



FIX is not yet a FIX for the sell-side OMS industry

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By supporting a growing industry standard like the Financial Information eXchange (FIX), securities firms, exchanges, and their vendor partners have the potential to focus on more value-added activities rather than spending their efforts developing proprietary communication protocols and data models. This should help the industry as a whole lower costs, increase efficiency, and foster innovation.

However, the limited adoption of FIX today by many sell-side firms, particularly the smaller ones, is preventing the protocol and the vendors that have incorporated it into their systems from achieving their true potential. For suppliers of order management systems (OMS), who are struggling to grow in what some view as a mature industry, the rapid development and penetration of FIX into new geographies and product lines will help them focus less on fundamental issues like integration and connectivity and more on the enhanced functionality their customers care about, such as compliance and advanced trading strategies.

A decade of FIX

As a structured protocol, FIX translates the details of a trade into a common language understood by a growing number of financial marketplace participants. It is being developed by an industry-wide initiative for the real-time, seamless electronic exchange of securities transactions. In an era of dwindling profit margins, this initiative has enormous

potential to help firms lower costs and improve efficiencies. Through an emphasis on standardization and flexibility of business content, FIX can help achieve the long-awaited goal of straight-through processing (STP), improving both the reliability and timeliness of communication between brokers, asset managers, and exchanges.

In response to this potential, about 150 vendor firms have developed more than 200 FIX-enabled software products. These include FIX converters to translate not only between the various versions of FIX, but also between FIX and older protocols like CMS, or even between the newer XML-based FIX and its legacy "tag equals value" version. In addition to FIX converters, there are numerous FIX gateways from which financial institutions can choose that handle the connectivity and messaging aspects of the protocol. FIX tool kits and API libraries allow firms to create their own customized FIX-enabled platforms, along with various simulators for the testing and certification of those solutions.

These FIX products exist on multiple technology platforms, including .NET, Java, C++, C, C#, and even OpenSource.

FIX went live in 1993 when Fidelity Investments and Salomon Brothers linked their systems together as part of a pilot whose development began in 1992. Ten years later, FIX has evolved through six versions to support not only equities for buy- and sell-side firms, but also nine fixed income products in five major regions around the world.

One of the goals of the latest version of FIX, namely version 4.4, is to incorporate the proposed changes from the Bond Market Association (BMA). These requirements include adding or enhancing support for two-party fixed income trading of such US products as treasuries, agencies, municipals, TBA mortgages, corporates, commercial paper, repurchase agreements, and security lending transactions as well as the counterpart products in Europe. FIX Protocol Ltd (FPL), which owns and maintains the public-domain FIX specification, also developed an allocation model for this version release, as well as enhanced allocation and trade capture for third-party fixed income reporting.

In addition to the changes from BMA, FPL also incorporated the proposed changes from the Futures Industry Association (FIA), including developing enhanced allocation messaging to support street-side listed futures and options requirements. Enhanced trade capture report messaging to support block trades was also incorporated into version 4.4, as well as new messages to support position maintenance and position reporting.

FIX is not only evolving to support more product and message types, but also to ensure it will be compatible with future technologies. To provide a migration path to the next generation of FIX systems, the XML-based FIXML was developed. Not only will this adaptation provide for the better handling of repeating groups of related fields, it will also position FIX for greater interoperability with other industry standards, such as SWIFT, TWIST, and FpML.

In order to protect firms' existing investment in FIX, FIXML version 4.2 was developed to be embedded in the traditional "tag equals value" FIX format. FIX is currently defined as both a message format as well as a delivery mechanism. However, with FIXML versions 4.3 and 4.4, no session protocol is described, so common industry

middleware and protocols, such as MQ or SOAP, could be used, reducing the need for FIX engines. In addition, the XML DTD is giving way to an XML schema. The FIXML XML schema will help provide content validation through the definition of data types, something a DTD cannot do.

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The future of FIX looks even brighter as it begins adhering to the ISO 15022 model, a new, global industry standard for electronic messages exchanged between securities industry players that will encompass both front-office messages like FIX and back-offices messages like SWIFT, and replace previous standards like the ISO 7775 scheme for message types and ISO 11521 for inter-depository message types. This will ultimately enable users to do away with separate interfaces internally or externally with such organizations as SWIFT and Omgeo. The next generation of the model, called ISO 20022, is already in the works. Broad vendor support for a common industry data model like ISO 15022 and the use of industry-standard technologies like XML will mean more solution choices for financial institutions that are independent of the underlying platform, as well as being easier to support and customize.

Sell-side OMS: the new pivot point for STP

Order management systems have become a central component of most brokerage operations. For broker-dealers, these systems have expanded to include not only traditional trade creation and management workflow, but have also begun to include some aspects of other functions, such as execution, smart order routing, confirmation, accounting, allocation, and network connectivity.

In addition to these extended duties, the OMS is being seen as the new pivot point for internal and external straight-through processing. The move towards STP in the US and elsewhere is gaining momentum, and the realization that a great deal of re-engineering will be necessary to reach STP goals is spurring vendors to think about how their systems can facilitate this impending change.

One way to facilitate this change is through the use of FIX. FIX is supported by all the leading sell-side OMS vendors, including Belzberg, GL Trade, NYFIX, OM Group, royalblue, S1 (Davidge), SunGard, and Fidelity Information Services (Sanchez). These solutions are used by both sales and traders to send all types of FIX messages, including indications of interest (IOI), advertisements, allocations, orders, and executions. An OMS vendor who cannot fulfill the minimum requirement to support FIX is unlikely to be considered by sell-side firms at all. Some vendors, such as NYFIX and Davidge Data Systems, offer their own FIX engines, while others use a partner to provide FIX-based functionality, like Javelin or Financial Fusion.

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There are approximately 7,100 broker-dealers operating in the US, a majority of which are small, regional players. Approximately 30 percent of these sell-side firms are utilizing FIX today, according to Celent analysis, and the adoption rate continues to increase. This contrasts with the buy-side, where almost 26 percent of all buy-side firms utilize FIX currently. However, the top broker-dealers dominate the securities market in the US, accounting for the bulk of assets, revenues, and employment. In fact, Tier I and Tier II firms hold more than US\$4 trillion in assets combined, representing approximately 70 percent of the industry total. Therefore, the majority of transactions today would be utilizing FIX for some or all of the equity trade process.

Of these firms, all are using FIX for orders and executions, and 68 percent of them are using FIX for IOIs. Fewer firms use FIX for other types of messaging, such as advertisements and allocations. In terms of product coverage, 100 percent of these broker/dealers use FIX for equities transactions, whereas only 35 percent are currently using FIX for derivatives trading. The overwhelming majority of these sell-side institutions rely on FIX version 4.0, but 71 percent also use FIX version 4.1. Less than half are supporting version 4.2 today.

FIX servers are becoming a necessity for OMS vendors who are trying to manage a large and growing network of

execution points and clients. Growth in equity order flow is creating an environment in which OMS vendors must provide connectivity and smart order routing features to meet customer demand. Where alternative trading systems (ATS) are further fragmenting the market by creating multiple execution points, OMS solutions are moving into the fray, in many cases with new functionality, to keep buy- and sell-side firms abreast of all possible execution points. Without such systems, best execution as a concept is all but lost.

A good OMS provides a core level of functionality that includes order routing and connectivity, position keeping, compliance, and auditing. This provides a platform for more advanced functionality, but the urgent needs of the sell-side demand a focus on connectivity and integration, which could be helped by the increased use of a standard like FIX.

- **Connectivity to market destinations.** While order routing is, to a certain degree, not part of the functionality of an OMS, the OMS's connectivity to major execution venues is still an important part of broker-dealers' evaluation processes. The OMS must be able to reach all major market destinations for execution via proprietary networks or in partnerships with third-party networks. FIX adoption by exchanges will help this cause.
- **International connectivity.** The number of cross-border trades is expected to grow substantially over the next few years, and the goal of easing cross-border trades is weighing heavily on the minds of many in the securities industry. Vendors providing OMS solutions are cognizant of this and are constantly adding new execution venues overseas for their clients. New FPL working groups focusing on local market needs should help ensure FIX will be adopted overseas as well.
- **Integration with the buy-side.** Celent believes that sell-side and buy-side integration will become a necessity in the coming years, especially as the broker-dealer's role as middleman to a trade is jeopardized by the growth of direct access technologies. OMS vendors can help the sell-side by providing connections with the buy-side to let the broker-dealers enhance their relationship with their clients. Additionally, this step will help the buy-side become better prepared for streamlined trade processing cycles, an added benefit.

All major buy-side OMS solutions support FIX version 4.0 or higher today, including Advent, Charles River, Eze Castle, Indata, Linedata, Macgregor, SunGard, DSTi, FMC, Latent Zero, SS&C, and Thomson.

- **Back-office integration.** Part of the US broker-dealer's current challenge is to re-engineer systems to dramatically improve STP rates. This is done not only to lower operational risk and costs, but also in anticipation of a potential mandated T+1 settlement cycle, which may again capture the attention of regulators. While a great deal is being done to accomplish this from an external perspective via matching engines that bring different parties to a trade together electronically, many firms must still put forth the effort internally as well.

OMS solutions can become a very important part of this process, acting in unison with middle- and back-office systems to allow for a smooth trading process. Achieving maximum operational efficiency requires extensive back-office connectivity (with synchronization in batch or real-time) with popular back-office systems/services such as ADP, Beta, Phase3, Pershing, and U.S. Clearing.

Beyond integration and connectivity

If OMS vendors, with the help of messaging standards like FIX, could move beyond a focus on issues like integration and connectivity, they could instead focus on providing more value-added services. In general, these systems are already considered reliable and largely similar in feature sets, especially in terms of front-office functionality. This has caused relatively fierce competition from vendors, largely on the basis of price. It is unclear if, after years of striving to cut costs and lower their price points, vendors can raise the capital necessary to support the development needed to handle new functions.

Required OMS functionality, in order of importance, includes transaction processing, multi-currency support, FIX support, a crossing capability, SWIFT connectivity, and IOI messaging. Compliance, auditing, and risk management capabilities are being added as well. Some vendors have developed or are developing support for various new trading styles such as VWAP, basket trading, program trading, and quant trading. FPL will need to ensure that FIX adapts rapidly to support all these new methods of trading.

OMS vendors face a number of other challenges. They are seeing Tier I market opportunities shrinking, mainly due to the growing interest in adopting a best-of-breed approach to in-house development among large broker-dealers. Celent expects to see only three Tier I deals close over the next three years. It is a buyer's market, and in this era of tight IT budgets, buyers are able to demand more for less. Competition is increasing from abroad, and non-traditional OMS vendors are entering the market aggressively.

In addition, broker-dealers needs are changing. There is a gradual convergence of the retail and institutional businesses. Driven by ongoing cost constraints, firms with competitive retail and institutional equities trading businesses will increasingly opt for purchasing and/or developing an OMS that can effectively handle both sides of the business.

There is also a definite movement towards integrating the listed and OTC desks in order to operate a more cost-efficient trading desk. As a direct result, OMS vendors are being asked to develop a single solution that can handle both the listed and OTC desks with routing access to both markets. They are also being asked to handle an increasing number of traded asset classes, most notably options and fixed income. While the capabilities already exist in FIX to support this trend, FPL needs to continue to push adoption and standardization by the vendors as well .

Finally, an increasing number of firms are moving beyond their market-making businesses to introduce agency trading in hopes of diversifying their revenue sources. As a result, it will become increasingly common for broker-dealers to conduct multiple kinds of trading, including principal (trading for their own accounts), riskless principal (acting as a principal to meet buy and sell orders of a client at the same price), and agency (matching buy and sell orders from clients). Once again, FPL will have to step up to meet the challenge of encouraging the adoption by broker-dealers. FIX has already been implemented, for example, by several exchanges as well as the Options Linkage Authority (OLA), which is an OCC-supplied network for permanent linkages among US options exchanges to ensure order best execution. **FIX**

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