

SYNAPSE: A PARTNERSHIP FORGED IN STEEL

LCH.Clearnet intends to become the premier multi-asset clearing house in the world, with TCS as a strategic partner

By **R. Vivekanand**, Global Head – Market Infrastructure, TCS Financial Solutions

In 1888, London Clearing House was established to clear commodities contracts in London. Over the decades, LCH took on a greater role in the London financial markets, clearing a wide variety of financial instruments across trading venues. In 2003, LCH merged with Clearnet, which was the clearing house for all products traded in the European Euronext markets. The resulting company, LCH.Clearnet, brought on new exchange customers and began clearing additional asset classes, spreading its geographical reach, and playing an increasingly critical part of the global financial infrastructure.

The Lehman collapse in 2008 brought increased scrutiny to the systemic risk posed by uncleared OTC derivatives. The market was going haywire, global trade was frozen in its tracks, freight brokers were going bankrupt, and the commodities markets were undergoing unprecedented volatility. “That was a huge call for the marketplace to make sure that they had clearing houses to stand between counterparties,” says Alberto Pravettoni, Managing Director, Commercial Services, LCH.Clearnet, who had worked extensively with clearing organizations during his earlier career with Goldman Sachs and Citibank. “CCPs with the right technology and processing solutions have important repercussions for the real economy.”

When counterparties to failed banks found themselves gasping for air on the wrong end of failed trades, the resulting chaos threatened to bring down the global banking system. Accordingly, regulators and politicians around the world have promoted an increased role for clearing houses. “The ministers of



Alberto Pravettoni



Orlando Chiesa



Paul Ramanath



Jonathan Moffat

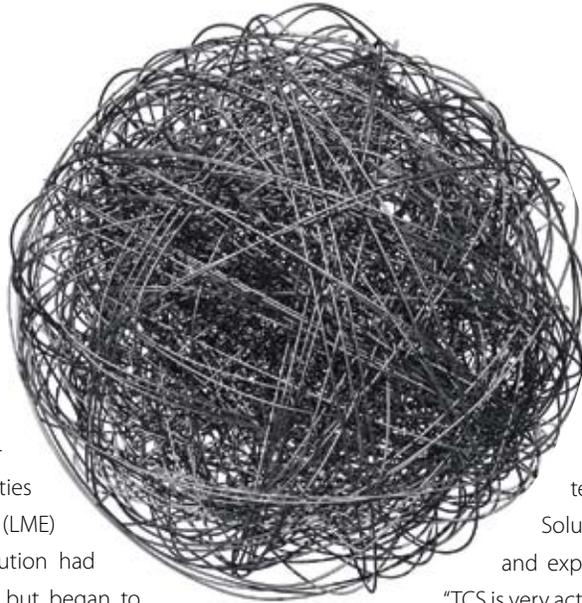
finance in major countries of the world have been calling for all of these OTC derivatives to be centrally cleared,” explains Pravettoni. “Banks will face hefty capital charges for any non-clearing activity, and so they have a huge incentive to clear these products,” he says.

As the only clearing house with over 10 years of experience clearing OTC derivatives and the only one to have managed a member default in a large OTC market, LCH.Clearnet is in a strong position to benefit from the move towards increased OTC clearing. “We have a very substantial business in interest rate swaps, we’re building what we hope will be a substantial business in foreign exchange, and we have launched a business in credit derivatives in Paris,” says Pravettoni.

Yet these new revenue opportunities have also heightened the competition for clearing services. LCH.Clearnet competes with several other clearing houses globally, including the clearing arms of major exchanges. Even before the recent regulatory focus on OTC derivatives, regulators have been aiming to restructure the competitive environment in the capital markets. Chief among these efforts has been the Markets in Financial Instruments Directive (Mi-

FID), a European Commission initiative that not only increased competition in trading, but that also brought about higher levels of competition in equity clearing.

In this increasingly competitive environment LCH.Clearnet will have to continue to innovate and build strong strategic relationships across all the asset classes and markets it serves.



DISCOVERING ALCHEMY

LCH.Clearnet began clearing futures and options on commodities for the London Metal Exchange (LME) in 1987. LCH.Clearnet's prior solution had served LME well over the years, but began to show its age with several limitations that were affecting LME as well as its member firms, both in operations and on their trading floors.

LCH.Clearnet's legacy system had become out of date and cumbersome. Also, for the operations teams at LME member firms, the system lacked sufficient straight-through processing capabilities, making it difficult for commodities trading firms to integrate clearing data into their internal systems. In 2007, LCH.Clearnet began searching for a new solution to serve LME.

One of the core criteria was that the solution couldn't be the intellectual property of a competitor in the clearing business, and this ruled out using any of the exchange-owned-and-operated technology providers. "We wanted to make sure that we had the right contractual relationship with our provider that would give us the ability to use that technology freely across markets," says Pravettoni. "We had a strong desire to partner with somebody with whom we could feel comfortable as a long-term partner."

The search for a partner led directly to TCS Financial Solutions and TCS BOUNCS Market Infrastructure. "Following a competitive RFP process, TCS were chosen due to a combination of reasons including pre-existing clearing software, domain experience in our sector, and in particular, their commitment to deliver," explains Jonathan Moffat, Director, Group Sourcing And Supplier Management, LCH.Clearnet. "This last factor proved to be crucial during the subsequent delivery phase of the project and sus-

tained the project throughout."

The LCH.Clearnet executive team recognized that TCS Financial Solutions offered the industry presence and expertise to deliver a strong solution.

"TCS is very active in the financial services industry," observes Pravettoni. "Given their track record and the quality of the organization, we were very comfortable that TCS Financial Solutions would be a very good partner for us."

"It was a straightforward decision to go with TCS," adds Pravettoni.

Still, the selection of TCS Financial Solutions was a big deal for LCH.Clearnet. "It was the first time for our organization to engage with a provider outside of the City of London or not based in Paris, where we have our other operating entity," says Pravettoni.

Not only was it the first offshore development deal for LCH.Clearnet, but it was also an IT project with a greater scope and complexity than had ever been attempted in the history of the organization. The legacy system, despite its age, contained business logic accumulated over two decades of working with dozens of LME clearing members, and that functionality had to be maintained. The members had to be insulated from having to make significant changes, even while enabling rollout of new products. These requirements had to be absorbed on the development end.

MELTING THE BARRIERS

The project, branded as Synapse, powered by TCS BOUNCS, kicked off in January 2008. At various points during the project, from 80 to 100 consultants from TCS Financial Solutions were dedicated to LCH.Clearnet, making it one of the largest mission-



critical implementations performed by TCS Financial Solutions in the capital markets vertical.

To steer the solution mapping and operational deployment of the project to a successful completion, LCH.Clearnet brought on Orlando Chiesa, who during his tenure with UBS built up an entire global futures and options clearing service. Chiesa left UBS in 1999, and then worked with a competing clearing house, Eurex, before joining LCH.Clearnet in early 2009 in the role of director responsible for development operations and risk.

The requirement for Synapse to replicate existing functionality increased the level of effort by an order of magnitude, resulting in a “catalog of thousands of pages of business requirements specifications,” Chiesa relates. “The scope we had been given, ‘Build it as the business knows it today’, definitely made it more complicated.”

As the project progressed, both parties realized that working more closely together could deliver some real benefits. Up until that point, the two teams communicated mostly through dry business requirements documents, with limited personal contact and collaborative development.

In September 2008, the key people from LCH.Clearnet and TCS Financial Solutions held a three-day workshop where they made critical decisions on how they would capture requirements in the future. “Our lesson learned was first to build a culture, and take the time to work around a desk rather than on paper,” says Chiesa. “Workshops became increasingly important.”

“It’s a people business,” adds Chiesa. “Even though it’s software development, the results heavily depend on how people work

together, how they react to one another, and how well they accept one other. In the end, this was the key to our success.”

“We also decided to co-locate the delivery team,” says program director Paul Ramanath. “We had the TCS onshore team sitting alongside the IT production people, our developers, business analysts, business users and risk management people. Initially, it took a bit of nurturing and proactive team-building activities, but then people started working well with each other, using a lot less email, relying much less on status reports, and working better as a team.”

LCH.Clearnet team members made more trips to Chennai for collaborative testing and development. “Things changed drastically on a personal level, and long-term relationships developed there,” says Ramanath. “When that happened, we saw that a successful outcome was inevitable.”

“We learned that it’s very important to move people through both sides of the delivery team,” observes Ramanath.

Ultimately, the close teamwork paid off handsomely. “TCS and LCH.Clearnet worked as one team with the sole aim of making the project a success,” reports Ramanath. “Throughout the project, everyone stayed positive and focused towards the common goal of a successful deployment.”

Board members and company executives also spent time with TCS Financial Solutions executives, crafting business strategy and responding to issues on the ground. “There was never a question about support at the top levels of management for driving the whole relationship forward,” relates Ramanath. “The senior management team genuinely wanted to know what they could do to make this work.”

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SOLID FOUNDATION

LCH.Clearnet deployed Synapse for LME in late July 2010. “One of the production managers here said that it was perhaps the most uneventful deployment he had ever seen,” relates Ramanath. “When you bear in mind the size and complexity of the project, it was extraordinary.”

“The fact that it went through so smoothly, is something that’s recognized as important by the whole team and the entire organization,” adds Ramanath. “I’m very proud of the outcome.”

To start, LME will quickly benefit from increased competitive agility. “Synapse gives the ability to launch more quickly,” says Pravettoni. “We’ll be able to launch bullion contracts for LME in November 2010, which is a validation of the flexibility that we have in the system.”

Synapse has flexible configuration options that enable LME to add new commodities derivatives, quickly and easily. Synapse can handle new derivatives on base metals and other standard commodities within the space of a few days. “It’s just a little bit of testing with the members and our downstream systems,” explains Chiesa. “The setup of the product itself, I can do in the space of a coffee break.”

“LME can earn revenues much faster and gain momentum with new products,” adds Chiesa.

LME’s 40 clearing members, who collectively hold approximately 1.8 million trade positions and have an average trade volume of 30,000 trades per day, also benefit greatly from Synapse. Throughout their operations, they now have advanced support for business processes related to derivatives clearing, including trade and position management, transfers and adjustments, bulk transfers, and settlements. In addition, Synapse enables lower operational costs through straight-through pro-

cessing of clearing data, using the XI+ messaging protocol for trade feeds, notifications, and inquiries. “TCS BANC’S Market Infrastructure has fully STP electronic interactions with clearing members,” says Chiesa.

Synapse also supports last-minute trading decisions by commodity traders, who often need to hold off on options declarations until expiry. “We’ve had very positive feedback from members on the usability of the system, particularly around options declaration, an area that they’re very sensitive about,” says Ramanath.

“We are now harvesting a swathe of benefits as a result of this strategic implementation,” said Martin Taylor, Group CIO, LCH. Clearnet. “This browser based, user friendly system brings in a high degree of comfort and compliance among the member organizations while enhancing our flexibility and agility in embracing business challenges.”

“TCS Financial Solutions demonstrated their brand promise throughout this mission critical implementation,” adds Taylor.





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BUILDING ON SUCCESS

Now that LME has gone live, the work of achieving broader competitive advantage in the clearing marketplace can really begin.

Following a roadmap that had been hammered out through the strategy sessions between LCH.Clearnet and TCS Financial Solutions, in a unique collaborative product management model, the TCS development team has already begun work on the next iteration of Synapse, which will be ready in early 2011. The new version will be based on the latest version of TCS BANCs Market Infrastructure, updated with the custom components of the code base now live at LME.

“There has always been debate in the industry about the real value of relationships or partnerships between suppliers and customers, but this has been a testament to its power,” remarks Moffat. “The combination of a demonstrated commitment to delivery and the commitment to LCH.Clearnet from the management of TCS has been the basis upon which the scope of services from TCS has now grown substantially beyond the initial engagement.”

The next version of Synapse will provide the ultimate level of flexibility in account structures for both position accounts and margin accounts. Instead of just being able to open a clearing account for their own transactions, clearing members will be able to establish sub-accounts for each of their customers, who in turn can create their own sub-accounts, nine levels deep. And at each level, Synapse will be able to track positions using either net or gross calculations, which enables an incredibly flexible range of options for cross-border clearing relationships. “This enables final beneficiary accounting at the clearing house level, which meets the regulatory requirements that exist anywhere in

the world on keeping position accounts,” says Chiesa.

Furthermore, the next version will have a parallel multi-layered structure for margin accounting, which can be kept on either a segregated or non-segregated basis according to the local regulations of the commodities trader. “You can even provide margin calculations for clearing members so that they don’t need a back-office system at all, as they can rely upon the clearing house to calculate their margins according to their own methodologies,” observes Chiesa.

This is new ground not just in commodities derivatives, but in the clearing business overall. “The industry today has systems which allow firms to do just what the rules and regulations say, but they have very limited flexibility,” says Chiesa. “I haven’t seen any other clearing system at any other clearing house that has the accounting flexibility of Synapse.”

Eventually, LCH.Clearnet will seek to consolidate both listed and OTC commodities derivatives onto Synapse. Currently, OTC commodities derivatives are handled by a separate solution. “We want to migrate out of that system and onto Synapse,” says Pravettoni.

“I’m very comfortable about where we are now, and I can see that TCS was definitely the right decision for LCH.Clearnet,” remarks Pravettoni. “I have very high expectations that what we’ve built over the past two years with Synapse is just the first step in deepening our relationship. The role of TCS is central to developing our strategy.”

“We have developed an excellent relationship with TCS and see them as important strategic partners in the development of our technology solutions,” remarks Roger Liddell, Chief Executive, LCH.Clearnet Group.

FAST FACTS

The **London Metal Exchange**, the world's premier base metals market, offers metals price risk management tools including futures and options contracts for aluminum, copper, tin, nickel, zinc, lead, the U.S. Securities and Exchange Commission alloy and NASAAC, steel billet, plastics and soon cobalt and molybdenum. Last year, the total value of trading was \$7.41trillion and the Exchange currently has 5.96m tonnes of material on warrant in 633 storage facilities across 39 locations globally.

LCH.Clearnet Group is the leading independent clearing house group, serving major international exchanges and platforms, as well as a range of OTC markets. It clears a broad range of asset classes including: securities, exchange traded derivatives, energy, freight, interest rate swaps, credit derivative swaps, and euro and sterling denominated bonds and repos; and works closely with market participants and exchanges to identify and develop clearing services for new asset classes. LCH.Clearnet Group Ltd is owned 83% by users and 17% by exchanges.

AT A GLANCE

Company: LCH.Clearnet Group Ltd.

Headquarters: London and Paris

Business Challenges:

- To clear all commodities derivatives trades for the London Metal Exchange and its members on a single platform.
- To enable the rapid launch of new products in new markets, with customizable clearing services.

Solution:

TCS **BOINC**S Market Infrastructure supports the entire range of commodities derivatives trading for London Metal Exchange, while providing LCH. Clearnet with a strong foundation for further growth across other asset classes. The component-based, n-tiered J2EE architecture is built on a technology stack including Sun Solaris, Oracle, and Weblogic.

Below, from left to right:

Michael Bischoff (Director, IT Dev and Production)

Allan Mycroft (Director, IT Systems Integration)

Jonathan Moffat (Director, Group Sourcing
and Supplier Management)

Martin Foakes (Commercial Manager)

R Vivekanand (Global Head, Market Infrastructure, TCS FS)

Alberto Pravettoni (MD, Commercial Services)

Chris Tupker (Chairman of LCH.Clearnet Group, Retired)

C Kiran Seshadri (LCH.Clearnet Client Partner, TCS FS)

John Townend (Board Member, LCH.Clearnet Group)

Martin Taylor (Group CIO)

NG Subramaniam (President, TCS FS)

Tej Bhatla (Head of BFS Europe Industry Solution Unit, TCS)

Sunil Chopra (Global Head of BFS Sales, TCS)



Strategy meeting between LCH.Clearnet and TCS, in India.