is still some way to go until its use case for alpha generation has been fully realized.

In the future, the use of AI and machine learning in the non-equity analytics process has the potential to be a game-changer, as it has implications beyond equities and can actually provide the trader with actionable information regarding how to execute a trade based on changing market conditions.



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