Trading Technology Product of the Year

NASDAQ OMX

Risk Awards 2014

A brave new world

Derivatives users had a lot on their plate last year with the rollout of new Dodd-Frank rules on clearing, reporting and trading. Firms have had to adapt to the new reality – and some have been more successful than others. This year's *Risk* awards recognise those that have made the most progress. By Lukas Becker, Matt Cameron, Laurie Carver, Clive Davidson, Kris Devasabai, Peter Madigan, Fiona Maxwell, Tom Osborn, Joe Rennison, Cécile Sourbes and Duncan Wood

The roll of honour

Derivatives house of the year HSBC	**OTC infrastructure service of the year** eClerx
Lifetime achievement Wilson Ervin, Credit Suisse	**Derivatives exchange of the year** Ice
Deal of the year Arqiva/HSBC	**Clearing house of the year** LCH.Clearnet
Bank risk manager of the year Deutsche Bank	**Law firm of the year** Davis Polk & Wardwell
Interest rate derivatives house of the year Goldman Sachs	**Corporate risk manager of the year** Microsoft
Currency derivatives house of the year Bank of America Merrill Lynch	**Sovereign of the year** Riksgälden
Equity derivatives house of the year Morgan Stanley	**Insurance risk manager of the year** Axa
Credit derivatives house of the year Credit Suisse	**Hedge fund of the year** Chenavari Investment Managers
OTC client clearing service of the year Barclays	**Pension fund risk manager of the year** PKA
Structured products house of the year Société Générale Corporate & Investment Banking	**Quant of the year** Michael Pykhtin
Inflation derivatives house of the year Barclays	**Risk management system of the year (bank)** Barclays
Hedge fund derivatives house of the year Deutsche Asset and Wealth Management	**Risk management system of the year (vendor)** Markit IRM
Credit portfolio manager of the year HSBC	**Trading technology product of the year** Nasdaq OMX
EM dealer of the year Standard Bank	**Back-office technology product of the year** SmartStream
OTC trading platform of the year Tradeweb	**In-house system of the year** Royal Bank of Scotland

Many US derivatives users were very much looking forward to the September 2 Labor Day holiday. The previous few months had been a blur of activity as the first US clearing mandates came into force, starting with the largest swap dealers in March and followed by the deadline many were concerned about – clearing for large end-users on June 10. Aside from a few technical glitches, those first mandates went relatively smoothly. Another deadline was looming on September 9 for smaller, less-frequent derivatives users, but many participants were relatively confident and relaxed, and looking forward to the long weekend.

Then came the release of long-awaited rules on uncleared derivatives margining requirements on the Monday holiday, drawn up by a group led by the Basel Committee on Banking Supervision and International Organization of Securities Commissions. For some participants, it meant immediately booting up the laptop or heading into the office to analyse what the rules would mean.

That pretty much summed up the year. With so many lengthy, complex rules being finalised by global and domestic regulatory bodies, and so many new requirements coming into force, participants risked falling hopelessly behind if they spent more than a few days out of the office.

For many banks, last year was all about getting ready for new regulations – and helping their clients through the process too. That doesn't just mean helping them understand the rules and providing clearing and execution services, though. Many end-users were growing increasingly worried about contingent liquidity risks posed by sudden, large margin calls, leading some banks to focus on developing new, innovative structures that would help alleviate the impact of a cash drain. Others worked to restructure outstanding trades that would be too capital-intensive in the new world, with the aim of optimising their own portfolios and, in theory, reducing costs for their customers. Many of the most successful firms are featured in the following pages.

As always, the winners were incredibly difficult to pick. *Risk* asked candidates to submit detailed information on their businesses, and the shortlisted firms underwent several in-depth, face-to-face interviews with the editorial team. Demonstrations of key risk and trading systems were given, and calls were made to end-users and other market participants to obtain feedback. The entire process took about three months. *Risk* would like to thank all those who participated for their time.

In making the final decisions, a number of factors were considered, including (but not limited to) risk management, customer satisfaction, responsiveness to new regulations, engagement with regulators, liquidity provision and creativity. **R**

Trading technology product of the year

Nasdaq OMX

Hong Kong, Istanbul, Singapore, Sydney – the ambitious exchanges based in these cities have more than a few things in common. They are all fighting to create or expand their own regional trading hub, and they all recognise the need to give investors a liquid, reliable market. And, underpinning that market, they all use a technology platform created by New York-based Nasdaq OMX. Borsa Istanbul is the most recent convert of the four, having switched to the Genium INET technology in July last year.

Reliability may not be the first thing a casual observer would associate with Nasdaq at the moment. The exchange's reputation in that respect has taken a battering since the problem-plagued initial public offering for Facebook in May 2012 and a three-hour outage on the Nasdaq exchange itself in August 2013. Neither incident was related to Genium INET – Nasdaq uses its own trading system and the August 2013 incident was due to a problem with a data feed.

To help ensure reliability of Genium INET, the company runs 20,000 functional tests each night during the tailoring of the platform for a customer or preparation of an upgrade. And the firm claims the Nordic markets that are its largest installation are open for business over 99.99% of the time. This was one of the factors that persuaded Hong Kong Exchanges and Clearing (HKEx) to upgrade from the platform's predecessor, going live on Genium INET in October 2013.

Genium INET offers low-latency order processing while guaranteeing a high level of fault tolerance, says Bill Chow, chief technology officer at HKEx. "The matching engine is also rich in trading functions and able to support a wide variety of asset classes. It's a powerful platform that is able to support our launch of new products and pursuit of new business initiatives as we develop the market."

The origins of the platform go back to 1990, when the Stockholm Options Market (OM) created Click, the first electronic derivatives exchange trading platform. Unusually for an exchange, it packaged its technology as a third-party product. It was a hit, being installed in Hong Kong, Milan and Austria. Meanwhile, OM became OMX following a merger with Helsinki Stock Exchange, and as it and the other Click users expanded the instruments they supported, the platform was extended to become a multi-asset class trading system – today, it stretches beyond its futures and options roots into the full range of cash products.

With the continuing evolution of the markets and the underlying technology, OMX launched a research and development (R&D) programme in 2004 to develop a new platform to replace Click that could meet future challenges. In 2007, OMX was acquired by Nasdaq, itself a technology-orientated exchange, which was already home to applications including the INET messaging middleware. In 2010, Nasdaq decided to bring the various elements together: the extensive experience of Click across a number of exchanges, the R&D programme – then known as

Johan Dahlström, Nasdaq OMX

Genium – and INET, to create an updated trading platform it called Genium INET.

"We had been evolving Click for over 20 years and had developed functionality to meet the extensive requirements of our wide group of customers. We took this functionality, the best of our internal R&D, plus the INET middleware, and built Genium INET," says Johan Dahlström, vice-president at Nasdaq OMX.

The development team recoded all the Click functionality in the modern open Java language to create a set of plug-in modules. "All the code is plug-ins – order book, matching engine and all other elements. For each customer, we download the required plug-ins and tailor a system to their needs," says Dahlström.

In an era of high-frequency trading, it is essential that an exchange platform is optimised for performance. Nasdaq OMX analysed how trades are handled in the matching process and came up with an innovative way of compressing and decompressing data extremely quickly to store trades in memory. As a result of this and other changes, Genium INET is 100 times faster than Click, with the ability to handle 1.2 million quotes and 200,000 trades a second.

As an operator of exchanges itself – and user of its own technology – Nasdaq OMX was acutely aware of the growing need for markets to cut costs. The company wanted to take advantage of advances in low-cost hardware, so it developed the new system to run on the Linux open-source operating system and off-the-shelf commodity processors. This is cited as one of the big attractions of the service by HKEx and other users.

Genium INET is now running trading for 17 exchanges, including the Nordic installation that covers Stockholm, Copenhagen, Helsinki, Iceland and three Baltic exchanges, which together trade 97 markets. In addition to Borsa Istanbul, Borse Stuttgart also signed up for the system in 2013.

SGX implemented Genium INET in 2011 to support a new range of products and services. "It's a super-fast trading system providing very low order-response times," says Bob Caisley, chief information officer at SGX. In addition, it is easy to implement the system's in-built functionality, and it can scale up as SGX volumes increase, he says. **R**