

# *Trading blocs*

## What next for the stock exchanges?

*Consolidation among Western exchanges may be moving towards an end game, with the focus of future activity shifting towards emerging markets*

August 2011



There is little doubt that the high-profile mergers earlier this year may yet act as a further catalyst to consolidation. Indeed, Xavier Rolet, CEO of the LSE Group, commented that

"In five years there'll be three to four international exchange groups with global distribution  
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distribution

(OTC) derivatives market in the US and Europe seek to transfer the trading and clearing of these contracts onto exchange platforms and through central clearing houses. This has potentially opened up a new and significant opportunity for the exchanges and encouraged them to enter diversified markets and vertically integrate their businesses to include clearing and settlement services in their bid to make the ultimate one-stop shop.

Further pressure has been placed on exchanges to combat declining market share following the growth in demand for off-exchange trading. So-called 'dark pools' allow investors to trade large blocks of securities without showing their hand in the open market. This form of trading is particularly popular with institutional investors who seek to reduce transaction costs and limit the impact on prices from executing large orders over lit exchanges.

As economic growth in the BRICS (Brazil, Russia, India, China and South Africa) and other emerging markets continues to outstrip the West, the next generation of mega exchanges could come from these countries (see figure 1). Indeed, many Western companies are seeking to list in these markets, recognising the importance of accessing their growing capital bases. In turn, US and European groups could face the prospect of becoming the targets for acquisition rather than the acquirers. However, at present, the supporting infrastructure of expertise and technology in London, New York and other leading Western financial centres still gives them a powerful edge in the global marketplace.

Asia's place in the future global exchange market may depend upon the liberalisation of regulatory systems and revision of ownership structures. Many see the emerging market exchange groups as being at the same stage of development as their European and US counterparts some years ago, and expect that it is only a matter of time before they replicate the Western structure. Indeed, as the axis of growth and market activity shifts South and East, the emerging markets are set to be the focus of the next wave of transformational change and deal-making within the exchange sector.

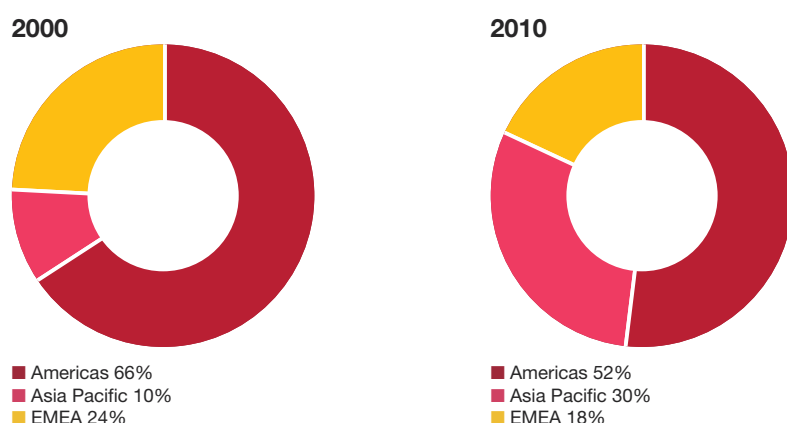
However, US and Europe have some way to go before they can claim to be operating in fully harmonised and transparent marketplaces. Unlike the US counterpart, the European clearing and settlement industry is fragmented and, from an IT infrastructure perspective, unconnected. Therefore, further consolidation and restructuring could still be on the cards if a truly globalised market is the inevitable end game.

Over the coming years, it will be interesting to see how today's leading exchanges adapt to the shift in global capital flows and how quickly the leading emerging market exchanges materialise as global players.

*"The start of the second generation of consolidation in the exchange world is just that... We're just getting started."*

Xavier Rolet (Chief Executive of LSE)  
Interview with Reuters, 23 February 2011

**Figure 1: A changing global landscape**  
**Annual electronic orderbook share trading value**



Source: World Federation of Exchanges

# Section 1

## Europe and North America

Demutualisation across many western stock exchanges has released their value and made it easier for them to merge and extend their reach, most notably into derivatives trading, a key market for growth.

The latter half of the last decade saw significant consolidation through such deals as the LSE's acquisition of the Borsa Italia, the New York Stock Exchange's (NYSE) merger with Paris Euronext and the Deutsche Börse's takeover of the International Securities Exchange (ISE). Figure 2 sets out the most significant deals in recent years. Figures 3 and 4 highlight the gap in size between the largest exchange groups and the following pack.

**Figure 2: Ten largest deals in the exchange sector in the past five years (completed deals between March 06 and March 11, excluding partial acquisitions)**

Completion date	Target	Target's nationality	Acquirer	Acquirer's nationality	Deal value USD mil (excluding debt)
Jul-07	CBOT	US	Chicago Mercantile Exchange	US	11,648
Apr-07	Euronext	Netherlands	NYSE	US	10,183
May-08	Bolsa de Mercadorias & Futuros- BM&F	Brazil	Bovespa	Brazil	8,975
Aug-08	Nymex	United States	CME Group	US	7,909
Mar-08	OMX	Sweden	NASDAQ Stock Market	US	4,003
Dec-07	International Securities Exchange	US	Deutsche Börse	Germany	2,811*
Oct-07	Borsa Italiana	Italy	London Stock Exchange	UK	2,617
May-08	Montreal Exchange	Canada	TSX Group	Canada	1,070
Jan-07	New York Board of Trade	US	Intercontinental Exchange Inc	US	1,066
Mar-07	Archipelago Holdings	US	New York Stock Exchange	US	884
					<b>51,166</b>

\* Deutsche Börse Group 2007 Annual Report

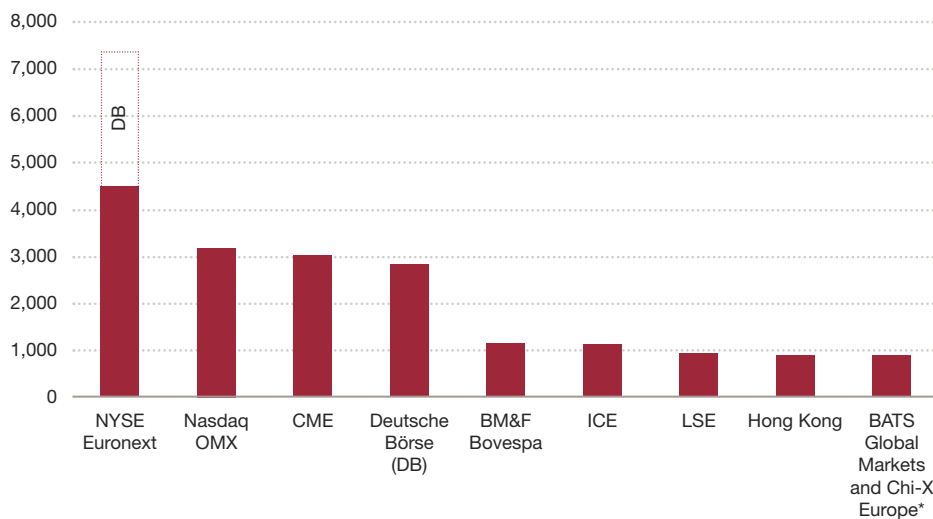
Source: Dealogic

*“It is ironic that in their bid to break up the national monopolies of exchanges, regulators seem to have created global ones in their place”*

Steve Grob – Director of Group Strategy, Fidessa  
[www.fragmentation.fidessa.com,feeding-frenzy](http://www.fragmentation.fidessa.com,feeding-frenzy), March

**Figure 3: Total revenues 2010**

USD in millions



■ As reported

Source: 2010 Annual Reports

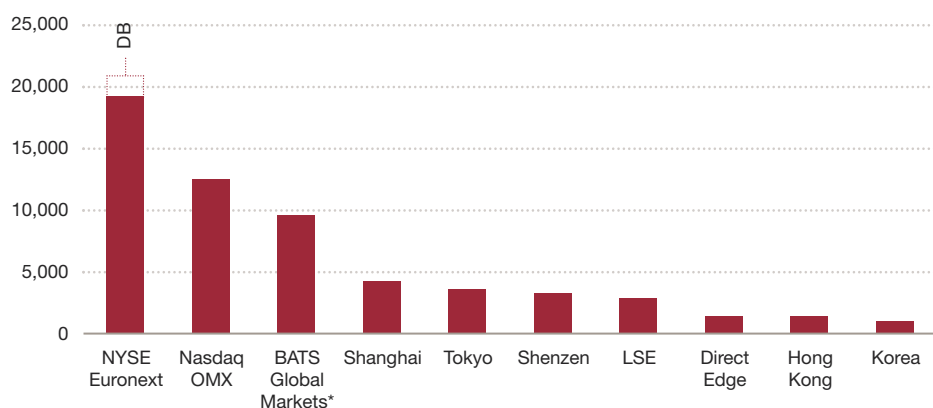
\* BATS Global data based upon 2010 unaudited public figures filed with US SEC on 13 May 2011; and Chi-X Europe data based upon the 2010 audited public figures

*“Securities regulators should welcome these consolidations, but competition regulators may be concerned.”*

Arvey Pitt Former SEC Chairman  
Interview with CNBC, February

**Figure 4: Electronic trading order book value traded in 2010**

USD in billions



■ As reported

Source: Thomson Reuters Equity Market Share Reporter

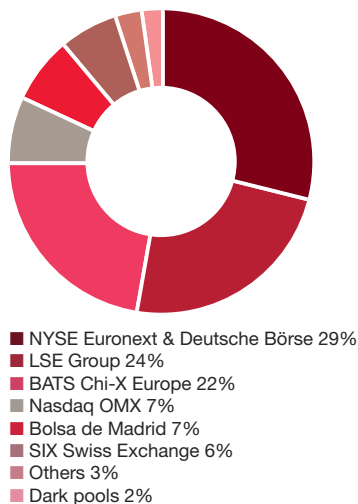
\* Includes Chi-X Europe

However, just as these larger exchanges were emerging, regulators in Europe and North America stepped in to open up the market to new low-cost entrants, including Chi-X, BATS Global Markets and Direct Edge (see Figure 4). Some of these new entrants managed to secure market share, not only through competing on price, but also by offering traders alternative pricing models. The traditional model of maker-taker, whereby traders are incentivised to execute large orders for shares with tight spreads by receiving a rebate once they have given a quote, was replaced for the taker-maker model. Under the latter structure, rebates are offered for accepting quoted prices rather than creating them and then being charged for execution. This model is intended to attract high volume traders willing to accept a weighted average price between the spread who, in return, would benefit from reductions in their overall transaction costs.

6 Notably through the EU Markets in Financial Instruments Directive (MiFID), which came into force in 2007

Figure 5: Market share: equities (turnover) – Europe, USA and Canada

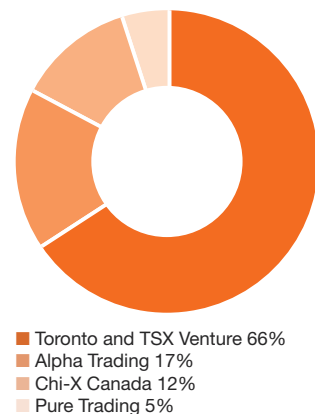
## Europe



## USA



## Canada



Source: Europe – www.batstrading.com; and Thomson Reuters Equity Share Reporter as at 4 May 2011

*“With the competitive threat from alternative trading pools it makes strategic sense for traditional exchanges to combine resources so they can compete better.”*

Neo Chiu, Senior

of Equity Research at BNP Paribas  
BBC News, February

While the new entrants found themselves severely tested by the market dislocations of the financial crisis, Chi-X and BATS Europe had together captured more than 50% of the market share in European share trading by the time of their merger announcement in February 2011. A similar trend emerged in the US, with BATS Global and Direct Edge having taken 30% of the US equity market by the end of 2010, putting them at number three and four in the market, respectively (see Figure 5).

As prices have fallen, exchanges have looked to consolidation to enable them to increase market share and sustain margins. The challenge is heightened by the growing demand for faster and more sophisticated trading technology, with exchanges investing considerable sums in IT systems in an effort to retain and attract customers.

The result has been a fresh wave of planned mergers. This includes the tie-up between NYSE Euronext and Deutsche Börse, along with the aborted merger between the LSE and TMX.

In their search for growth, some of the larger Western exchanges have turned to the Middle East region. In 2010, NYSE Euronext acquired a one-third stake in NYSE Dubai (formerly Dubai International Financial Exchange) with Dubai Bourse retaining the remaining stake. NYSE Euronext also entered into a technology trading partnership with the Abu Dhabi Stock Exchange in 2010. In the same year, NYSE Euronext acquired a stake in the Qatar exchange.

### Fresh options

As an alternative to consolidation some exchanges have sought to diversify their revenue streams to include data and post-trade services. Some exchanges have greatly benefited from this strategic move and reduced dependence upon the crowded cash markets.

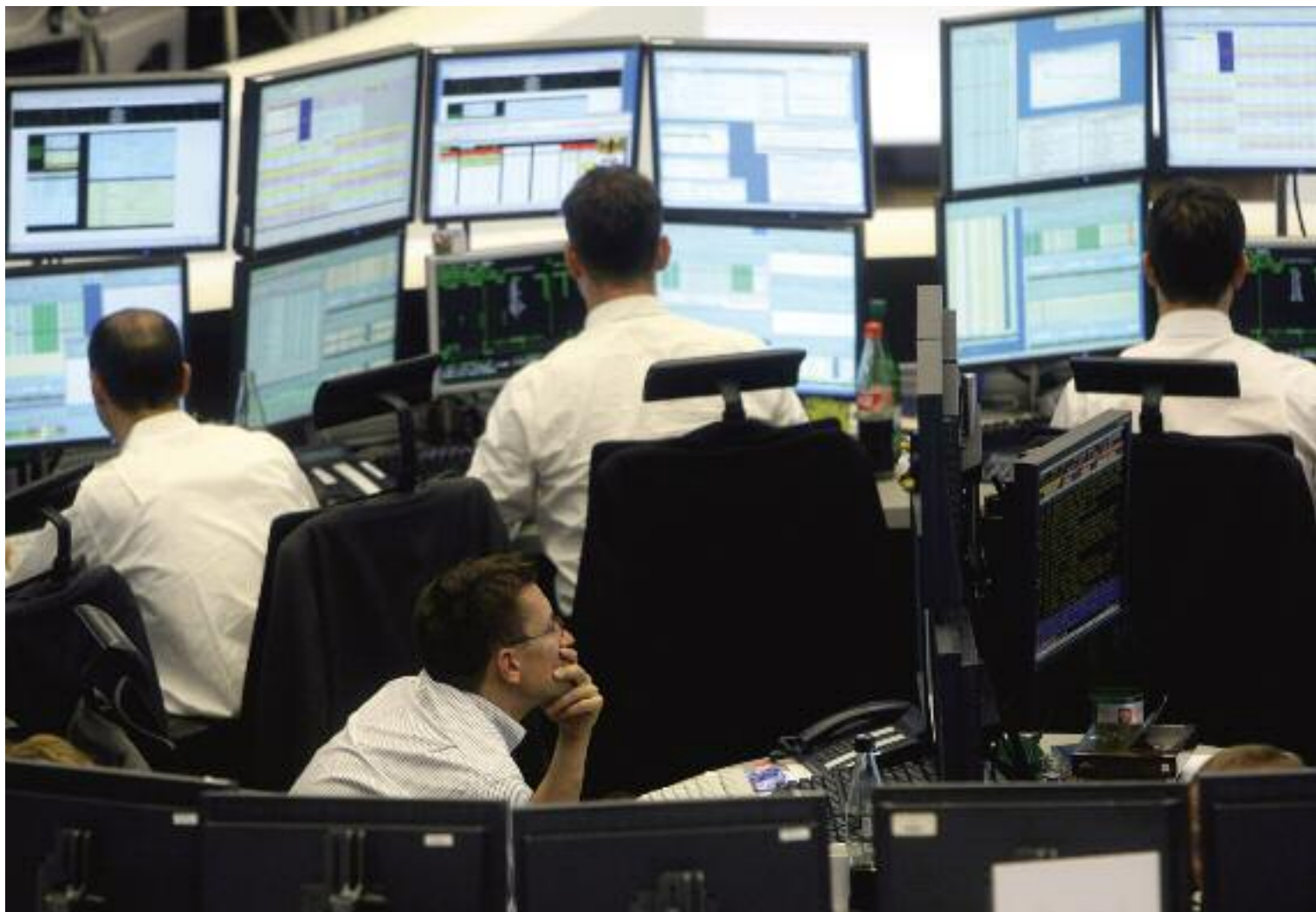
In the quest to develop services and find new products, many exchanges have been launching new securities. The secondary market for carbon certificates and tradable energy securities is a case in point. Exchanges such as the Intercontinental Exchange in the US and TMX's NGX in Canada offer energy exchange platforms for both physical and derivative products, together with clearing and settlement services. Indeed, it is feasible that the secondary market will continue to evolve to include more innovative products such as luxury goods and art.

7 BATS Europe media release, 18.02.11

8 Nasdaq OMX press release, 18.11.08

9 NYSE Euronext press release, 19.06.09





## ***Trading developments***

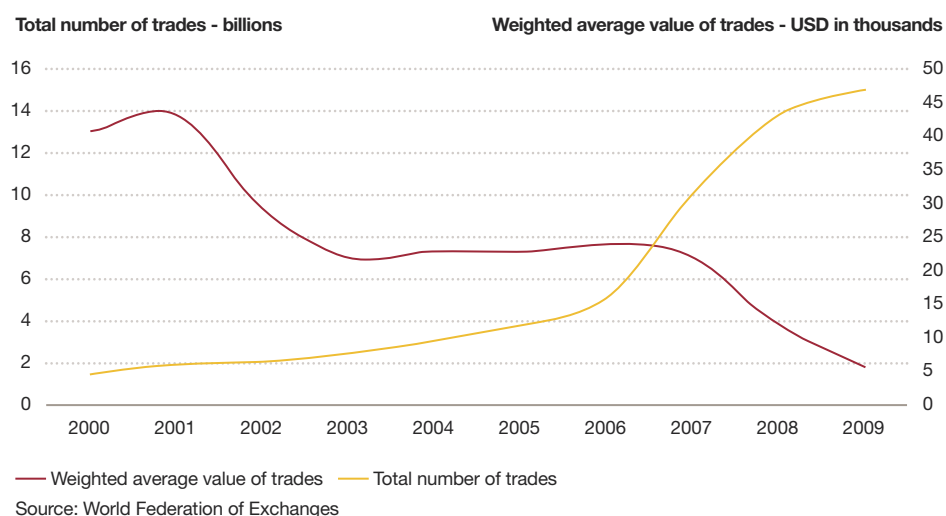
The average value of trades has dropped considerably in recent years (see Figure 1). In large part, this can be attributed to the emergence of algorithmic trading, which is a form of automated trading that breaks up large blocks of shares to manage risk and the impact on the market. Coupled with the effect of dark pools, exchange orders by average value have gradually fallen as opportunities to mitigate the potentially adverse effects of large block trades have become available to investors.

Another key trend has been the increase in the number of trades. In part, this has been driven by high-frequency trading (HFT), whereby traders execute rapid orders using high-tech software to take advantage of fine price margins between exchanges.

HFT has attracted regulatory scrutiny with some regulators concerned that rogue or erroneous high-frequency orders could destabilise markets, as happened with the US Flash Crash in May 2010. Regulators are likely to seek to impose stricter oversight over

HFTs and will principally be trying to ensure that appropriate risk management procedures are implemented by those who trade in this manner.

This has highlighted the need for exchanges to invest continually in their technology and compete for market share by offering customers ever more efficient means to source liquidity and execute trades. Interestingly, consolidation of the exchange sector and aggregation of liquidity would be disadvantageous for HFTs, as they benefit from a highly fragmented market that allows arbitrage to take place.

**Figure 6: Volume vs. value of trades (global)**

This increased volume and frequency has placed huge extra operational demands on exchanges. Developments in technology have been critical in enabling the larger exchanges to keep pace with this upsurge in activity. At the same time, many of the smaller exchanges have sought partnerships with their larger counterparts.

### **Dark pools and pricing transparency**

Dark pool trading is growing, though lighter regulation and reporting requirements mean that the bulk of this business is going to banks. However, banks' dark pools could soon fall under the same multi-lateral trading facility regulatory category as exchanges, creating a more level playing field and bringing more trades to exchanges. In the months to March 2011, total off-exchange (OTC) traded equities (this includes Broker Crossing Networks and dark pools) accounted for 40% of equity trading across Europe.

One of the goals of MiFID is to inject transparency into the market. As a result, many European dark pool operators are becoming increasingly concerned that their unique selling point, the ability to efficiently match trades hidden from the market, will be lost if they are forced to quote pre-transaction data publicly.

In the US, dark pools as off-exchange trades (including Electronic Communication Networks) accounted for 10% of all equity trades in 2010. Like the European Commission, the SEC has raised concerns over the pricing environment that dark pools create and is reviewing the potential impact on investors and market stability. While it would appear dark pools are here to stay, in all likelihood, regulation of these platforms will become ever more stringent.

In the quest for greater price transparency, European regulators have included data pricing on the agenda when reforming MiFID (commonly known as MiFID II). Specifically, this involves the idea of creating a consolidated data tape in much the same way as prices are quoted in the US. European platform prices would be aggregated to generate a single data source, potentially increasing transparency and lowering costs for the end user.

The regulator's job is to codify the process and create a common set of rules to allow the consolidation of data. Data service provider Thomson Reuters recently wrote a paper exploring this concept and concluding that it supports a modular approach underpinned by regulatory action.

10 www.thomsonreuters.com – 'Monthly market share reports', March 2011

11 Thomson Reuters Equity Market Share Reporter

12 Reuters, 20.01.11



## Derivatives

Most derivative contracts are currently traded bi-laterally in over-the-counter (OTC) transactions, a market worth c. \$10 trillion. By requiring the standardisation and centralisation of derivative contracts, the US Dodd-Frank Act and Europe's Market in Financial Instruments Directive (MiFID) mean that they are more likely to be traded through exchanges and the clearing houses they control. This could create hugely valuable growth opportunities which may further encourage exchange groups that focus primarily on equities to bolster their derivative trading operations through acquisition.

These regulatory changes have given rise to Organised Trading Facilities (OTFs), which are derivative trading platforms for OTCs similar to the Multilateral Trading Facilities (MTFs) used for cash securities. At present, it is unclear what proportion of the market these OTFs will capture. For now, many think this will transform European derivative trading and potentially transfer a significant amount of revenue from the dealers and banks that traditionally brokered these transactions to the exchanges and OTF operators.

In a bid to enhance liquidity and promote transparency, US legislators have announced the creation of SEFs (Swap Executive Facilities), platforms upon which OTC derivatives will be traded (the US equivalent to the OTF). These platforms are similar to the MTFs in that they will allow prices to be publically displayed, promoting greater levels of fungibility of the traded contracts. i.e. increasing the interchangeability of OTCs to the extent that they become commoditised.

Banks which currently trade OTCs under the old system stand to lose market share to the operators of SEFs and centralised clearing houses as a result of the legislative reforms. The need for some exchanges to capture a share of the OTC market will be fundamental for growth and will be a key factor when making strategic decisions.

A number of exchanges have attempted to acquire their own central counterparty clearing house (CCP), creating what is known as a vertical silo. However, these silos are under threat from further competition and potential regulation that will promote interoperability.

## Clearing and interoperability

In conjunction with the MiFID reforms, the European Commission published its European Market Infrastructure Regulation (EMIR) paper in September 2009. These proposals seek to increase the stability of the OTC market by ensuring that such contracts are centrally cleared and imposing rules to establish greater levels of interoperability (ability for trading parties to select different clearers).

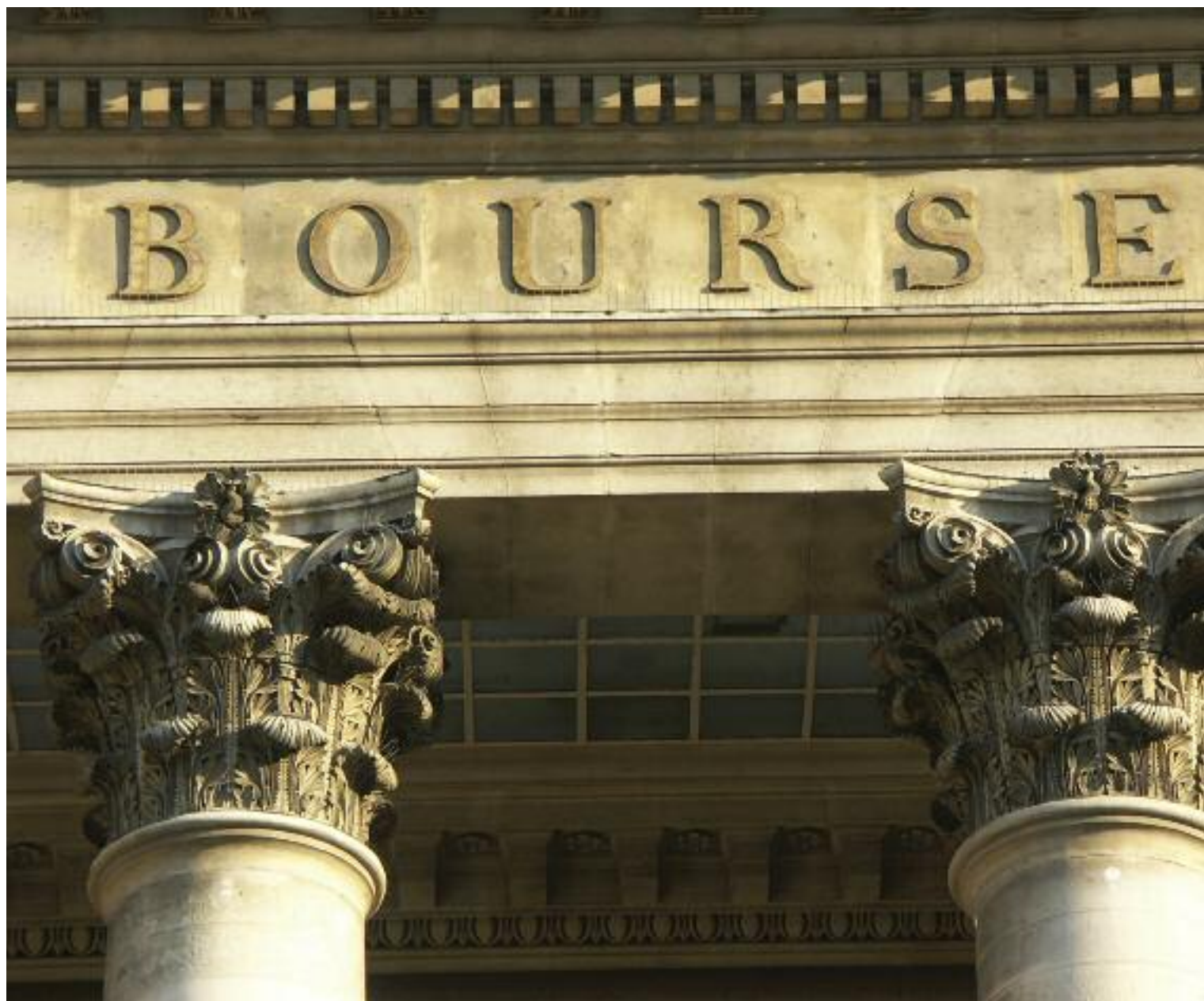
If the EMIR forced clearing platforms to be more open in an effort to boost competition, specialists such as LCH.Clearnet would be better positioned to compete with the exchange silos in much the same way as MiFID allowed Chi-X and other new entrants to gain equity trading market share from the national stock exchanges.

The fragmentation of clearing within Europe (and many other parts of the world) results in investors having to put up more margin than might otherwise be required.

While there have been some moves towards greater interoperability among clearing houses, this may be accelerated by the EMIR proposals, which would break the lock-in between exchanges and clearing houses altogether. In the face of possible regulatory reform and the emergence of new trading venues, some European clearers have cut their clearing fees, potentially setting the stage for further industry consolidation.

*“We believe that this is the beginning of a consolidation wave and not the end...”*

Duncan Niederauer – CEO NYSE Euronext  
Shareholder meeting, 11 April 2011



### ***Where next?***

As consolidation gathers pace, the remaining independent exchanges may choose to partner with one of the big players.

In the US, there are major cash market players seeking to compete on size and reach, while specialist exchanges operate in the derivatives and commodity markets. The latter have been better placed to protect their market share because of the highly specialised services they offer and their retention of in-house processing and clearing (vertical silo).

With the exception of ICE, most of the major US futures and options exchanges have remained out of the recent M&A wave. This is potentially due to the fact that these exchanges are exposed to different pressures from the cash equity operators and are not dependent on sheer scale to ensure their competitiveness is maintained. Their strategies would appear to differ. For example, the CME group, owner of the Chicago and New York Mercantile Exchanges, has indicated that it is reluctant to join the M&A rush, citing a preference for organic growth of its core business. However, one possible scenario is CME will continue to invest in South America as an alternative to

forging ties with a US counterpart. This follows the order routing and direct market access agreement signed between CME Group and BM F Bovespa in 2007. The Chicago Board of Exchange (CBOE), on the other hand, may be taking a different stance, with press reports suggesting that it might be more open to strategic transactions.

It is unclear whether the smaller European bourses will be swallowed by the big players in the immediate future, as there may be too few synergies to justify these transactions. Either way, it would appear that the long-term viability for Europe's smaller exchanges is dependent upon being either a niche player promoting small cap interests or part of a larger group seeking market share growth.

With a market capitalisation of €1.5 billion, the Spanish Bolsa de Madrid is the largest of the European exchanges to remain outside the control of one of the major international groups. Press comment suggests that it was approached by Deutsche Börse in 2007, though no deal materialised. The Bolsas y Mercados Españoles, Bolsa de Madrid's parent company and operator of all Spanish exchanges (including MEFF, the futures and options exchange), is reported to be interested in investing in a planned pan-Andean exchange as it looks to strengthen its ties with Latin America.

Most of the Scandinavian exchanges were amalgamated into the OMX, which itself was acquired by NASDAQ in 2007. The notable exception is Norway's Oslo Bors, which has remained independent. The exchange is owned by Norwegian bank DnB NOR AS, which has rejected a number of offers in recent years. The exchange has instead been sharing technology platforms with the LSE and TMX.

The SIX Swiss Exchange has engaged in M&A activity in recent years by jointly acquiring Dow Jones Stoox index with the Deutsche Börse. However, it appears to want to remain focused on the Swiss financial sector. As the Chairman of SIS Group, Dr Romeo Lacher, commented

*"Our new enterprise is committed to the Swiss financial centre and will ensure the long-term Swiss sovereignty of the country's securities trading activities and all related services."*

Russian exchanges MICEX and RTS have long been trying to extend their reach into the European market. In December 2007, press commentary suggested that they had been in discussions with the Deutsche Börse over the possibility of forming trading alliances to gain access to each other's investor base. In June 2008, the two exchanges, with the support of the Russian government, announced they would merge in a deal worth €1.5 bn.

Austrian Wiener Börse is believed to be keen to focus on its regional market. The exchange believes that in certain markets, strategic alliances and technology sharing schemes offer viable alternatives to full-scale mergers. The group has been pursuing data alliances with many of the Eastern European exchanges and has recently added the Belgrade Exchange as the ninth member.

The Gulf stock exchanges are facing challenging conditions. The UAE hosts three exchanges – NASDAQ Dubai, Dubai Financial Market (DFM) and Abu Dhabi Securities Exchange (ADX). These exchanges have suffered significant falls in volumes following the financial crisis. Press reports suggest that a potential merger between DFM and ADX could be possible, giving rise to the second largest Arab exchange by combined market capitalisation after Saudi Arabia's Tadawul.

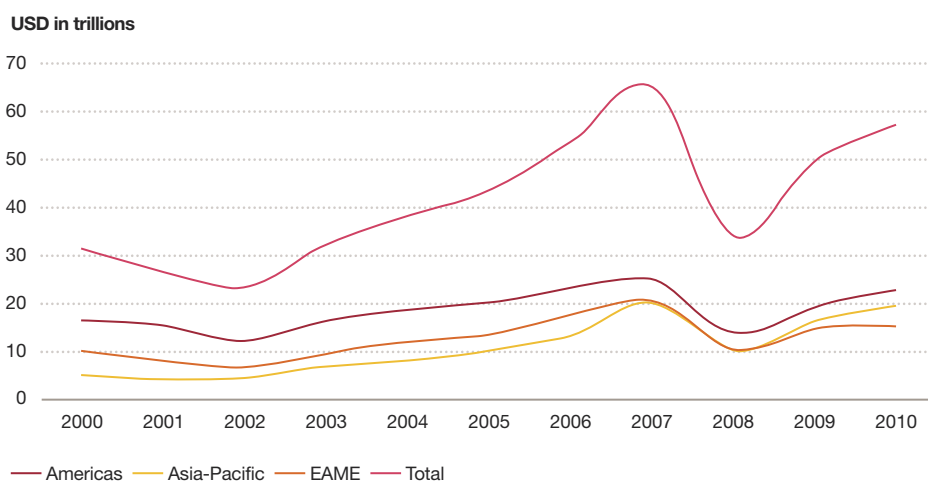
Were the members of the Gulf Cooperation Council (GCC) ever to achieve monetary union, this could provide an additional boost for the Gulf exchanges as it could reduce many of the cross-border costs and regulatory issues from trading in the region, boosting liquidity and paving the way for exchange mergers.

15 CME Group press release, 29.09.08

16 NASDAQ OMX press release, 12.12.07

17 Oslo Bors press release, 12.03.09

18 MICEX press release, 29.06.11

**Figure 7: Market capitalisation – value of listed equities**

### **Increased competition**

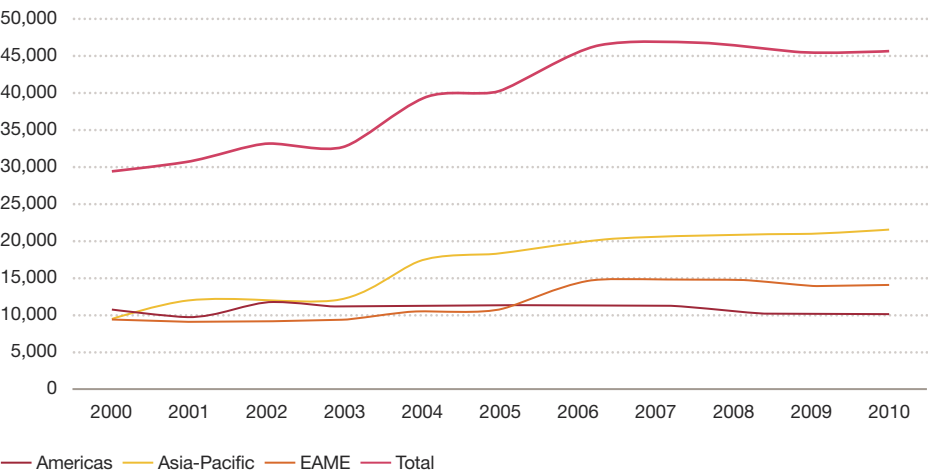
As Figure 7 highlights, the Americas (dominated by the US exchanges) still has the highest market capitalisation of the three main time zones, though it is Asia-Pacific that has been growing the fastest. Asia-Pacific also accounts for almost all of the increase in the number of listed companies (see Figure 6). As growth in Asia-Pacific continues to accelerate, market capitalisation and associated share trading values/volumes will increase accordingly.

In the face of these evolving global trading flows, Western exchange groups will need to look closely at what strengths they can leverage, either in competition or collaboration with their emerging market counterparts. Potential advantages include powerful and sophisticated IT platforms that can provide global trading facilities wherever the company or investor is located. They can also draw on a pool of skills and market support in areas such as investment banking, accounting and fund management.

The key to success will be identifying the right partners and what complementary strengths each can bring to bear. This may be through innovation and IT strengths on the one side and access to key growth markets on the other. Underlying considerations include the balance between derivative and equity trading and how well set up the company is for further integration and growth.



Figure 8: Total number of listed companies



Source: World Federation of Exchanges





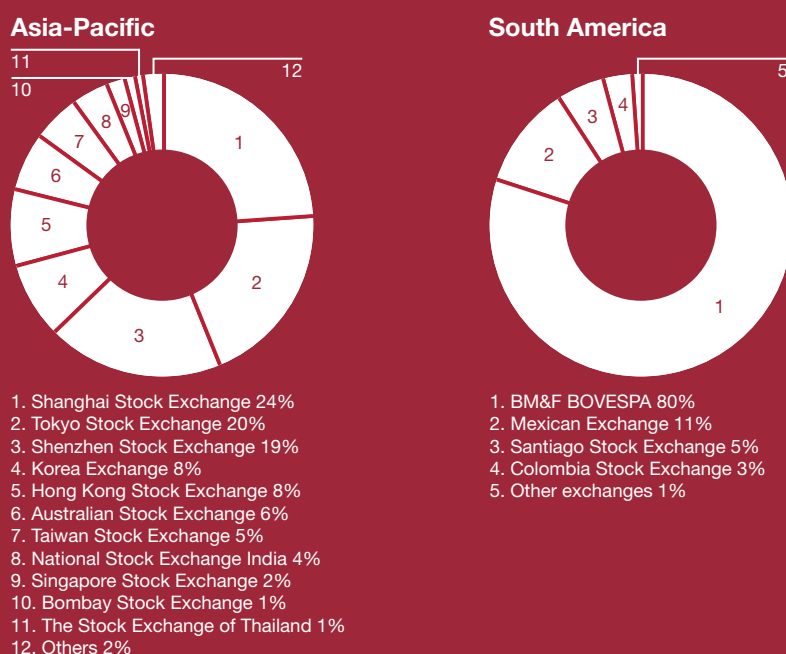
## Section 2

# Asia, South America and Africa

*“There is no doubt that the world of exchanges is changing; competition will become more and more fierce.”*

Magnus Bocker, CEO Singapore Exchange  
4 May 2011

**Figure 9: Market share: equities (turnover) – Asia-Pacific and South America\***



Source: Asia-Pacific – Thomson Reuters Equity Share Reporter as at 4 May 2011; and South America – World Federation of Exchanges data (1 January - 30 June 2011).

\*Comparable data for African exchanges is not available.

In October 2010, the Australian Securities Exchange and Singapore Exchange announced plans to merge in a deal worth \$1.5 bn, although recent intervention by the Australian government blocked the merger, on the grounds that such a tie-up would be against national interests. Nonetheless, the announcement of this planned merger, coupled with the transatlantic M&A activity, has encouraged other Asian exchanges to consider their options.

Any moves may take time, however. The Asian exchange market is fragmented and governed by different regulators and ownership structures.

The Hong Kong Stock Exchange, for example, is emerging as a dominant player in the region and has hosted a number of high-profile listings in recent years as Western companies seek to gain greater access to the Asian investor base. Hong Kong mirrors some of the Western exchanges in that it is a listed entity and open to foreign capital flows. However, press comment suggests that for now, it would favour strategic alliances and diversification into the derivatives market over a merger with another cash trading powerhouse.





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# Conclusion

*Nationalist interests and regulatory obstacles have hampered a succession of recent proposed mergers amongst some of the Western exchanges. It brings into question whether further cross border consolidation is really feasible and perhaps marks the time for reconsideration of global strategies. Indeed, strategic alliances, technology sharing initiatives and small bolt-on acquisitions have allowed the larger Western exchanges to continue their entry into new markets and expansion of their service offerings. These have challenged the notion that economies of scale through large acquisitions is the only remaining tool left within their armoury.*

Some Asian and other emerging market exchanges also face regulatory regimes that favour the status quo. This raises uncertainty as to how easy it will be for them to engage in cross border transactions in the short term. Nonetheless, capital market growth will undoubtedly spur on M&A activity within these regions over the next few years as these players seek to globalise their business models, moving away from industry structures founded on isolated regional liquidity hubs.

We can be sure that the future of the global stock exchange sector is one dominated by a few highly integrated market players. Who these market leaders will be and the path they choose to get there, remain unknown.

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- lead advisory corporate finance.

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