



Finally, moving beyond FIX

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As you might have guessed from the title, this article is not about how great FIX is. While FIX has had, and will continue to have, an unbelievable impact in the financial services industry, financial firms have begun to move beyond FIX.

This article focuses on the next steps for firms that have made a significant investment in their electronic trading infrastructure. While enabling FIX was a large part of this investment, it left firms with some very flexible, but expensive-to-manage plumbing. Now that front-office transactions have been converted into real-time electronic information, firms have a brand new opportunity to tap into a tremendous amount of new business value. To do so, however, firms must get a handle on their infrastructure and the information that moves inside the network. The question is: how can firms increase their return on investment moving forward, beyond FIX?

Market saturation and diminishing returns

In the financial services industry, technology projects that are deemed critical by the business must get done yesterday, while many other projects are put on hold. So it doesn't come as a surprise that FIX has evolved faster than firms have moved to the latest version. Most of the industry is still using FIX version 4.0, released in 1997! Businesses that needed support for futures and options moved straight to version 4.2. Similarly, only firms that need more complete support for business processes, such as allocations and asset classes such as fixed income, will upgrade to version 4.4. The reason for

this is simple: the incremental capabilities in future FIX versions don't justify the investment in upgrading legacy technology for most of the industry.

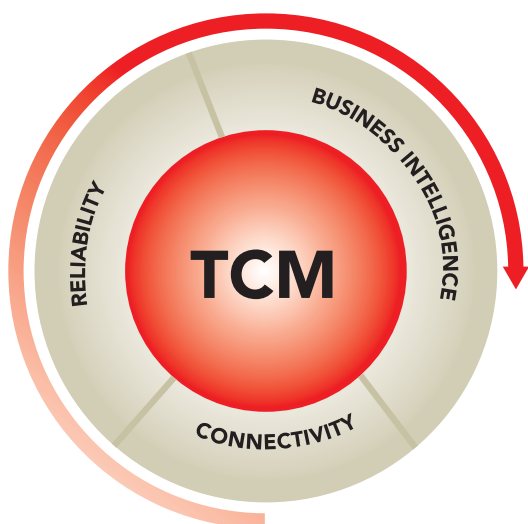
At the same time, growth in stand-alone FIX engine sales has pretty much run its course. In most of the US, firms that will use FIX to automate part of their business have already bought or built a FIX engine. Today, most firms buying or building FIX engines are doing so to replace existing technology. And firms aren't just looking to replace their FIX engine; they are looking for a more strategic approach to connectivity. While the European market isn't quite as far along as the US, it's catching up quickly. The FIX engine vendors left standing today will tell you there are plenty of areas in the world where FIX penetration has room to grow. But, the reality is – and FIX engine vendors know it – that most of those areas aren't quite ready for FIX from a business perspective. Firms not using FIX today also need more than just a FIX engine. The good old days for FIX engine vendors are in the past.

So ... where's the ROI?

When the market was booming in the late 1990s, so was FIX. There was little need to show ROI. Sell-side firms knew they would lose business if they didn't have FIX; buy-side

firms demanded it. And with technology staffs closely aligned with business units, there were often several unrelated FIX projects happening at the same time. With every downturn in our industry, however, firms cut IT expenditures. IT departments go into maintenance mode. Businesses increasingly demand return on investment for new projects.

Larry Tabb, in *Wall Street & Technology* (February 2004), was quoted as saying, 'If either Fidelity or Salomon had ever prognosticated the savings and business opportunities that FIX would create, the executives would have either been laughed out of the building or taken to the loony bin'. But did he fully answer the question that prompted his quote? Larry was asked if firms were able to achieve measurable ROI from their FIX investments.



Firms that have morphed their businesses to leverage FIX and electronic connectivity will pretty much unanimously say that FIX has had a positive impact on the business; but how much of an impact? In this age of cost-benefit analysis it's not surprising that the question is finally being raised.

The answer to the question is: the real ROI is not to be found in FIX itself. Is FIX not just another protocol that connects systems together? Like other protocols, FIX allows systems to communicate faster with each other. And when those systems are heterogeneous and obscure, FIX allows errors to happen faster, in greater numbers, and at greater cost. One could argue that FIX – and the trend to connect disparate systems for processing trades – has created a new set of challenges.

A report published by the UK Financial Services Authority was quoted in *Securities Industry News* (April 2004) as saying, 'Most multi-product firms use a large number of front-office and back-office systems, which in many cases lead to a complex and opaque IT infrastructure. It is, for example, common for firms to have separate systems for equity trades, fixed income, swaps, repos, etc. The IT risks generated by such an infrastructure are obvious.'

Plumbers and architects

FIX is plumbing. And in a very real sense, FIX engine vendors are just supply shops. Of course, plumbing is important, and plumbing that is constructed well enough to last for years is certainly desirable. At the end of the day, however, a free section of pipe and a gold-plated section of pipe are both just sections of pipe.

The ROI from an investment in FIX – the business value, the competitive advantage that directly impacts the bottom line – comes from the real-time transparency of transaction-processing information that standardized connectivity makes possible. The architecture a firm puts around its connectivity for tapping into the intelligence flowing through the pipes is what creates the compelling business value that will enable real-time decision-making, risk management, exception processing, measurement of execution quality and identification of bottlenecks ... the list goes on and on.

Actively managing connectivity

A FIX engine that is built and integrated correctly gets a firm connected. The right kinds of testing, administrative controls, and status monitoring capabilities around the FIX engine will ensure that the connections are reliable. But, again, this is all plumbing – a foundation for connecting applications inside the enterprise and connecting the enterprise to its business partners.

But it is only by building on top of that framework more sophisticated business intelligence, such as transaction analysis and exception management, that FIX connectivity begins to represent a real competitive business advantage.

Transactional connectivity management (TCM) is a new category of enterprise solution for electronic trading that takes the foundation of transactional connectivity (e.g. the FIX engine) and builds value on top of that in the form of real-time analysis of transactions, systems, markets and trading

partners. The business value to be leveraged in a connectivity platform lives not in the network itself, but in the communication happening across the wires – the information flowing through the network. TCM is about harnessing this real-time information and using it to create measurable business value.

Streamlining operations: latency and exceptions

The opportunity for costly errors increases with the complexity of the systems environment and the volume and variety of electronic transactions that flow through it. Connectivity – the plumbing – creates its own risks by introducing new points of failure and opportunities for errors in translation. TCM provides transparency across the environment and introduces capabilities for tracking and managing exceptions at the moment they happen rather than after the fact.

As an example, real-time measurement of transaction flows through systems and across the enterprise enables a firm to identify high-latency processes and make performance improvements before problems emerge. At best, this is dynamic performance tuning to continually improve processing capabilities; at worst, it's proactively addressing potential problems before they turn into costly real problems.

Quality of execution: transaction flow analysis

By providing visibility throughout the entire transaction process, an enterprise TCM solution can allow a firm to watch and analyze the flow of transactions end-to-end: through FIX engines, order routing and order management systems, and even throughout post-trade processing. This capability enables a firm to detect bottlenecks and measure processing capacity in real-time on a global scale. By adding market information, it then becomes possible to measure execution speed for trades as they happen, and compare execution prices with dynamic information such as market price or VWAP. Taken a step further, a firm can establish parameters around expected response time and order execution parameters and generate alerts or notifications when targets are missed – and even make real-time adjustments to routing rules based on execution performance.

Business-defined intelligence

With TCM, businesses can define their own intelligence. A broker providing direct market access may want to measure the quality of their customers' order flow. Are their customers

sending in more messages (cancels and replaces) than they are providing revenue? A credit department may want to automatically notify customers of their remaining buying power, but may also need tap into other real-time information in deciding what action to take with their customers. A program trading desk may want to know the probability of order execution based on current market conditions and historical information during similar conditions.

Firms can gain a competitive advantage if they can quickly put the information that is available in their network to work for them. Firms must first realize that the information is there, but also be capable of collecting and analyzing the information as quickly as it is arriving. This is what TCM is all about.

Extending beyond the FIX Interface

The items listed above are only indicative of the kinds of business value that can be – and are being – derived from enterprise TCM solutions today. Monitoring FIX logs or FIX engines doesn't get us there – that's just making sure the plumbing works reliably. The real value comes from integrating all kinds of information: order and execution flows, market data, compliance data, and other business data. Pull all of that intelligence together in real-time to empower your traders – or your customers, or trading systems – to make better business decisions, quicker, and be more competitive.

The important point here is that finding the real business value that exists in FIX and connectivity means looking a step beyond the operational infrastructure that makes electronic communication between systems possible. TCM is about harvesting the intelligence that derives from the electronic conversations themselves in the context of the real-time marketplace – and the relationships between a firm and its customers and trading partners.

The focus of connectivity can't be the FIX engine. Instead, connectivity must be about achieving a complete TCM solution around the messaging engine and across the network, business applications, customers, and trading partners. The business value grows as firms gain more and more transparency across the enterprise. The messaging engine is the core, but the real payoff comes with dynamically managing the connectivity in order to optimize the handling and execution of every single transaction flowing across the enterprise in the most efficient and informed way possible. **FIX**