

# MARKET view

A MAGAZINE FOR THE EXCHANGE INDUSTRY | no.2:2008



NASDAQ OMX

## Focus on the customer

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»Technology is the beating heart of our organization.»

Bob Greifeld,  
CEO of NASDAQ OMX

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PHOTO: ISTOCKPHOTO

## NASDAQ OMX and BESA to establish bond clearinghouse

NASDAQ OMX and the Bond Exchange of South Africa Ltd. (BESA) have signed an agreement to create a joint venture clearinghouse, BondClear, expected to launch in early 2009. In addition, NASDAQ OMX will provide post-trade administrative services and a central counterparty (CCP) for BESA's new derivatives market. The clearing offering will be based on NASDAQ OMX's operational model for

its Nordic market, and will bring international best practice standards to South Africa. With NASDAQ OMX acting as CCP, BondClear will be able to provide South African market participants with a counterparty whose credit rating exceeds what is currently available in South Africa. Earlier this year, NASDAQ OMX was awarded a contract to help develop the bond markets in Kenya, Tanzania, Uganda and Rwanda.

## New trading solutions launched in Singapore

The Singapore Commodities Exchange (SICOM), which was recently acquired by the Singapore Exchange (SGX), launched e-SICOM, a new high tech electronic trading platform based on technology from NASDAQ OMX. This comes on the heels of a major milestone by SGX with the launch of Quest-ST, a new trading engine for equities, also provided by the company.

In addition to the equities trading engine, NASDAQ OMX will deliver a clearing platform for SGX derivatives, securities and OTC clearing businesses in 2009. Earlier this year, SGX launched an upgrade of its market data system, SGX DerivativesQuote, the first solution in the world to be powered by the company's next generation distribution system for market data, GENIUM® Market Info.

PHOTO: GETTY IMAGES



Financial district, Bogotá, Colombia

## BVC launches new derivatives market

Bolsa de Valores de Colombia launched a new market for derivatives based on a trading engine provided by NASDAQ OMX. The new platform, which will add cash equities later this year, is part of BVC's ongoing initiative to grow its position in South America. Juan Pablo Córdoba Garcés, President, BVC says, "Implementation of NASDAQ OMX's trading engine allows both retail and institutional investors to execute orders more securely and efficiently. In addition, the system provides scalability for future volume increases, as well as the flexibility to quickly introduce new products."

## NASDAQ OMX to support development of Vietnam's securities market

NASDAQ OMX and the Ho Chi Minh Stock Exchange (HOSE) have signed a memorandum of understanding with the objective to support the development of Vietnam's main stock market. The goal of this agreement is to leverage NASDAQ OMX's technology and market experience to strengthen infrastructure, efficiency and liquidity at HOSE and the

Vietnamese capital market in general. "The agreement with NASDAQ OMX aims to foster closer ties between our organizations and to establish a channel for information exchange in the areas of system operations, regulatory framework, cross-listing and product development," said Mr. Nguyen Doan Hung, Chairman of HOSE.

## NASDAQ OMX to launch US clearing service

NASDAQ OMX plans to launch a clearing service for US cash equities, using the clearing license it obtained when it acquired the Boston Stock Exchange in August 2008. The new clearinghouse, to be called NASDAQ Clearing Corporation (NCC), plans to net trades continuously, enabling traders to know their next day margin obligations at the close of the current trading day. NCC expects to launch in 2009.

## NASDAQ OMX Europe begins trading

NASDAQ OMX Europe, a new multilateral trading facility, began trading 25 FTSE 100 stocks in late September 2008. By the end of October, approximately 600 European securities were trading on the marketplace. Additionally, the company intends to file an application to become a Recognized Investment Exchange and launch a London listing venue.

PHOTO: ISTOCKPHOTO



# Complex Event Processing: Getting more business information from data

**S**till in relative infancy in the exchange world, Complex Event Processing (CEP) technology holds great promise beyond its current use in the surveillance and supervision functions. Given the recent market turmoil and the increasing competition in the trading environment, the ability to offer new services based on CEP could provide exchanges with a significant competitive edge.

CEP is software technology that enables applications to monitor multiple streams of event data, to analyze them in terms of key performance indicators that are expressed in event rules, and to act upon opportunities and threats in real time. CEP users can specify the information that is of

»...the ability to offer new services based on CEP could provide exchanges with a significant competitive edge.«

interest to them whether it is low-level network processing data or high-level enterprise management intelligence.

One of the significant advantages of CEP is that it enables users to take action in response to specific scenarios as they occur, rather than having to wait for data to be compiled in a database before being able to access it.

According to Aite group, a Boston-based research firm, in the coming years many of the solutions for dealing with the capital markets data explosion will be built around event processing frameworks. "Many problems, restated with an event processing formulation, look much more manageable," says Aite.

"Today, there are significant opportunities for firms to leverage solutions developed by third-party providers to solve many of the challenges that the ever-increasing data production in the capital markets is posing."

CEP enables real-time analysis of data because rules can be built very quickly to enable staff to look at data from different perspectives.

**MOST EXCHANGES** use CEP technology for surveillance and supervision. It is ideal for analyzing the vast amounts of data that trading systems generate. Traditionally, these functions were handled by systems built in-house, which were development-intensive, requiring a programmer to build rules on how to search for specific data. But as market volumes have grown and algorithmic and program trading have made trading more complex, exchanges have looked for more flexible technology. At the same time, trading has become fragmented across multiple venues, further distributing trading and increasing competition.

It is in this competitive arena that CEP shows its greatest potential. Sell-side customers of exchanges are using CEP technology to build algorithms that identify trading opportunities. There is no reason that exchanges cannot also use CEP to offer algorithms to their members, which in turn will enable their members to offer new services to their customers.

It has become increasingly difficult for exchanges to differentiate themselves as competition from new market entrants intensifies. Today competition is based on latency and trading fees. This model is not sustainable over the long term, because technology will enable everyone to eventually catch up. Therefore, it is vital to be able to offer additional services that enable differentiation – NASDAQ OMX, for

example, offers Smart Order Routing services, which is a great differentiator and will grow in importance in the future.

Regulators may well push exchanges into implementing more CEP-based solutions in the surveillance area. Given how complex markets have become and the large number of liquidity pools available, it is increasingly difficult to survey trading activity across different marketplaces, but regulators may start to demand new types of analysis across different markets. CEP could play an interesting role here, with exchanges ultimately offering compliance services to their members.

Although CEP is still in its infancy, the ability to derive more business information from the data generated by the exchange will be a key success factor for exchanges in the future. We are not yet at the point where we can see all the opportunities that will come from CEP technology, but they are beginning to appear on the radar. ■

Cecilia Qvist  
Head of Business Development  
NASDAQ OMX Market Technology.



PHOTO: SANNA SKERDÉN

# At NASDAQ OMX, both technology and customers come first

BY SHERREE DECOVNY PHOTO ROB TANNENBAUM

An old adage says the whole is greater than the sum of its parts, and that is certainly true of NASDAQ OMX. In February 2008 the two entities combined to create a global organization with the goal of promoting seamless trading and company services worldwide. NASDAQ OMX's skill in providing technology and related services to exchanges has taken on even greater strategic significance within the organization. Maintaining robust intra-industry relationships and crafting strong partnerships have become critical to success in an increasingly interconnected world.

The number of new entrants in the exchange and exchange-like space is growing, as evidenced by the rise in the number of ECNs and MTFs in the US, Europe, Canada and Australia. This increase in the size of the addressable market presents a tremendous opportunity for NASDAQ OMX to provide core technology to exchanges around the world. "Technology is the beating heart of our organization," says Bob Greifeld, CEO of NASDAQ OMX. "We believe the technology segment of our business has strong organic growth potential, and we are pleased to be able to leverage our collective expertise and provide our customers with superior technology solutions."

NASDAQ OMX's technology relationships also open the door to expanded partnerships when it makes sense for both the company and the client. For example, NASDAQ OMX has taken a minority investment in Agora-X, a technology customer that is developing an institutional ECN for OTC commodities contracts. And the company recently acquired the consulting, clearing and international products business from Nord Pool, a premier power market in Europe and a longstanding technology customer.

Ultimately, NASDAQ OMX's strength lies in what Greifeld likes to refer to as an organization that is "manically focused on the customer and that understands the challenges facing exchanges today." Specifically, exchange systems must be flexible enough to handle ever-increasing data volumes and to add new asset classes to their trading platforms that provide incremental value to their clients.

Before the merger, NASDAQ and OMX both had exemplary track records in developing industry-leading technology solutions. "Our goal is to combine the best solutions from the respective organizations in a meaningful way," says Magnus Böcker, President of NASDAQ OMX. "For example, we are going to use the INET messaging bus to power the GENIUM architecture, and that will enable us to get to market faster and with a robust product."

While technology is critical, it is not a cure-all for all market ills. As the global credit crisis continues to shake the markets, NASDAQ OMX and other exchanges with similar market models can serve as role models for the OTC markets. Financial market participants can look at how exchanges are structured and how they leverage their technology assets. They can apply the same concepts, such as transparency and price discovery, to certain OTC instruments.

**IF THE CURRENT** crisis has taught us anything it is that computer models cannot replace willing buyers and sellers agreeing to a price. The meltdown ties back to the fact that many participants did not know their risk exposure or the value of their assets. That cannot happen on an exchange where investors know the exact prices and exactly with whom they are trading.

When it comes to clearing and settling OTC products, an entity is only as



**Bob Greifeld (left), CEO and Magnus Böcker (right), President, NASDAQ OMX are working hard to promote seamless trading and company services worldwide.**

»Our goal is to combine the best solutions from the respective organizations in a meaningful way.»

Magnus Böcker,  
President of  
NASDAQ OMX

strong as its weakest link, which creates a domino effect. That is not the case with exchanges. "In a central counterparty market, there is strength in numbers, and each participant adds to the strength of the marketplace," Greifeld points out. "One could argue that if the credit default swaps market had been trading on a market similar to NASDAQ OMX markets, then there is no way this could have happened, and we would not be facing what we are today."

Technology is the driver of cost efficiency, business development and trust. Through partnerships with NASDAQ OMX, exchanges will have the systems they need to cope with increasing volumes, to introduce new products and to grow their business. In addition, exchanges will be well equipped to help market participants weather the current crisis and to set an example for the industry. ■

It is likely that more Shariah compliant products will appear on the scene in the coming years. Exchanges have an opportunity to play a key role in the building of the infrastructure to support this market.

# Capitalizing on Shariah

Exchanges around the world are listing Shariah-compliant ETFs and creating indexes to meet the needs of Islamic investors.

BY SHERREE DECOVNY PHOTOS LAM MENG YEIN, ONASIA IMAGES ILLUSTRATION ANNA SVANFELDT

Shariah investing is growing rapidly worldwide as Muslims seek to earn profits without violating the tenets of their religion. While the infrastructure is still emerging, mutual funds and exchange traded funds (ETFs) are being developed to meet the needs of this important customer segment. Exchanges are capitalizing on this trend by creating and listing these and other new products.

While estimates vary, a recent Ernst & Young study of Islamic funds shows assets held by investors in Muslim countries at more than US\$1.6 trillion, which is expected to

rise to US\$2.7 trillion by 2010. At the same time, the Sukuk (Islamic bond equivalent) market, currently worth about US\$70 billion, is increasing at an average annual rate of 40 percent and is estimated to reach US\$200 billion by 2010.

Shariah investing is the fastest growing sector within this investment market. Shariah investment criteria screen out banks and other financial companies. On the debt side, Shariah does not allow 'house of cards' scenarios in which investors are entitled to no more than a stream of revenues. Instead, Sukuk transfer ownership of performing assets.

"Islamic finance is prudent business," explains Yusuf Talal DeLorenzo, Chief Shariah Officer at Shariah Capital. "Shariah has nothing against sophisticated investing or trading strategies, as long as the underlying investments are real and fundamentally sound."

Originally focused on real estate, Islamic finance is beginning to diversify into infrastructure finance, leasing, private equity, structured products, Sukuk and alternative asset classes. While many derivatives are not permissible under Shariah, there is now a wide spectrum of investments



available for the diversification of investment portfolios.

Non-Islamic countries are looking to capitalize on this potentially high-growth market. Hong Kong and Singapore are planning to challenge Malaysia's dominance in the Asia-Pacific region. Meanwhile, London bankers are predicting that Sukuk origination and issuance by European corporates and governments is coming soon. Still, there are relatively few Shariah-compliant opportunities for investors outside the Middle East.

“In many parts of the world, people are not familiar with investing,” says John Jacobs, NASDAQ OMX Executive Vice President, Global Financial Products and Global Marketing. “That challenge is compounded in many Muslim societies due to Shariah rules. These societies typically have traditional banking products, but there is a shortage of other investment vehicles.”

It is also difficult for investors to do the rigorous analysis required to determine whether a company is Shariah compliant, which involves

more than just a simple test to ensure the company is not involved in the sale of products such as alcohol, tobacco or pork. Too much cash on a company's books might imply that the company is earning interest income and, therefore, must be screened out.

**SEVERAL COMPANIES** are now filling that gap. Securities firms are becoming established in local markets to offer Shariah-compliant products such as mutual funds, ETFs and structured products, and people are learning about the financial markets.

Shariah Capital, for example, is developing unique investment solutions for asset management in compliance with Shariah. Recently, the firm developed refined criteria for screening stocks by means of proprietary software and a short-

Shariah (literally, the path leading to the watering place) is the body of Islamic law dealing with many aspects of daily life. Shariah principles preclude investment in businesses including conventional

financial services, alcohol, pork-related products, gambling, leisure and entertainment as well as interest-bearing investments and investments in companies with unacceptable levels of debt.



**Non-Islamic regions and countries, like Hong Kong and Singapore, are planning to challenge Malaysia's dominance in Shariah investing in the Asia-Pacific market.**

industry. Exchanges have an opportunity to facilitate growth in the market and help determine how Islamic capital markets will function. "While the going may be hard at the outset, the opportunity is a real one. But for those with an eye toward the future, the rewards can be remarkable," says DeLorenzo.

**IN LATE 2007**, a Shariah index was launched on the Tokyo Stock Exchange. The index includes 79 Japan-traded stocks selected with respect to each company's compliance with Islamic canonical law. The index excludes businesses that offer products and services that are considered unacceptable or non-compliant according to Shariah law. All constituents are monitored daily to ensure the indexes maintain strict Shariah compliance.

In May 2008 Daiwa Asset Management launched Singapore's first Shariah-compliant ETF on SGX. The Daiwa FTSE Shariah Japan 100 (DaiwaETF) offers Islamic investors instant access to the top 100 Shariah-compliant companies in Japan by market capitalization. While the DaiwaETF was created to cater to the expanding needs of Islamic investors for greater investment alternatives, Daiwa Asset Management expects it will also appeal to non-Islamic investors internationally. Besides offering exposure to top tier companies in Japan, the ETF's sector diversification is an attractive proposition for professional and retail investors seeking to participate in Japan's stock market.

**NASDAQ OMX** is also leveraging its large index business to tap into this opportunity. The exchange plans to roll out a screened version of the NASDAQ 100 and the NASDAQ Biotechnology Index by the end of 2008, which will open up tremendous

opportunities for investment firms to create new products based on the indexes.

"Companies included in these indexes are now being introduced to a whole new group of investors," says Jacobs. "They're getting the visibility of being in a world-class index, they're receiving the direct and indirect investment of these new investors, and hopefully that leads to improved valuations over the long haul."

It is likely that more Shariah-compliant products will appear on the scene in the coming years. Exchanges have an opportunity to play a key role in the building of the infrastructure to support this market. Those that want to break into it must include in their offering a fast, efficient way to trade these products. Also they need to ensure they have the capabilities to market indexes and capture the fees that go with them. ■

**» While the going may be hard at the outset, the opportunity is a real one.»**

Yusuf Talal DeLorenzo, Chief Shariah Officer at Shariah Capital

**Yusuf Talal DeLorenzo,  
Chief Shariah Officer at Shariah Capital**



sale alternative that complies with Shariah law.

"Our refined Shariah screening solution uses the latest technology to provide managers with accurate data on more than forty thousand publicly traded companies worldwide," says DeLorenzo. "Likewise, we rely heavily on technology for our ongoing Shariah supervision of the hedge fund managers on the Al Safi Trust platform."

The firm acts as advisors to the Al Safi Trust, an offshore alternative investment platform for hedge funds, which bridges Western investment management and Shariah. The firm allows hedge funds to manage in a manner consistent with their existing strategies while still addressing the religious requirements of Muslim clients.

A trading mentality is beginning to emerge in the Islamic finance

# Carbon trading:

## A market mechanism for tackling pollution

An open market system of well regulated, organized exchanges helps businesses reduce the effects of global warming.

BY SHERREE DECOVNY PHOTO ROB TANNENBAUM ILLUSTRATION ANNA SVANFELDT

**T**o combat global warming, companies and countries want to reduce their carbon footprint, thus driving an emerging growth market in carbon trading. While penetrating any immature market can be risky, there are strong opportunities for both marketplaces and financial players in global carbon trading.

Carbon trading enables organizations to buy and sell carbon credits, helping to regulate carbon emissions. According to industry analyst Celent, the carbon exchange market has grown from under €9 billion in 2005 to about €25 billion in 2007 and, depending on the future regulatory framework, could reach €40 billion by 2012 and over €100 billion by 2020.

**CURRENTLY, THERE IS** both a regulated compliance segment of the carbon market and a voluntary, unregulated one. Two such regulated markets are the UN-sponsored regulated Clean Development Mechanism (CDM) and the largest regulated market, the European Union Emission Trading Scheme (EU ETS) which was created in conjunction with the Kyoto Protocol. Kyoto binds many developed countries to a cap and trade system with the goal of reducing overall emissions. Because the US did not ratify Kyoto, it is not bound.

In the regulated compliance segment, the EU allocates carbon credits



»This may not be a perfect system, but it is an excellent start.«

Torger Lien,  
CEO of Nord Pool

to countries. These credits are then divided among industries within that country. Each industry is assigned a cap on the amount of carbon it may emit, and individual companies can trade the allowances amongst themselves. Niche power marketplaces, like the European Climate Exchange (ECX), Nord Pool and Powernext, list contracts in CO2 certificate contracts, European Union Allowances (EUAs) and Certified Emissions Reductions (CERs).

**THE EUROPEAN SCHEME** recently completed Phase I of its Kyoto program, establishing a solid baseline price for allowances and setting the stage for a more settled market. During the first six months of the full Kyoto period, EUA contracts traded at about €20-25 per metric ton.

“This may not be a perfect system, but it is an excellent start,” says Torger Lien, CEO of Nord Pool. “The carbon market has significantly increased awareness of global warming and the role played by CO2 emissions. For the first time, we can put a price on polluting the environment – a powerful incentive for change.”

The regulated compliance segment of the market should evolve. Once industries develop a reliable method for counting emissions, they will reduce caps annually. Then, the EU will progressively lower the target for

allowable emissions and expand the regulation to include more industries. Eventually caps will be applied and auctioned instead of allocated.

“It will create a very different pricing model,” says Patricia McGinnis, Research Director at IDC Financial Insights. “It’s hard to imagine another financial market that could grow as quickly as this one can, assuming that all the dimensions of the European requirements continue to roll out.”

The regulated compliance segment will likely grow throughout Europe and worldwide. The CDM allows EU-based firms to earn or spend credits elsewhere in the world, so new markets will emerge. One is being launched in New South Wales, Australia, for instance.

**IF THE US SIGNED** the Kyoto Protocol, the regulated segment would be boosted. A bill introduced in the Senate in June 2008 failed. Over time, it will become increasingly difficult for the US to justify its position on lowering carbon emissions when 182 countries have pledged to act.

In October 2008, NASDAQ OMX completed its acquisition of the clearing, consulting and international derivatives products of Nord Pool and formed the NASDAQ OMX Commodities division. Recently the US Commodity Futures Trading Commission



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(CFTC) granted permission to Nord Pool to allow US companies to trade and clear carbon products, enabling US companies to trade on a regulated compliance marketplace, and setting the stage for a NASDAQ OMX global commodity offering.

Voluntary markets for carbon trading exist in the US. The Chicago Climate Exchange, formed in 2003, was the first North American marketplace geared to reducing greenhouse emissions. In March 2008, a group of 11 financial and energy industry players launched the Green Exchange to trade environmental futures and options contracts. Currently trading through the New York Mercantile Exchange (NYMEX), the Green Exchange expects approval to become a separate designated market in 2009.

The voluntary markets lack the infrastructure present in the regulated compliance markets. "Like the Wild West, there's no good sense of what the

rules are," says McGinnis. "There's no registry for carbon credits or debits in the US in the voluntary markets, and there's no place to park them."

**FOR EXAMPLE,** carbon credits could be issued to plant trees in Africa, or to protect the Amazon Rainforest. But who counted the trees and what was the amount of carbon allocated per tree? Was it done correctly, or done at all? Are the allowances divided into the right number of units? With no registration or depository, it is impossible to confirm that the same units were not sold multiple times.

Such a scenario does not bode well for attracting investors. "The industry infrastructure is missing in the voluntary markets, so it isn't going to be attractive to anybody," says McGinnis. "There has to be accountability and transparency to know what you're buying."

Voluntary markets have significant

**»There has to be accountability and transparency to know what you're buying.«**

Patricia McGinnis,  
Research Director  
at IDC Financial  
Insights

growth potential, but their fate will be determined by the willingness of the players to establish a self-monitoring and self-supporting infrastructure. Standardization is the key. To this end, the carbon market needs auditors – like Den Norske Veritas and Bureau Veritas – to verify emissions accounting.

Once the infrastructure is in place and the market is standardized, organizations including the World Wildlife Fund, Rainforest Action Network or Sierra Club, may be interested in issuing carbon credits and their products could be listed on exchanges that serve as the central counterparty for trading, netting, clearing and settlement.

Opportunities abound in the carbon market. Business is realizing that an open market system of well regulated, organized exchanges is an excellent way to help control pollution worldwide. Such exchanges can deliver a transparent, fair and efficient marketplace and a level playing field. ■

# Reducing risk in OTC derivatives

A centralized clearing facility can reduce counterparty and settlement risk in the OTC derivatives markets.

BY HEATHER MCKENZIE PHOTO NASDAQ OMX AND BANK FOR INTERNATIONAL SETTLEMENTS

Even before the onset of the global financial credit crisis, regulators were concerned about inefficiencies in OTC derivatives trade processing. Over the last year, it has become apparent just how vulnerable the market is to systemic failure. Although the OTC derivatives markets' infrastructure has coped quite well during the turmoil, an integrated operational infrastructure would bolster reliability and robustness. To this end, various participants are considering ways to reduce operational, counterparty and settlement risk. One of those ways is to have exchanges set up a centralized clearing facility for these products.

In its semi-annual Over-the-Counter (OTC) Derivatives Markets Statistics for the year ended December 31, 2007, the Bank for International Settlements indicated that the derivatives market was worth just over US\$596 trillion in notional amounts outstanding, compared with US\$414.8 trillion the year before.

Although the OTC market has grown faster than the exchange-traded market, recent events have taken their toll. The failure of Lehman Brothers changed the landscape for derivatives users, says Martin Johnson, Investment Director at P-Solve Asset Solutions, a UK-based investment consultancy. "Until [recently] pension

"If exchanges are prepared to make their post-trade services available to the OTC market, that could be a happy compromise."

Bob McDowall,  
Senior Analyst,  
TowerGroup

fund trustees who had attempted to mitigate their funds' exposure to interest rate, inflation and equity market volatility by using derivatives probably had taken for granted that these contracts would perform their required function," he says. "They may not have given enough thought to what might happen if their swap counterparty defaulted. After all, surely the big investment banks were too big to fail."

Lehman Brothers' bankruptcy highlighted the increased probability of counterparty defaults and the resulting operational issues for institutions with derivative contracts in place. Old contracts must be terminated in an orderly fashion, new contracts put in place at competitive rates and collateral calls managed regularly to minimize the potential impact of future market events.

**BOB MCDOWALL**, a Senior Analyst at the European operations of financial research firm TowerGroup, says that he believes eventually OTC derivatives will have a higher risk weighting for capital purposes and regulators may provide some incentives for OTC derivatives to be cleared by exchanges. Already some exchanges are looking to provide confirmation matching of OTC derivatives that are not exchange listed. "If exchanges are prepared to make their post-trade services avail-

able to the OTC market, that could be a happy compromise," he says. "By using the central counterparty [CCP] and post-trade technology services of an exchange, risks will be reduced."

Momentum is building behind the idea of a centralized clearing facility for OTC derivatives, after years of manual processing. Speaking at the annual meeting of the Swiss Futures and Options Association in Switzerland in September, Mark Yallop, Chief Operating Officer of broker ICAP, said



**Bank for International Settlements, Basel, Switzerland.**

more OTC market trades would be cleared through a central clearing-house in the next 12-18 months, given 'regulatory concerns.' On-exchange clearing would facilitate fast trade confirmation, and result in the cost of processing trades falling to as low as US\$5, which would enable more OTC trading to take place.

**INVESTMENT BANK-BACKED** clearing-house The Clearing Corporation has announced its plans to launch a credit default swaps clearing platform before the end of the year. The facility will be a global initiative to clear both US and European CDS indexes, tranches and single-name liquid CDSs. Eurex Clearing aims to complement US initiatives with a European-based one and is evaluating the introduction of a CCP for OTC products.

The US-based International Derivatives Clearing Group (IDCG), a new derivatives exchange and clearing-house, has applied to the Commodity Futures Trading Commission for a clearinghouse license. Set to launch in 2009, IDCG will focus on OTC traded instruments, primarily interest rate swaps. NASDAQ OMX has taken a minority interest in IDCG and will provide the clearing system.

The trend toward centralized clearing of OTC derivatives has not yet reached the Asia-Pacific region. Among



**The industry will need to work with regulators to restructure the global financial infrastructure for OTC products.**

the reasons for this trend is the strongly domestic nature of the markets; few have opened up to regional or more international trading. "In derivatives markets, the most efficient ones in the region are those that have adopted common clearing standards – Hong Kong, Singapore and Australia," says Ulf Carlsson, General Manager for North Asia at NASDAQ OMX. "These markets stand out as being the most solid and international in terms of post-trade practices. They are using traditional risk-margining models and have set up CCPs and clear in real-time."

Derivatives exchanges in countries like China, Korea and Japan have historically set up clearing facilities based on domestic standards, which, according to Carlsson, is a case of reinventing the wheel. "I think investors will force them to adapt to international standards and practices, particularly once countries take the steps to open up their borders."

There is huge potential to grow the exchange-listed derivatives markets in Asia-Pacific, which currently represents only about two percent of the total global market. Regulatory requirements such as the need to hold margins in the local currency stand as a barrier to participation. Going forward, demands from the global players will likely have a significant impact on the derivatives markets in Asia.

**MOST INDICATIONS POINT** to continuing turmoil in the markets for the near term. Once the dust settles, the industry will need to work with regulators to restructure and, to some extent harmonize, the global financial infrastructure for OTC products. Some of this work has already begun especially in the US and Europe. As central counterparty clearing facilities, exchanges can leverage their technology to play a key role in reducing risk in the OTC markets. ■

# The emergence of smart venues

Some exchanges have made a strategic shift in deciding to route orders to dark pools and multilateral trading facilities.

BY HEATHER MCKENZIE PHOTOS BRYOK AND NEONET

The emergence of new alternative trading venues and smart order routing is posing a challenge for traditional exchanges. To compete effectively, they need to think strategically. Sell-side firms already have the tools to handle smart order routing. Buy-side firms are slightly behind the curve, but they want to acquire this capability. Exchanges can play a role by becoming smart venues, thereby benefiting from an open playing field and access to multiple markets.

According to Steve Leegood, Founding Director of UK-based technology consultancy Bryok, as smart venues, exchanges could impose differential tariffs, which could change according to the time of day or level of liquidity in a particular asset class. "This would make exchanges more competitive on a very dynamic basis," he says. "It is the same principle that airlines use in occupancy-based cost of flights, which changes moment by moment as flights reach maximum occupancy."

Smart order routing originated in the US equity markets as a means to cope with the fragmentation of

»Exchanges can... become smart venues, thereby benefiting from an open playing field and access to multiple markets.«

liquidity experienced during the growth in electronic communications networks (ECNs). With smart order routing, trades are automatically routed to a pre-determined list of execution venues.

In Europe, smart order routing is less well established. But the condition that led to its uptake in the US – liquidity fragmentation – is emerging as a number of new trading venues appear following the implementation of the European Commission's Markets in Financial Instruments Directive (MiFID).

**SIMON NATHANSON**, President and Chief Executive of Neonet, a Stockholm-based provider of global direct market access brokerage services and trading technology, says Europe is at the beginning of a wave of fragmentation. "Neonet has always thought that we will see new venues such as multilateral trading facilities (MTFs) and dark pools," he says. "Very early on, we realized that market participants would need help to find the best liquidity, not only when they hit the other



**Steve Leegood, Founding Director, Bryok and Simon Nathanson, President and Chief Executive of Neonet.**



side in an aggressive trade but also when they are not aggressively placing an order."

"Neonet has built a second generation order routing system that adds more intelligence," says Nathanson. "This system looks not only at where the best price is, but also at the best probability of transacting a trade."

Hedge funds and proprietary trading desks are continuously seeking new markets in which to apply their arbitrage and statistical algorithms. Currently, hedge funds in the US and Europe are fine tuning their algorithms to work under different circumstances in several markets in Asia-Pacific, including The Singapore Exchange (SGX) and the Australian Securities Exchange (ASX).

**ASIA-PACIFIC HAS** lagged the US and Europe because the liquidity pools in the region are scattered and competition between exchanges is less intense. While the Asia-Pacific exchanges are eager to attract algorithmic traders, the challenge lies in understanding their requirements and in anticipating the level and extent of their participation.

Routing to dark pools will become an important factor for exchanges, according to Brian Hyndman, Senior Vice President, Transaction Services at NASDAQ OMX. "In the US, the real change in smart order routing this year is that we are now connecting to a variety of dark pools. Earlier this year non-displayed pools of liquidity accounted for 6 percent of the overall market; by September it was closer to 8 percent, and it continues to grow," he says.

In Europe, it is early days, says Hyndman, but NASDAQ OMX is in discussions to route to dark pools. "Our clients want us to check out dark pools before their orders are routed to the public market. For major market centers and exchanges to be competitive, they will have to connect to dark pools and accept client demands." ■

## Market View

A magazine from NASDAQ OMX, the world's largest exchange company. It delivers trading, listing, exchange technology and public company services across six continents.

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Trydells, October 2008

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