



## The Naked Truth

The 60-day feedback period allocated by the SEC to its proposed changes to the practice of sponsored access is almost up, and by the time this issue hits desks, 'unfiltered' access may be a thing of the past. But the real issue here is how brokers implement technologies allowing them to manage and monitor their clients' orders in real time.

Two months. Sixty days. Either way you look at it, when it comes to the financial services industry and how quickly change has historically been effected, it's not a great deal of time. But 60 days is the time window the US Securities and Exchange Commission (SEC) has allocated for the feedback period after its January 13 proposal that would require brokers who allow their clients access to the markets by way of their own membership to employ rules in order to minimise the possibility of systemic risk brought about by unlicensed traders. The crux of what the SEC wants is to implement tighter controls for sponsored access - the arrangement whereby a broker provides non-exchange members access to global exchanges - and more specifically, naked sponsored access (also known as unfiltered access), the practice of brokers providing non-exchange members with direct and unfettered (and unmonitored) access to trading venues.

So what's the problem? In short, industry participants are concerned that as a result of advances in the speed of trading technology, firms run the risk of racking up significant exposure in a very short space of time, which, in extreme cases, may lead to their failure - if not complete failure then at least their inability to cover their losses - and the transfer of that exposure to their trading counterparties and clearing houses. It's a valid argument, although the SEC's fixation on the issue of membership and the assumption that exchange members somehow pose less of a threat to the market than non-exchange members is simply not valid.

It's not a foregone conclusion that the SEC's proposals will be adopted, although industry commentators would be quick to point out that the industry's highest profile regulator has an impressive track record of getting what it wants, and that the hedge fund registration rule successfully challenged and defeated in US Court of Appeals (District of Columbia Circuit) in June 2006 was the exception and definitely not the rule.

"The SEC has identified a significant risk in the way naked sponsored access operates today, and I think that its comment letter strongly suggests that naked sponsored access will likely be banned," says Dariush Nazem, vice-president, low latency product development, at Goldman Sachs Execution & Clearing. Bank of America Merrill Lynch (BAML) sees it pretty much as Goldman Sachs does - that naked sponsored access is to all intents and purposes on borrowed time, at least in its present guise. "Given the pace with which it has done this and put this proposal together, and the fact that it comes on the back of a Nasdaq proposal that has already been approved, I would say that this is likely to happen," observes Tim Cox, director of Global Execution Services at BAML.

John Goeller, managing director of Global Execution Services at BAML concurs with Cox's assessment, but goes a step further by suggesting a rationale for the speed with which the SEC addressed what has become a topical issue. "I do think it has done quite a lot of due diligence around this rule prior to

publishing it," Goeller says. "It has consulted a number of industry participants, groups and providers in this space, and I think it has made up its mind. If it appears to be rushed, it's only because it wants to get it out there."

Antonio Reyes Miras, global head of electronic trading products for Prime Services at JP Morgan responsible for running the broker's high-frequency trading business across futures, cash and forex, is undecided whether the proposals are likely to be adopted. More pressing, he says, is the need for the SEC to address the real challenge at hand: the potential for the introduction of systemic risk resulting from low-latency, high-frequency trading strategies. "It's difficult to tell until we know what the final proposal is going to look like, but I think unless we're careful there is a risk that we will focus too much on the differentiation between a member and a non-member of an exchange without focusing on the drivers and concerns around naked access," Reyes says. "At the end of the day, what the industry is concerned about is systemic risk associated with this type of activity."

### **Brokers carry the can**

Since its creation in 1934, the SEC - like all regulators - has periodically come in for its fair share of criticism for acting in what many perceive to be a heavy-handed manner, although this latest proposal is unlikely to polarise opinion, given the spectre of potential losses resulting from a reluctance to act in the overall interests of the industry. "Typically the risks that you're looking at from a sponsoring perspective are not knowing your exposure before the next trade," explains Goldman Sach's Nazem. "In an environment where you're getting a drop from an exchange, there's always that window between an incoming order and what's already on the book. There has been lots of discussion around the amount of risk that you can build up in the span of 500 milliseconds or five seconds, and from our perspective, we've never felt comfortable not knowing the level of exposure before the next order gets to market."

Nazem has touched upon one of the necessary evils of the sponsored access model - the understanding that in the event that a sponsored client incurs significant losses that it isn't in a position to cover, the broker, whose MPID (market participant ID) is tagged to those trades/positions, becomes liable. It's a somewhat sobering notion knowing that through no direct fault of your own, your brokerage may be liable for covering significant losses, all of which may have arisen over a matter of seconds or minutes as latency continues to shrink while at the same time order volumes maintain their upward spiral supported by ever scalable order/execution management systems.

"In the naked sponsored access environment, all the details of the trade only appear after the trade has been executed - in other words, after the fact," continues Nazem. "And so it's very difficult when it comes to naked sponsored access to monitor at the order level and carry out the necessary risk checks. If a strategy were to go the wrong way and start spitting out a bunch of orders, if those orders get executed, the broker-dealer offering up its MPID is only going to know after the fact - after the trades have been executed and often that's too late to react. Now, there's risk on the book and often when the client isn't able to cover the losses, the risk comes back to the broker-dealer who has their own ID on the trade. At the end of the day, the broker-dealer is accountable for the trade."

### **Technology to the rescue?**

Technology plays a crucial, enabling role in the loss scenario described by Nazem. So it stands to reason that if technology is at the heart of the problem, then it might be at the heart of the solution too. All three of the brokers interviewed for this feature - Goldman Sachs, JP Morgan and Bank of America Merrill Lynch - have deployed applications from FTEN, the New York-based provider of high-frequency trading and sponsored access technology, allowing them to monitor their clients' order flows on a real-time basis, and crucially intervene by way of automatically interrupting trading sessions if clients inadvertently breach any pre-determined trade barriers.

"We are in the position where we are able to manage our risk on a real-time basis, although this not only applies to FTEN but to all of our products," explains BAML's Cox. "What we aim to do across all of our products - and this is what FTEN does very well - is be in the position where we can view any of our clients' exposure at any given time. It's not only about what they've executed but what they've sent to the market too, so that whenever a prospective order comes in we know what the incremental risk will be. We've already established the limits we are comfortable with, and if clients get near one of those limits they are made aware of it - they're also made aware of the fact they they're not allowed to breach those limits."

JP Morgan's Reyes advocates a similar approach to the one described by Cox, although he is also aware of the downside of micro-monitoring - monitoring every order on a pre-trade basis - which he feels undermines clients' efforts to execute large order numbers in as short a time as possible. The answer, he says, lies in the concept of 'at-trade' risk management, the coining of which he attributes to FTEN. "You need to do the basic pre-trade [checks] but you still need to provide a mechanism for these firms - many of whom provide liquidity by means of electronic market making - to continue performing in a very competitive market," Reyes contends. "This means that you cannot do all your checks pre-trade because you'll be slowing them down. The only thing you can do to continue mitigating that risk in an automated fashion is to introduce at-trade risk management, a concept developed by FTEN which is post-trade and real time, but with the ability to terminate a connection as soon as a limit is breached."

### **The challenge**

But as is so often the case in the financial services industry, simply throwing technology at a problem and hoping it'll miraculously do the trick is as naive as it is effective. Understanding the full extent of the challenge, its implications for the organisation from a business as well as a technology perspective, and identifying similar, associated challenges is clearly the way forward. According to Ted Myerson, chief executive of FTEN, in addition to clients showing an increased demand for aligning with the proposed SEC rule (which would mean implementing the appropriate technology allowing them to conduct pre-trade risk checks for sponsored access clients as well as all their agency order flow), they're also looking to generate aggregated views of clients' exposures across all execution venues. "They're looking for the ability to display an immediate view of the positional risks of each client across all types of exchanges," he says. "That's needed to properly monitor the total number of trades and offsetting hedges."

The scale of the data management and logistical challenge facing brokers in this space can easily be glossed over and trivialised as just another IT project, although Myerson's assessment stresses the acuteness of the task facing brokers in their quest for real-time trade monitoring, especially those firms with limited IT resources or which are hamstrung by outdated architecture or legacy systems. "This niche generates massive amounts of messages that need to be managed on a real-time basis, which can be extremely challenging to a broker's existing infrastructure," he says. "The real challenge is meeting the spectrum of needs simultaneously - this includes the speed requirements of the fund [client], the level of integration needed with the internal broker controls, and doing this while satisfying the regulatory obligations. FTEN surrounds the trade with a fully managed offering, which typically includes execution, risk management, order flow control, compliance and surveillance solutions together with books and record keeping."

### **Getting the full picture**

The demand for aggregated views of clients' exposure to which Myerson refers is high on JP Morgan's list of priorities, according to Reyes, who questions the efficacy of attempting to generate an accurate, meaningful picture of a client's total exposure unless it includes all the venues in which it is active. "Pre- and at-trade risk management at a particular execution venue doesn't really help us manage credit or counterparty risk," he explains. "For us to manage our exposure to a particular client or prop trading firm, we need an aggregated view of their activities across all venues, otherwise there's a risk that we might terminate a client because they breached a limit on, for example, Nasdaq, when they were offsetting

those positions on either a different cash equities exchange or using futures indexes. So we could potentially erroneously terminate a client's connection because we think our exposure to that client is beyond our limits. What you really need is an aggregated, post-trade view of all its activities - that's the only way in which we can deal with clients' counterparty risk."

### **What's all the fuss about?**

The problems identified and addressed by the SEC in its January 13 announcement on the possibility (likelihood) of it implementing a new framework around naked sponsored access, boil down to a single issue: technology. It is the technology that is freely available to market participants that provides the potential for the introduction of systemic risk, much in the same way that a gun provides the potential for serious injury (or worse), although implementing the technology (or owning a gun) doesn't necessarily imply that risk or injury will follow as a matter of course.

One of the consequences of the development of faster trading platforms is the rise in popularity of high-frequency trading, which is forcing brokers and regulators to consider the types of risk checks and controls needed for this new class of no-touch order flow. Advances in exchange execution speeds, co-location capabilities and high-performance execution platforms - all contingent on technology - have enabled firms to build positions (and exposures) in seconds.

The speed of high-frequency trading has forced many brokerages to revise their processes and systems; regardless of how the trade gets to a venue, it is the prime or sponsoring DMA (direct market access) broker who carries the liability. Dallas-based SWS Group provides an illustration of how quickly (and stealthily) these problems can arise. In its Q4 report to shareholders (the full transcript of which was available on the Seeking Alpha website at the time of publication), SWS Group chief executive Don Hultgren reported a significant loss relating to the proprietary trading of one of its divisions, which he estimated to be in the region of \$6.3 million (pre-tax).

"The details of the loss are as follows," stated Hultgren. "The new correspondent that was set up to trade directly on a guaranteed basis with the Nasdaq Exchange shorted past the preset limits for his broker dealer. The alerts sent to us by the monitoring system could have protected us against such a loss if they had been acted on promptly. Unfortunately, there was a delay in the communication of the alert within our organisation and a misunderstanding on how to cease trading during a trading session. The result was the correspondent traded until the end of the trading session while ignoring our repeated attempts to contact. At the end of the session, the correspondent was short 2.3 million shares of a stock. The loss resulted in the next morning when the stock gapped up \$4.84 on the open. Our trading department then handled the buy-in of the short in an orderly fashion."

Managing the risks that can arise from high-frequency trading strategies is usually complex. Multiple accounts using disparate trading systems that trade large volumes across multiple venues with a single broker identifier are typical. But best practices are emerging, designed to protect the market while allowing successful strategies to scale. The best practices incorporate positional hedges into the exposure calculation and allow proprietary funds to scale their most successful strategies.

### **The way forward**

A combination of processes, information and real-time checks are needed. Critical capabilities include:

- Start-of-day files - to track intra-day client positions (eg committed capital) accurately
- Pre-trade order-level risk checks - to safeguard against fat-finger mistakes

-Real-time MPID (market participant ID)-level risk checks - to prevent excessive capital exposure across multiple venues and ports

-Real-time account level risk checks - to monitor positions in real-time and protect committed capital and P&L

-Real-time trading stops by account - to restrict, limit or stop trades, positions and loss positions while maintaining uninterrupted services for accounts that are not in breach under the same broker ID

-Fully managed change-management is needed to adapt risk checks to changes in regulations and evolving business needs quickly and cost-effectively.