



Algorithmic trading governance and controls

Challenges in 2018 and beyond

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Algorithmic trading: what you need to know

At the beginning of 2018, algorithmic trading became a regulated activity in Europe for the first time, under MiFID II. Then in February, just as firms were embedding their new governance and control frameworks after the MiFID go-live, the PRA and FCA announced additional requirements for algorithmic trading that set the bar even higher. Banks have much work to do to fully implement these new control standards, and there are some tough questions to answer along the way.

Finding the point of failure

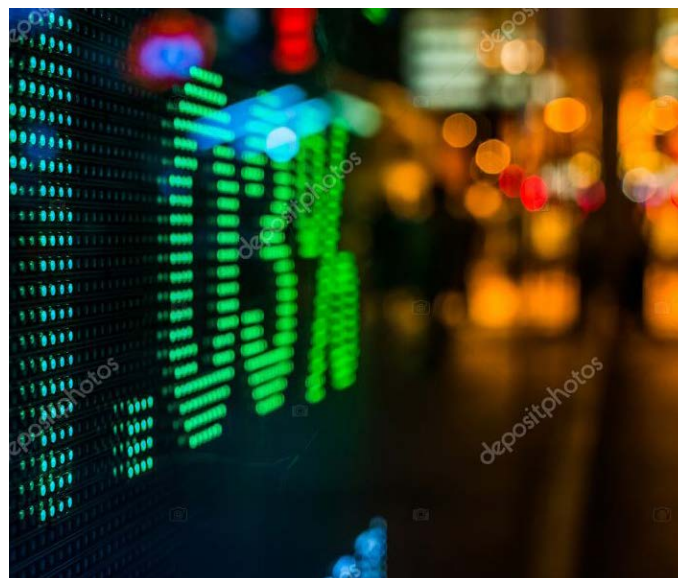
From a control perspective, an attractive feature of algorithmic trading is that the rules of the game are explicitly defined before any trading activity takes place (at least in theory). No traders have to balance client outcomes, the firm's profitability and their own profit and loss account with each client order arriving at a desk, an inherent conflict that has been the source of many conduct issues in wholesale banking. Because algorithmic trading removes the human factor from a dealing desk's inherent risk profile, it should provide opportunities to better define and control for good outcomes. However, the complexity of algorithmic trading environments means things can go wrong in many other ways. Defining and controlling the point of failure is neither clear nor easy. The stakes are high for senior managers, as regulators expect a clear line of personal accountability for executives in charge of algorithmic trading activities.

Opening the black box

Risk and compliance functions are expected to play significant roles in the testing, approval and monitoring of algorithmic trading. Regulators are clear that to be effective, these functions need to have the right tools, skills and understanding of algorithms. To address the last point, firms need to maintain comprehensive documentation, including inventories of all algorithms and related controls. Achieving this means changing the code development cycle so that often-secretive front office quant teams document and detail their algorithmic strategies better, and make them available for scrutiny by control functions. Under the new rules, a black-box approach to the development and deployment of algorithms is no longer possible.

Rethinking the risk and controls approach

Historically, most testing and simulation of algorithms has focused on profitability and execution quality. This is understandable and will continue to be the core focus. However, banks now need to test and control for other factors, including: operational resilience, market disruption, market abuse, anti-competitive behaviours, compliance with venue rules and consistent good client outcomes. Banks need to go beyond traditional software testing techniques to address all these operational and conduct risk requirements. In the complex algorithmic trading environment, with multiple potential points of failure and a high degree of interconnectivity and interdependence, banks need to rethink their approach to implementing conduct risk controls.





Steps to implement conduct risk

1.



Reduce inherent risk exposure

2.



Integrate pre & post trade processes

3.



Consider emerging risk

First, they should focus on reducing inherent risk exposure by designing system architecture that prevents some risks from crystallising. Inherent risks can be reduced by creating environments that allow for information flows within the algorithmic trading stack to be separated, and independently provisioned and controlled. This will reduce the risk of front running client orders or other risks associated with inappropriate use of pre-trade client data. Systems architecture should support the effective implementation of a 'need-to-know' principle, for example by creating containers for different types of algorithms, with independently controlled interfaces and execution environments.

Second, firms should consider a more integrated approach to running controls around pre-trade, real-time monitoring, best execution, capacity testing and market abuse. At large banks, these processes are typically run by different teams using different systems and data. In an algorithmic trading environment, issues with any of these processes often compromise several outcomes: for example, systems running slowly due to capacity issues may impact best execution as well as contribute to market disruption. Banks will get a better grip on risks and identify issues faster when they integrate monitoring across these disciplines. Compliance and risk functions have an important role to play. They need to put in place the right operating model, technology and personnel to be able to deliver holistic second-line-of-defence oversight and monitoring over algorithmic trading.

Finally, together with regulators and standards bodies, the industry needs to consider emerging risks in algorithmic trading – for example the pursuit of ever-increasing speed and low latencies or developments around privacy and data mining.

Many market participants and trading venues spend significant sums to achieve ever faster execution, but it is not clear whether there is a point at which faster markets stop benefiting final consumers. This leads to a paradox where an industry collectively invests to stay relevant in the speed race without necessarily making markets more efficient or effective. And unless there is an industry-wide 'speed limit', firms will always be exposed to latency and capacity risks because current market structure gives advantage to the fastest.

Implications for data privacy also deserve an industry focus. Combined with increasing computer power and developments in machine learning, vast amounts of client trading history and public data create opportunities to model the anticipated behaviour of market participants. Recent issues around data privacy from other industries show that there are limits to what constitutes acceptable commercial use of these datasets. Firms should assess their risk exposure to similar issues when using data to improve trading algorithms or to monetise private alpha.

It's a marathon, not a sprint

Business, risk and compliance functions have much to do to establish and embed truly effective and sustainable governance and controls around algorithmic trading. The recent focus on operational and conduct risk makes the task particularly challenging, as traditional financial measures are no longer sufficient. MiFID II and the additional standards required by the PRA and FCA are just the beginning of the journey. Banks should expect more to come as industry practice develops, and new governance and controls paradigms will be needed to support sustainable growth in algorithmic trading business while promoting effective and efficient markets.

If you'd like to discuss further, please get in touch.



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