Best execution across multiple pools of liquidity via FIX

By Mark Howarth, Instinet Pacific Limited

The continuing rise in the use of FIX over the past several years is analogous to the rise of the Internet. Investors, brokers, exchanges and other market participants have individually built communication systems using FIX-compatible standardised components, and are now starting to reap the same benefits from network effects that we have seen in the public domain with the web.

In particular, we are seeing brokers with FIX lines to multiple potential execution destinations starting to build technology that, from a single point, can make intelligent decisions about best execution and even represent orders in multiple places simultaneously. But how did we get here? And more importantly, how does this kind of technique bring benefits to investors?

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How did we get here?

Two parallel but unconnected developments have led to this. The first has been the growth of point-to-point FIX between brokers and their clients, which has led to pressure on non-traditional FIX destinations, such as ECNs and other alternative trading systems, exchanges and small order execution systems, to provide FIX-based access to their liquidity. This, of course, allows brokers and other intermediaries to leverage their systems investment by using the same technologies and competences to deal with outbound flow going for execution as they are using to manage inbound order flow from clients. Good examples of this are the New York Stock Exchange, which introduced FIX support in its Common Access Point service in late 2000, ECNoperators, who have offered FIX access to their NASDAQ liquidity pools for many years, and the Tokyo Stock Exchange, which offers a choice of its proprietary protocol or FIX to connect to its order book. Brokers in some markets catering for small order flow also offer FIX access to their automated execution systems, which guarantee to trade small size orders at the prevailing spread for a fixed charge.

The second development has been the emergence of a class of truly global stocks, able to be traded worldwide 24 hours a day, in various forms. Sony is a good example. A main listing in Tokyo, tradable from 09:00 to 15:00 JST, quoted in London on SEAQ from 15:00 to midnight JST, traded in the US in ADR form from 22:30 to 05:00, and then in the ECN after hours market until 08:00 when the Tokyo pre-trade session starts.

For this group of widely held, widely traded stocks, FIX connections offer the ability to react from a single point to news and trade 24 hours a day, with the actual execution location being unimportant, especially if currency exposures can also be handled automatically. So, given that the actual execution place is less important than achieving best execution price, and that this kind of stock could be quoted in multiple places simultaneously, why not try and place an order in multiple places to ensure the best price across multiple execution venues?

Where does this highway go?

To take advantage of such a benefit, it will need to be possible to specify 'Best Execution' as a market destination in a FIX order entry message. In most markets, this will only be a technical issue; market participants will have to agree how to support this kind of order. In some markets, notably Japan, prevailing laws require that clients specify which single place an order is executed in and brokers are constrained by that instruction even if better prices can be obtained elsewhere. The implications of achieving 'Best Execution' across multiple liquidity pools are now receiving more attention in Japan as past of recent efforts to re-invigorate the domestic markets.

In markets where the broker can choose the execution venues, implementing best execution is conceptually

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simple. Once the broker receives an order specified as 'Best Execution', it can be sliced into smaller pieces and the slices can be sent to multiple destinations simultaneously. An order router constantly investigates the price and depth of market in all the available liquidity venues, and sprays out a series of order slices across those venues. As slices are executed, the central order router can decide whether to send more slices to the same location, or cancel a slice from somewhere else and redirect it.

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Using FIX to connect to the destinations makes this process easier, because of the usual FIX benefits from a single piece of infrastructure to build and support. Investors benefit in this scenario from the broker- and market-neutral aspects of FIX. They can use a single point of access to more or less sophisticated execution services, depending on their needs. Brokers can quantifiably demonstrate that they are achieving best execution for their clients, because all the possible venues are open to them, and the cost of adding a new venue, such as a Crossing Network to their routing service, is a marginal cost addition to their infrastructure, not a full development project.

Of course, for these services to be viable, the major execution points, the exchanges, must be FIX enabled. This is where the Tokyo Exchange has taken something of a lead over the world's other first-tier exchanges, by striving to offer the ability to connect via FIX with the same performance characteristics as the exchange's proprietary protocol. This truly offers the best of both worlds to participants – continue to use an existing investment or choose to migrate to a newer FIX infrastructure. Other exchanges will surely follow this path in the future, further cementing FIX as the foundation for new and advanced trading services. **FIX**