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Liquidity Aggregation: The Next Level of Market Data Management

Firms should consider new liquidity management technologies to manage their trading across an increasing array of venues while providing the custom views required by different traders and algorithmic applications, says David Vincent, co-founder and chief technology officer of SmartTrade Technologies

Growing numbers of trading venues, fragmented liquidity, increasing interest in global cross-asset trading and constant customer and regulatory demand for more, and better, trading information are just some of the issues that make today's financial industry a vibrant and ground-breaking market sector. But these issues also pose significant challenges for market data managers who must match the speed of market development, adopt new and sometimes disruptive technologies, and—most importantly—provide market data users with accurate and timely information that will give them a competitive edge.

Containing and making sense of the rising number of market data feeds from the industry's growing pool of liquidity sources, both external and internal, is often a market data manager's first and fundamental challenge. Without correct market data, the danger is a domino effect of cascading confusion across a trading floor or an entire global enterprise.

While most industry participants have developed proprietary in-house trading and liquidity management systems, many of these systems are beginning to show cracks. They may struggle to cope with increasing datafeeds, integration issues, the demands of sophisticated algorithmic and high-frequency trading engines, and the need to slice and dice data not only to give traders real-time access to selected market data, but also to meet the requirements of different types of clients, predominantly retail, corporate and institutional clients.

One solution to the problem presented by multiple market data feeds—and the knock-on effects of multiple screens, different screen view formats, integration issues and slower-than-optimal decision making—is to aggregate all market data from multiple liquidity sources into a single, normalized view.

Typically, datafeeds from multiple exchanges are viewed separately. The feeds use different protocols that can be awkward to integrate with proprietary liquidity management platforms, creating a burden on IT resources to maintain data integrity across enterprise and global applications.

A better use of multiple market data feeds is in aggregating and republishing the data from the feeds as a single view, which can be used on a single terminal by a trader, or can be sent to an algorithmic trading engine or any other application that consumes market data. Parameters can be set up to provide different aggregated views of data for different users, and different versions of a consolidated order book can be created for different user types, be they traders or retail or investment advisors.

The benefits of a market data aggregator include a reduction in real estate, particularly trading screens, and its inherent costs, customized data views for a variety of users and the ability to provide an aggregated data view across an enterprise to ensure all users are seeing and using the same data.

Compared to the limitations of a proprietary liquidity management system, an aggregator with open application programming interfaces (APIs) offers swift scalability with easy integration of additional datafeeds that can be aggregated and used to generate new market data views for traders, trading engines, applications and clients. Different exchange data protocols can be automatically normalized using connectivity and aggregation software, avoiding the need to understand and integrate the logic behind each feed, and providing normalized market data that can be formatted according to user requirements—perhaps for market data from selected venues—or in line with user authorization.

An aggregator can be used as an individual liquidity component in an electronic trading environment or can be part of a larger liquidity management system that includes components for creating custom distribution strategies for market data, an engine for matching internal liquidity or for crossing of orders, and a liquidity connectivity platform with connectors to internal and external liquidity sources.

Beyond these elements of a liquidity management system, it is important to consider the nuances of different solutions, as they can make a significant difference to how a system works, how it is managed, and what it can deliver to the end-user. While the technology behind liquidity aggregation and distribution is in the early stages of adoption, firms implementing liquidity solutions should consider two emerging concepts that can provide competitive advantage.

The first concept is state awareness, which allows users of a liquidity aggregator to know the state of orders at all times—for example, whether orders are filled, partially filled, what venue they are on and whether a venue is up or down. This is important, since users have a better chance of filling their orders or sending flow to another venue if they know the exact state of those orders. A liquidity platform with state awareness built into the core is likely to respond more flexibly and faster to changes in the market than a platform that emulates state awareness.

The second concept centres on intellectual property rights (IPR). While some liquidity platforms are limited in how they can be customized, others allow users to leverage their IPR and program their own rules, perhaps defining rules for matching engines or smart order routers at a granular level. This protects a company's IPR, but also puts it to good use in the creation of unique market data management strategies.