



Looking Back to Shape the Future

How FIX transformed trading and promises to liberate post-trade

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The Financial Information eXchange Protocol, or FIX, revolutionized the way we trade. With the increasing adoption of the FIX Protocol for post-trade processing, we believe that the time is ripe for achieving the long-sought benefits of Straight-Through-Processing (STP) such as reduced costs, increased efficiencies and shorter settlement cycles in the securities industry.

In the 20 years since the adoption of the FIX Protocol for trade messaging, there have been unprecedented improvements in the accuracy, speed, volumes and efficiency of trading. FIX has enabled both buy side and sell side firms to build trading technology internally or choose from a multitude of vendors, fostering competition and driving innovation. With the advent of FIX-based technology, key performance indicators that were previously measured quarterly are now available on a daily basis.

In this paper, we review how FIX-based technology has transformed the world of trade execution, and make the case for why it is poised to do the same for post-trade processing.

Early days of trade automation

Most institutional trades prior to the mid-1990s were placed and executed via phone or fax. Some of the more “advanced” methods at the time involved electronic file transfer, Computer-to-Computer Interface (CTCI), or placement through a broker-provided Designated Order Turnaround (DOT) box. Even with a high level of automation, many buy side desks were crowded with order placement terminals for specific broker/dealers with which they had soft dollar, research or other arrangements for execution.

During the early '90s, an innovative group of prominent buy and sell side firms identified the need for a common messaging standard to streamline the communication of orders and executions between asset managers, broker/dealers and exchanges. This led to the creation of the FIX Protocol, which was officially introduced to the market in stages during the mid-'90s.

Though initially viewed with some skepticism, FIX grew in presence, usage and acceptance by the various parties involved in the institutional and retail trading processes. This early success motivated the securities trading industry worldwide to adopt FIX for standardizing the trading process. By the end of the decade, FIX had established itself as the global messaging standard for front office equity trading and was extended to other asset classes as well.

New era in automation leads to an “arms race”

Exponentially expanding any previous concept of STP, a new era in trading automation began. Trading recommendations from portfolio management systems were imported into a trade blotter in an Order Management System (OMS), and orders were routed to broker execution systems via FIX. Buy side traders were able to break up their large block orders in order to minimize market impact. Gradually, asset managers began to take control of some functions previously performed by brokers, such as order routing to multiple execution venues and Transaction Cost Analysis (TCA).

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FIX facilitated this automation by enabling *interoperability* between trading systems. It spawned innovation in order management and Execution Management Systems (EMS) that could communicate seamlessly with one another, and with broker systems and exchanges.

With the widespread availability of FIX-enabled connectivity between asset managers and brokers, the industry reaped the benefits of automation and achieved a significant reduction in trading errors previously associated with manual processing. Moreover, buy side traders were now able to route Direct Market Access (DMA) orders straight to the exchanges via FIX.

Driven by the ease of electronic communication, trading and execution volumes increased. To enhance the execution services to institutional clients and aid them with efficient and timely access to liquidity in the market, brokers developed new trading strategies called algorithms, and provided them to the buy side. Eventually these “algos” evolved into an entirely new line of business, allowing brokers to offer sophisticated order routing to an increasing number of Electronic Communication Networks (ECN), Alternative Trading Systems (ATS) and Dark Pool execution venues.

As various brokers and even vendors started developing these types of products, a competition resembling an “arms race” unfolded. The goal was simple: to enable access to liquidity and split second execution utilizing a wide range of execution venues, using FIX as the underlying messaging technology. Under these circumstances, if a trader did not have the latest technology on the desk, his/her firm would be severely handicapped in accessing liquidity and achieving best execution. The race was on. In a relatively short span, technology had transformed the nature of trading.

Moving to daily TCA

Prior to the proliferation of FIX, asset managers reviewed their TCA once a quarter to assess the quality of trade executions. By late 2005, driven by the availability of high computing power, the data stored in the FIX logs allowed asset managers to perform TCA on a daily basis. Soon they were able to measure their trading performance with higher frequency, and also evaluate how specific brokers were performing and which execution venues performed better during specific market conditions and for particular stocks.

Today, some firms are able to analyze transaction costs intra day and make even more sophisticated adjustments while the market is still open. Analysis that was once done quarterly has moved to daily and in some cases, intra day due in large part to the advances in the use of electronic trade data available through FIX.

Global standard for trading . . . and post-trade

FIX has become the *de facto* standard for trading worldwide and has brought the industry several steps closer to achieving STP. But the integration of trade execution with post-trade has been slow, and remains a challenge. Most post-trade processes today rely on proprietary vendor protocols which limit the seamless integration with upstream trading systems.

Driven by a desire to increase operational efficiency, lower costs and mitigate risk—buy side and sell side firms started to explore a move towards a proven, global standard for post-trade. In 2010, several industry leaders from the buy side formed a *Buy Side Working Group* to establish best practices for a FIX-based post-trade process. Building off the earlier work of the Global FIX Trading Community, the group developed and published FIX post-trade specifications based on FIX 4.4. Now called the *Global Post-Trade Working Group*, this group has evolved to

Industry Migration towards FIX for Post-Trade

The asset management industry is migrating towards a proven, global standard for post-trade

- 2014** FIX post-trade ready for mass adoption
- 2013** Global Post-Trade Working Group created to maintain FIX post-trade standards
- 2012** Vendors provide off-the-shelf solutions for FIX post-trade

Leading asset managers and most large brokers begin implementation of FIX post-trade systems
- 2011** Initial FIX post-trade specs released by BSWG
- 2010** Formation of the Buy Side Working Group (BSWG) to establish FIX post-trade standards
- 2008** First successful use of FIX 4.4 for post-trade
- 2004** FIX 4.4 specifications released

include asset managers, broker/dealers and vendor/service providers, and is focused on global standards for FIX for post-trade.

The case for FIX post-trade

The FIX Protocol can do for post-trade what it has already achieved in the trading arena—dramatic improvements in efficiency by enabling fast, secure and reliable exchange of information among a variety of systems through the use of a standard messaging protocol.

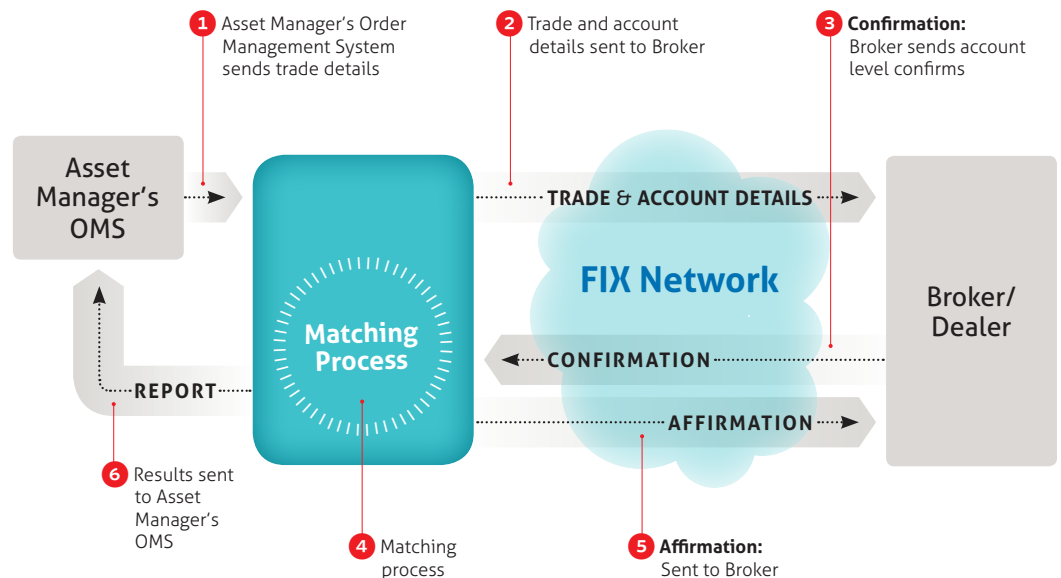
The FIX post-trade process provides bilateral matching directly between the asset manager and the broker/dealer. Execution and allocation details can flow seamlessly from an OMS to the post-trade system and on to the counterparty immediately after trade execution, supporting both STP and a post-trade process that is near real time.

FIX supports granular, field-by-field matching, including Standing Settlement Instructions (SSI). In the event of a mismatch, both counterparties would be notified of the specific fields that mismatched, and traders can take action to resolve the discrepancy while the market is still open. The reduction in post-trade processing time will be a huge contributor to reducing settlement cycles to T+2 and even T+1.

FIX-based trading technology has stood the test of time with regard to fast, secure and reliable transfer of transaction data. Moreover, the use of a common messaging standard has spawned a multitude of competing FIX networks and vendor solutions, which collectively:

- minimize the risk of a single point of failure;
- reduce costs to the ultimate investors; and,
- drive ongoing innovation in the industry.

Trade Confirmation/Affirmation Process



Technology risk in US securities settlement

At present, most institutional trades in US equities are confirmed, affirmed and transmitted to The Depository Trust & Clearing Corporation (DTCC) through a single vendor. This “*de facto* monopoly” was created by the original rules adopted by the NASD, NYSE and Municipal Securities Rulemaking Board (MSRB) for Delivery versus Payment (DVP) and Receive versus Payment (RVP) transactions. In 1999, these entities proposed a rule change, subsequently approved by the SEC, which allows other “qualified vendors” to provide confirmation/affirmation services. When it adopted this new regulation, the SEC said that it envisioned no barriers to competition. However, the market has since evolved with mergers, divestitures and acquisitions, and there is now only one provider of post-trade affirmation and confirmation, essentially preserving this monopoly status.

The reliance of the entire industry on a single vendor’s proprietary technology to confirm, affirm and transmit trades for clearing, based on a centralized matching process, presents significant technology risks to the settlement system. It creates a single point of failure for the largest equity market in the world.

In contrast, trade execution technology consists of multiple vendor systems and internally developed solutions that can interoperate using the FIX Protocol. This latter model of “distributed technology” is a proven approach to mitigating risk in the event a single system or network were to fail, by using it the failure would be localized to the users of that particular system or network. FIX-based post-trade leverages the same distributed architecture as trade execution, and promises to lower the risks in the financial ecosystem. Thus, we expect a number of FIX-based qualified vendors to emerge quickly as an alternative to the *de facto* monopoly.

Shaping the future

Thanks to the leadership of a few innovators in the early ‘90s, the FIX Protocol has been widely adopted as the messaging standard for trade execution. In turn, FIX has supported continued innovation that has advanced the state-of-the-art in trading technology.

Today, we face a similar landscape for the adoption of FIX for post-trade.

A number of large, global asset managers have identified post-trade as an area where they are looking to improve efficiencies, reduce costs and capture more alpha. Similar to the evolution of trade execution, the efforts of these early adopters is driving the industry’s migration towards FIX for post-trade.

FIX-based post-trade will further advance STP, enabling traders to allocate, confirm and affirm their trades in near real time. In addition, the FIX Protocol’s open architecture will allow for the continued development of

innovative post-trade solutions, both internally built and vendor-provided.

By all measures, FIX can address the post-trade demands of an evolving industry, one in which trading technology has progressed much faster and further than post-trade. FIX stands to change the way we trade once again, this time as the post-trade platform of the future.

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ABOUT THE AUTHOR

Ignatius John, considered by many to be an IT visionary, is recognized as a pioneer in the use of the FIX Protocol for post-trade. As Global Trading Strategist at asset manager AXA Rosenberg, Ignatius implemented a complete post-trade solution in 2008 using the FIX Protocol. This accomplishment was highlighted in a leading industry journal on trading, and was a precursor to the industry’s adoption of FIX for post-trade. In various roles at AXA Rosenberg over two decades, Ignatius managed business strategy, product and technology development. He also worked for global custodian State Street Bank on real time trading technology. Ignatius has a proven track record of implementing functional improvements to the investment process, from pre- to post-trade in the US, Asia, and Europe, to increase workflow efficiency, mitigate risk and enhance portfolio returns.