

First-mover Advantage?

Already offering cheaper, quicker pricing on French, German, Dutch and UK equities, Chi-X is the first tangible evidence of the challenge to Europe's stock exchanges posed by MiFID. Director Peter Randall talks to AT about the forces driving liquidity fragmentation and the implications for algorithmic trading.

What was the genesis of Chi-X?

In some ways, Chi-X has been many years in the making. A lot of people involved in Chi-X have been in the industry for a long time, looking at how we can conduct equity trading in a faster, cheaper and smarter fashion. But Chi-X is also a child of the regulatory changes that MiFID (Markets in Financial Instruments Directive) is unleashing. The genesis of Chi-X is the coming together of four elements: the connectivity options within Europe; the technology of the fourth-generation trading systems; the regulatory environment; and of course growth in market demand for electronic and, more recently, algorithmic trading and DMA access. If you put together the changes in regulation, technology and client demand, you've got a product. Chi-X is not the only answer by any means, but it is a credible and so far successful attempt to deal with the challenges the industry is currently facing.

From your launch announcement in September 2006, Chi-X has accelerated to a published share volume of 367m in September 2007. Are you surprised at the level of success so far?

We're pleased to be in a strong competitive position. First-mover advantage in the financial markets can be important, but I'm not surprised because I know the complexity of the work needed to get us to where we are today. Some of that work was relatively straightforward and some was among the hardest I've ever done. We've found one solution to the equation, but there are many potential solutions and I'm sure we'll have more competition.

Over the years many have tried and many have struggled to gain traction and attract liquidity (such as Tradepoint, and the LSE's Dutch trading system). Before launching Chi-X, we spent some time considering why this has been the case and have taken the considerations into account. For example, not only is Chi-X a low cost, high speed alternative, but it introduces an attractive pricing model and open access via FIX connectivity protocols. Some are surprised that we're showing modest but vital signs of life as every single attempt until now has failed to thrive. And although there's an element of surprise that we have done what we've said we'd do, it has been many years in the making.

What were the biggest hurdles to the creation of Chi-X?

There were three main challenges. The first was to ensure that our market model was able to answer the various demands of customers, i.e. to handle the characteristics of stock trading specific to Europe. ►

Photographs by Larry Levy

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Peter Randall



Chi X Market Data Microsoft Internet Explorer

chi-x LIVE Market Data PRINT CLOSE

SYMBOL	NAME	BID SIZE	BID	ASK	ASK SIZE	LAST PRICE	LAST VOL	TOTAL VOL	TOVER	↑ MIC	CCY
ING.I	ING GROEP OR	3600	32.195	32.21	2600	32.215	1000	984643	31810198	XAMS	EUR
RDSA.I	R. DUTCH SHEL	11266	28.92	28.93	100	28.93	100	972573	28068500	XAMS	EUR
DBKG.I	DEUTSCHE BAN	2484	93.45	93.505	400	93.47	200	298062	27930261	KETR	EUR
BAYG.I	BAYER ORD	300	56.355	56.385	1400	56.38	393	465129	26143926	KETR	EUR
BASF.I	BASF ORD	3028	95.07	95.095	2258	95.08	300	264171	25227051	KETR	EUR
PHG.I	PHILIPS KON	2700	51.95	52.005	800	51.99	1000	715924	22998765	XAMS	EUR
B.P.L	BP ORD	27094	591.95	592.05	18000	592.0	6000	3599487	21210807	XLON	GBP
DAIG.I	DAIMLER N OR	25	75.175	75.19	127	75.175	279	276616	26702500	KETR	EUR
SAPG.I	SAP ORD	1000	39.325	39.34	1674	39.32	600	497794	19706068	KETR	EUR
CBKG.I	COMMERZBANK	400	30.65	30.665	7600	30.65	400	574778	17548309	KETR	EUR
TOTF.I	TOTAL ORD	1670	55.05	55.06	1650	55.04	350	287137	15801009	XPAR	EUR
UN.I	UNILEVER ORD	2004	22.525	22.535	1200	22.515	200	670231	15036511	XAMS	EUR
ALVG.I	ALLIANZ SE O	100	162.195	162.235	100	162.195	100	73846	12076655	KETR	EUR
AXAF.I	AXA ORD	1000	31.4	31.44	1772	31.43	1000	355907	11201817	XPAR	EUR
SOGN.I	SOCIETE GENE	20	122.94	123.03	150	122.96	150	83013	10305234	XPAR	EUR
BNPP.I	BNP PARIBAS	200	80.15	80.21	1200	80.13	200	121399	9822021	XPAR	EUR
EOAG.I	E.ON ORD	150	127.15	127.365	150	127.35	100	75283	9593711	KETR	EUR
DTEG.I	DEUTSCHE TEL	2656	13.7	13.705	17500	13.7	1500	625215	8406379	KETR	EUR
RDSA.L	ROYAL DUTCH S	2004	201.9	201.45	2500	2013.9	400	378103	7589477	XLON	GBP
VOD.L	VODAFONE GRO	15327	177.3	177.4	20279	177.3	1611	3719554	6549442	XLON	GBP
AMEV.I	FORTIS ORD	1000	23.68	23.71	400	23.695	113	259610	6164176	XAMS	EUR
SIEG.I	SIEMENS N OR	52	98.724	98.77	1518	98.73	28	59645	5844915	KETR	EUR
AEGN.I	AEGON ORD	2022	14.11	14.115	4157	14.105	197	374050	5299320	XAMS	EUR
AKZO.I	AKZO NOBEL O	23	59.35	60.0	452	59.975	400	75284	4517198	XAMS	EUR
BLT.L	BILLITON ORD	3000	1865.0	1867.0	1200	1864.0	1297	201251	3730120	XLON	GBP
MUVN.I	MUNICH RE N	100	138.01	0.0	0	138.08	64	23469	3240700	KETR	EUR
RIO.L	RIO TINTO OR	429	4564.0	4566.0	31	4564.0	30	57673	2628082	XLON	GBP
HSBA.L	HSBC ORD	56	959.5	960.0	30000	959.5	82	251415	2420849	XLON	GBP
AZNL	ASTRAZENECA	1625	2594.0	2598.0	1358	2595.0	104	91827	2361711	XLON	GBP
GSK.L	GLAXOSMITHKL	11000	1284.0	1285.0	11009	1283.0	406	170173	2216791	XLON	GBP

Local Intranet

Major European Stocks listed on Chi-X

The second challenge was perhaps the most significant: to offer customers a fully anonymous and centralised clearing and settlement solution. We worked with customers and partnered on a non-exclusive basis with Fortis to develop the EMCF (European Multilateral Clearing Facility) initiative, which has proved very powerful in allowing a reduction in price, increase in competition and a credible alternative to the mantra of the incumbent providers that the only solution is consolidation. Monopolies appear to believe that only by building even stronger monopolies will they one day be in a position to lower prices. I don't think that the market has ever believed that. The third challenge was that we had to take a view 18-24 months ago on what actually MiFID meant. And there was no one 24 months ago that was willing to provide a clear, executable interpretation. So we had to sit down and decide for ourselves. That was a big risk to take. Fortunately thus far we seem to have called it more or less right.

How is Chi-X attracting liquidity from traditional exchanges?

I'd like to correct an assumption: we're not actually taking market share from the established exchanges. I believe to a large extent we're bringing new liquidity to the market, new business that couldn't previously be done in Europe, because the price charged by the

exchanges was wrong for particular trades or the technology platforms were too slow or suffered from capacity constraints. We have a very cheap, very high capacity, very fast platform. This means we can attract new liquidity – it's not a zero sum game.

How is Chi-X appealing to users of algorithmic/automated trading?

The only way in which [execution] algorithms can work is by getting better prices for their customers. Chi-X consistently has better prices than can be found on the other exchanges. For a TWAP algorithm that's going into the market multiple times per day, the value of being able to access the lowest prices consistently is considerable.



We don't incentivise algorithmic trading through price as you can only access our liquidity electronically. Our pricing structure is completely flat. If you take liquidity from the market we will charge you 0.3 of a basis point, if you add liquidity to the market we will rebate you 0.2 of a basis point.

The reason why our pricing is so low is that we have a low technology and employee cost base – it doesn't take as many people to run Chi-X as it might a large stock exchange.

What are your plans for the next 12-18 months?

We will expand in two ways. First, we will bring more participants into the market and we have a busy pipeline of firms who wish to participate – either by getting connected themselves or connecting via third-party vendors offering proximity hosting/co-location hosting solutions to help clients achieve near-zero latencies. Second, we will be continuing with our programme of introducing more European markets to these participants. We have been pleased with the modest but daily increasing volumes. I can't comment on market share expectations, however it is worth looking to the US where some 20-25 per cent of equity trading is conducted on ECNs (Electronic Communication Networks).

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How will you bring more participants to the market?

There are two main reasons why more participants will come. First, as volumes increase, more brokers will want to play those volumes, because they see the price improvement and understand that we're offering their customers the opportunity to get better pricing. If you can save two or three basis points for your customers by trading on Chi-X, they will demand that you go to Chi-X. Why would you go to another platform that would give you a less good price?

Second, Europe is beginning to show clear signs of voting in favour of competition and against consolidation. More people believe that having a competitive marketplace is desirable. If competition means fragmentation, that's not a bad thing. That which technology enables to be split apart can also be knitted back together again with technology such as smart-order routing. You can use SOR to pull in the prices and then decide which trading venue to use. ▶



What will liquidity fragmentation mean for traditional exchanges?

The only thing that will allow brokers to make decisions around best execution obligations is the ability to establish and capture best price for a particular equity on a particular day. So in a sense the *sine qua non* is that exchanges have to be technologically capable of including their prices in the common pricing feed. Realistically the only way they can do this is electronically. Platforms that have minimum electronic input are going to be disadvantaged.

How does Chi-X achieve such high trading speeds?

Don't ask why we're so fast; ask the incumbent exchanges why they're so slow. The answer lies both in the nature of the exchanges themselves and the process through which they originally computerised their trading operations. The challenge facing the exchanges is to adapt their existing capacities, technology architecture and infrastructure, and offer open access connectivity.

The breakthrough that the ATs (alternative trading systems) and ECNs made in the US was to realise that the matching algorithm is relatively trivial compared to the real challenge of optimising the input/output queue, i.e. how do you get people in



very fast and out very fast. And that's what we've done too. If you get your messages in and out very fast, the job's done; it doesn't matter how neat or elegant your matching algorithm is. It's not a question of why we're so fast, because we're only as fast as the technology can go. But the incumbent exchanges haven't addressed this for so long because

“The challenge facing the exchanges is to adapt their existing capacities, technology architecture and infrastructure and offer open access connectivity.”

they're monopolies and have had no incentive to adapt. The good news about MiFID is that it opens the doors for competition and for the first time in Europe investment firms are offered choice.

What kind of trading experience can users expect on Chi-X?

Our matching rules are purely price time priority. Although we do support dark liquidity by allowing people to place non-displayed orders, a displayed order will always take precedence over a non-displayed order. Our capacity at the moment is around 30,000 transactions per second. Adding capacity for us is simply adding more servers, because Chi-X has been designed to be scalable as an article of faith from the outset. In terms of trading speed, it depends how you connect, but generally we are giving a round trip of two milliseconds for remote connections; if you co-locate that is 690 microseconds.

We can provide all levels of consolidated data for free via the Chi-X Multifeed in a very standard, normalised package. Chi-X Multifeed includes all bids and offers, regardless of whether or not they were taken up; effectively, we give you the tape, so you can see all the details, for example, which side was the aggressor in any deal.

What technology developments are planned in next 12 months?

We will continue to invest in the next generation of the platform and are actively planning for new functionality. Smart-order routing is something we'll be offering shortly. A smaller broker who maybe doesn't have the technological sophistication of the global brokers can come to us and we'll check our price against other exchanges; if it doesn't match on Chi-X, we'll send it to another exchange. We'll route to them and hope they'll route back to us. If we have a better price, they should send deals to us, shouldn't they? We hope to be offering that this year. There are a lot of smaller brokers and services like this will level the playing field – it democratises the market. 🌸