Fast, Efficient and Sophisticated Trading Moves Into the Spotlight

Recent years have been dominated by the desire to trade as fast as possible, however as low latency trading closes in on the laws of physics, future investment is likely to offer diminishing returns. Firms keen to sustain a competitive edge are beginning to realise that whilst trading fast is ultra important, the ability to trade efficiently using increasingly sophisticated strategies based on accurate and smart trading decisions is where the real gains are likely to be in coming years.

However, today's ultra fast trading environment begs the question of whether we are now almost at the finishing line? Low latency trading is starting to reach the limits of the laws of physics and unfortunately the highly optimistic Buzz Lightyear mantra of going to 'infinity and beyond' doesn't apply to trading faster than the speed of light.

Financial services attracts some of the very sharpest and most innovative minds; professionals who won't settle for the status quo and are actively developing new ideas for how firms, even faced with the limitations of science, can continue to strive towards trading that little bit faster than their competitors. Prime examples include firms using microwave technology to reduce the time it takes to send data between New York and Chicago. Microwave technology sends data as radio pulses through the air in a straight line, instead of the more traditional fibre optic cables that transmit laser lights down glass stands. Not only does this approach benefit from the fact that the data can travel slightly faster through radio waves than glass, but it can also take a more direct path and avoid having to go around things like Great Lakes!

_Steve Colwill_  
CEO & Founder, Velocimetrics
A second example of how firms are seeking to cut trading delays even further is by increasing the responsiveness of trading systems using network routers with field-programmable gate arrays (FPGAs). Programming a router FPGA to respond to the order directly reduces the network hop previously necessary between the router and trading application. However, FPGAs by their very nature have limited programing capabilities, so this is suitable only for simple trading strategies: more advanced trading strategies require more complex computing systems.

Whilst small steps can be taken to enable even speedier trading, the wins in terms of profitability are reduced and market participants are starting to experience diminishing returns on their investment. The industry is getting to the point where the trade-off between being a few microseconds quicker, is not only cost, but also the reduced ability to make smart automated trading decisions, as firms are restricted to the simpler logic that can be added to a FPGA chip, with potentially limited financial gain.

Stephen Hawkings once famously said ‘Intelligence is the ability to adapt to change’ and in an industry where being one step ahead of the competition is critical, the more astute players are beginning to shift their attention to explore where they should go next. These participants fully appreciate the huge importance of low latency, and continue to focus on this, but they also realise that the ability to apply accurate and sophisticated trading decisions based on timely information and propagate these orders out to the market in a timely manner is increasingly what really matters in terms of the bottom line. Being fast is beneficial, but being able to trade smart and efficiently, using timely information and clever strategies is where the real gains are likely to be in coming years.

Trading efficiencies are moving into the spotlight. In today’s high speed and complex trading environments, the potential for decisions to be made based on delayed, incomplete or unreliable data can quickly convert highly profitable trades into huge losses. Future profitability relies not only on speed, but also on optimised operational efficiencies, that enable both human and automated traders to benefit from the availability of accurate and timely information, in addition to being instantly notified of issues that may adversely impact their trading success as they are emerging, before it is too late.

One of the biggest pressures facing firms as they seek to trade faster, more efficiently and smarter is how they do this under the ever expanding regulatory burden, especially in an environment with such a high degree of uncertainty. These challenges proliferate for firms employing strategies that facilitate trading across multiple geographies, as they are then required to comply with the rules of various different jurisdictions.

However, what is clear is that regulators globally are looking to increase transparency and technology can be a great facilitator for this, enabling firms to see what happened and why. If you take the examples of high frequency trading and algorithms, both have received some pretty bad press over recent years and regulators are looking to gain a stronger understanding of what is really happening under the hood. Firms need to be increasingly prepared to explain why a particular trading decision was taken and the result of this action, and to do this, firms need to be consistently monitoring what is happening within their systems so they can be confident in what they are doing.

Transparency is no longer optional; regulators are increasingly requiring it and it is proving essential for firms who want to truly understand how effectively their operations are performing. Some clear winners have emerged in the low-latency race and the barriers to entry in terms of cost and technical know-how have increased significantly. The real winners in the future will be the firms who can execute increasingly sophisticated trades at speed, confident in the quality of the inputs to their automated trading decisions and their execution.