ASIC

Australian Securities & Investments Commission

Exchanges in Asia: Trends and perspectives

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[1] The views expressed are my views and not the views of ASIC or the Australian Government. I acknowledge and thank McKinsey & Company for allowing me to use a number of their slides in this paper.

Introduction

Good morning and thank you for asking me to speak to you this morning. I first met Thomas Krantz, Security General of the World Federation of Exchanges (WFE) in October 2004 at a WFE conference and, as it turned out, it was my first day as CEO at the Australian Securities Exchange (ASX). He asked difficult questions then and six-and-a-half years later he continues to ask me difficult questions, such as those embodied in this topic of trends and perspectives on the development of exchanges in Asia. Although during that time I moved from CEO of ASX to Chairman of ASIC, our closeness has remained, and I would like to take this opportunity to thank him and to thank the WFE and the International Options Market Association (IOMA) for their important work in the exchange industry.

I would also like to take the opportunity to acknowledge and congratulate our host, the National Stock Exchange of India (Mr Ravi Narain), and to acknowledge the Securities and Exchange Board of India (SEBI). ASIC and SEBI have an excellent relationship and I have been privileged to know and work with the SEBI's former Chairman, Chandrasekhar Bhave, and more recently with SEBI's new Chairman, U.K. Sinha.

Now, to the topic itself—as I said it is not an easy topic, as the dynamic nature and the complexity of the exchange industry makes it difficult to predict trends and formulate perspectives on future developments.

The way I will approach this topic is to make three key points and then develop three scenarios and, in that way, identify the key issues the exchange industry faces and will face over the next three to five years in Asia.

From that analysis, the key takeout I will respectfully leave with you (for your assessment) is that the exchange industry in Asia is now at an important point in its development. It has the opportunity to make the most of the growth opportunities outlined and to learn from developments in Europe and in the United States, but to take advantage of that opportunity it will require a close dialogue and close cooperation within each jurisdiction and regionally between:

- the operators of the exchanges, be they incumbents or new entrants; and
- the rule makers for exchanges, be they policy makers or regulators.

This close dialogue and cooperation will need to be more than the usual consultation and sounding out that jurisdictions may make for other industries. This is because the exchange industry is different—it is a vital part of the financial system and infrastructure of each economy and, as a result, it is highly regulated. What is more, some of that regulation is provided by the exchanges themselves. This close dialogue and cooperation will need to play out at a local as well as a regional level. The need at the local level is clear, but regionally it is important as well. The global nature of financial markets, the potential cross-border systemic issues that we saw during the global financial crisis (GFC), and the need for regulators and policy makers to have confidence in market integrity issues when, for example, it comes to assessing such matters as cross-border listings and cross-border consolidations.

So my suggested takeout for you is not a solution but a process—an important process that will involve a close dialogue and cooperation between the incumbents and new entrants, and policy makers and regulators. In my view, this close dialogue and cooperation, if given the necessary priority by those involved, will lead to a possible blueprint for handling the many issues (which I will talk about shortly) that are confronting the industry and, in doing so, provide practical guidance for policy makers and regulators, and incumbents and new entrants; for example, for assessing new forms of trading, the entry of new players and potential cross-border consolidations.

Such a blueprint should lead to a clearer evolution of Asian exchanges to a position of sustained strength that allows innovation and progress to meet the needs of this growing and dynamic region. Without such a blueprint, the exchanges in Asia could be at risk in not making the most of the available opportunities.

We have seen good examples of the sort of close dialogue I am referring to post GFC with bodies such as the International Organization of Securities Commissions (IOSCO) and the Financial Stability Board (FSB). For this region, bodies such as the WFE and the IOSCO Asia Pacific Regional Committee (now headed by Chairman Sinha of SEBI) may be useful forums.

Let me now move to the analysis behind this takeout and move to the first of my three points. It is relatively a simple point for an audience such as this but worth restating.

Importance of exchanges in Asia

My first point is that exchanges in Asia are already very important to the economies where they are located, and will remain vitally important in each jurisdiction.

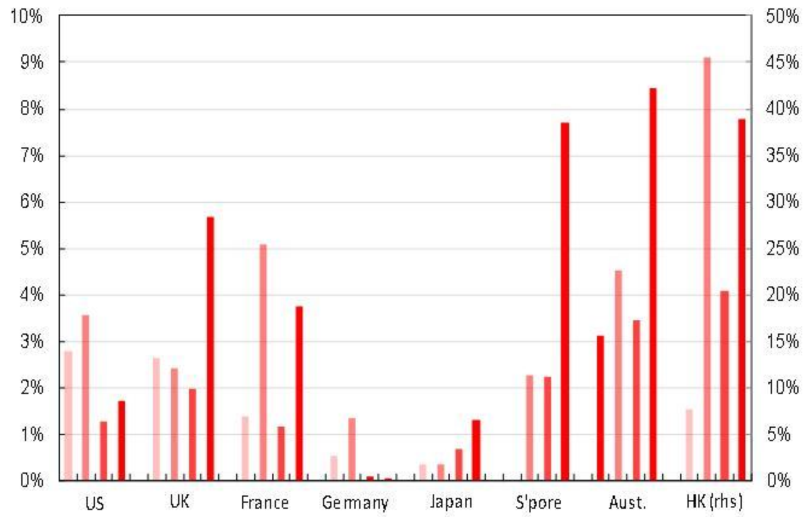
Vibrant exchanges play an important role in capital raising and for trading risk.

This slide shows equity capital raisings as a percentage of gross domestic product (GDP) for some major countries and some Asian comparators. You will see:

- in the United States, equity capital raising in 1995 and 2000 ran at around 3% of GDP before falling away;,
- in 2009 it has been over 5% of GDP in the United Kingdom; and,
- less in Germany and Japan, but around 8% in Singapore and Australia, and almost 40% in Hong Kong (because of international issuers).

Stock markets as a conduit for capital raising (equity capital raisings as a % of GDP) – five yearly intervals, 1995 to 2009

(Hong Kong measured on the right hand side axis)



Source: World Federation of Exchanges

Equity markets are also important for building the set of assets that local and international fund managers can invest in, and helping diversify the asset holdings of retail investors away from bank deposits.

This capital formation function in each economy is important to policy makers and regulators and is the most enduring explanation of why they take a close and active interest in the exchange industry.

The outlook for growth in exchanges in Asia is bright. The International Monetary Fund (IMF) and other official forecasts show Asia is contributing and will contribute more of world growth in the future, with attendant fixed capital investment needs.[2] As a result, demand for capital in the Asian region is

[2] IMF World Economic Outlook: Tensions from the Two-Speed Recovery: Unemployment, Commodities, and Capital Flows April 2011.

likely to be strong in the coming years, especially as the consumer markets develop.

Though Asian growth will see cyclical setbacks and corrections, the long-term trend is that of greater economic development and increased capital spending by corporations that needs to be funded.

Forecasts of capital issuance are notoriously difficult to make. However, we can support the idea that Asian equity capital issuance will be strong, at least in the medium term, by comparing recent levels of capital issuance across countries as development proceeds.

This slide sets out capital raisings in 2010.

Equity Capital Raisings in 2010

	Equity Capital Raisings			*Nominal GDP (US$b)*	*Total equity raisings (% of GDP)*
	IPO (US$b)	*Secondary (US$b)*	*Total (US$b)*		
Hong Kong	57.9	52.7	110.6	225.0	49.2
Shanghai	29.2	54.3	83.5	5,878.3	1.4
Shenzen	44.3	16.0	60.3		1.0
Australia	24.3	29.5	53.8	1,235.5	4.4
Tokyo	10.0	42.9	53.0	5,458.9	1.0
India	9.3	27.6	37.0	1,538.0	2.4
Korea	8.5	n.a.	8.5	1,007.1	0.8
Indonesia	3.3	5.2	8.5	706.8	1.2
Singapore	n.a.	n.a.	6.9	222.7	3.1
Other Asia-Pacific	n.a.	n.a.	9.1	1,592.0	0.6
Total Asia-Pacific	n.a.	n.a.	441.1	17,864.3	2.5
Total World	n.a.	n.a.	1,002.5	62,887.8	1.6

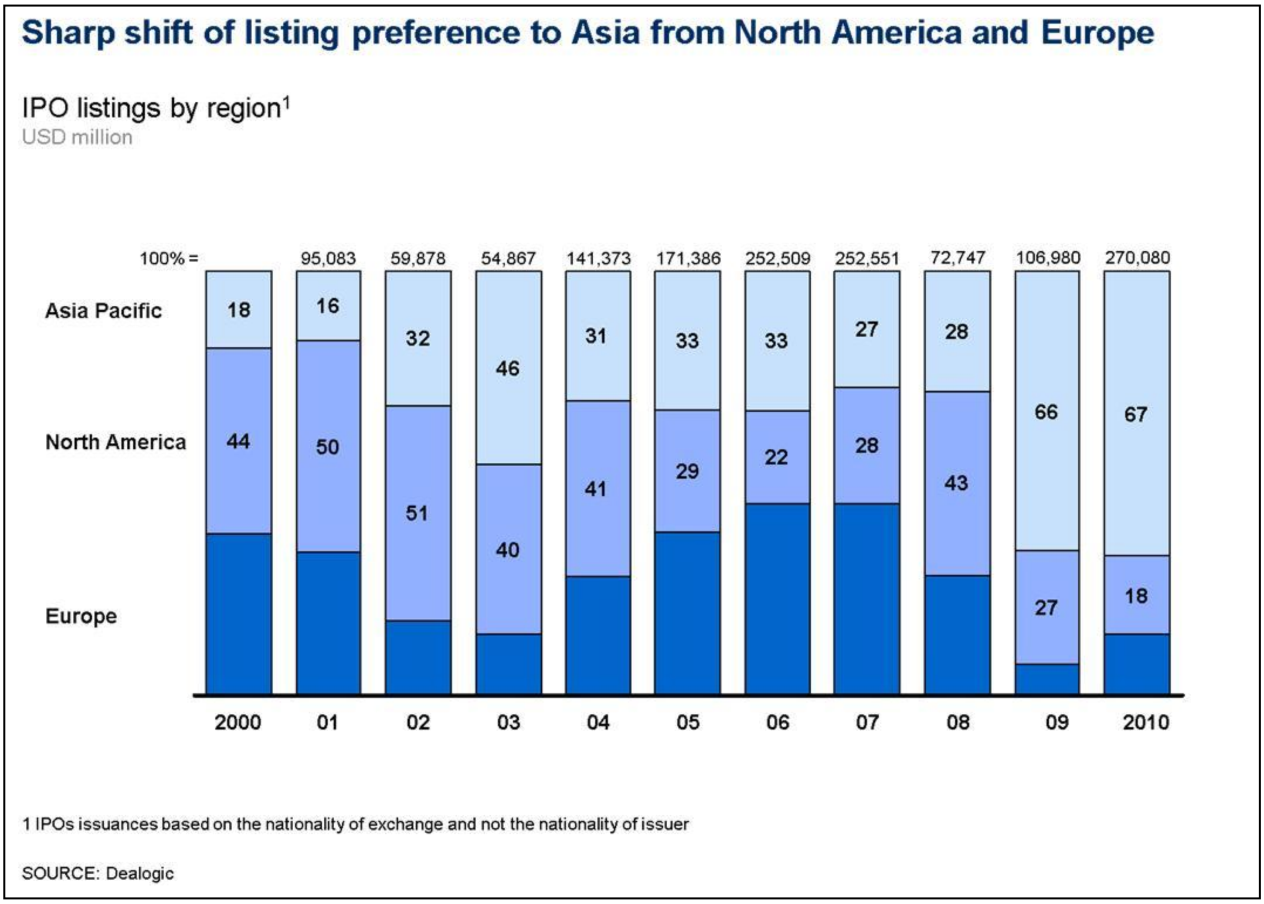
Sources: World Federation of Exchanges; IMF; OCE calculations

You will see that in 2010, Australian listed corporations raised US$53.8 billion in equity capital, equivalent to 4.4% of one year's GDP. In the same period, the total Asia-Pacific capital issuance by listed corporations amounted to US$441 billion—or 2.5% of the region's GDP. Assuming that the Asia ratio of capital issuance to GDP approached that of Australia, issuance in Asia should be around US$786 billion per year—or 80% higher than current levels.

Not all of Asia will necessarily see higher equity capital issuance. For instance, some countries will have a small ratio of raisings to GDP (say, around Japan's 1%), not because of underdevelopment, but more because the structure of the financial sector is biased towards bank deposits and bank debt instruments.

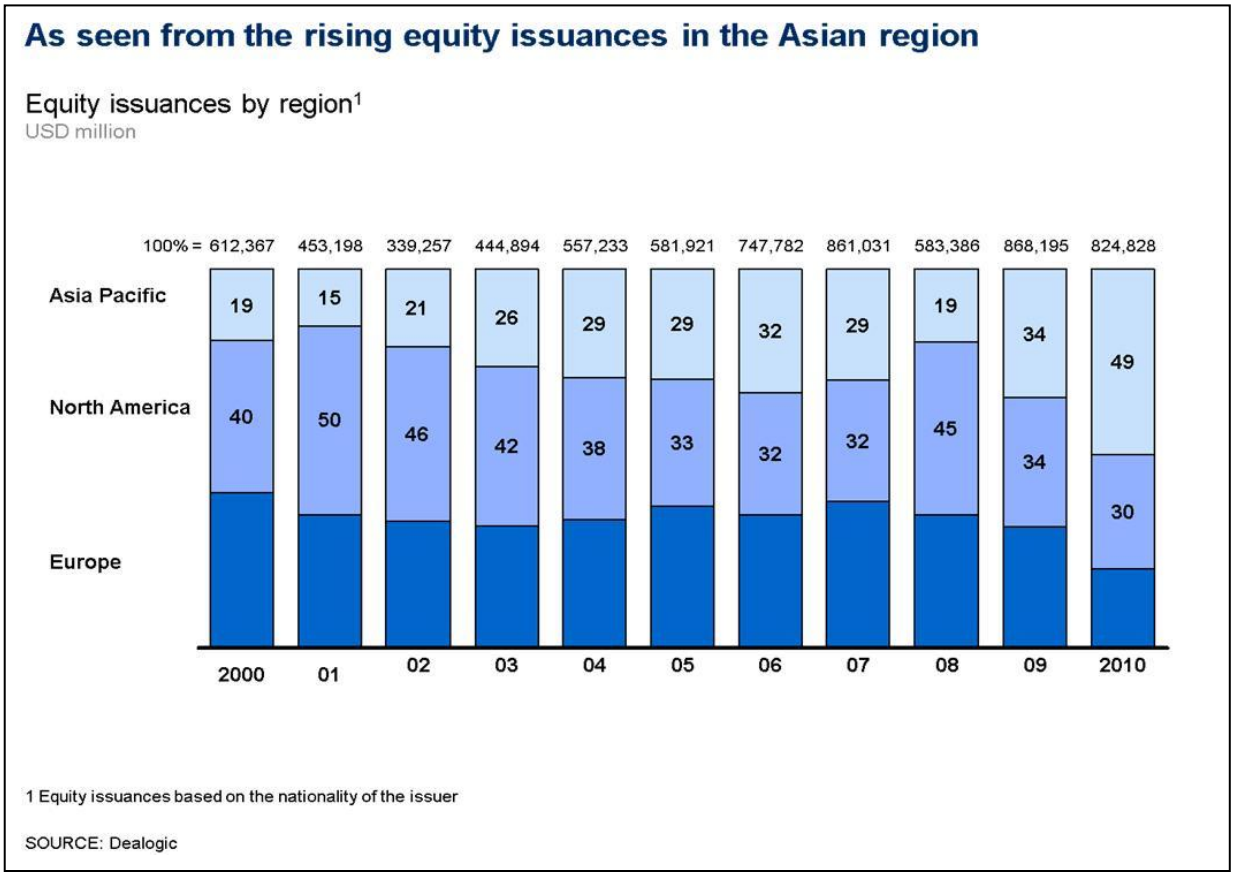
However, countries such as China and India are likely to see higher growth in their equity capital markets. In 2010, the Shanghai and Shenzhen exchanges saw a combined US$143.8 billion in equity capital issued, totalling 2.5% of Chinese domestic product. India has seen the issuance of a similar proportion of equity capital.

This slide highlights the growth in initial public offering (IPO) listings for Asia within the global total (2000–2010).



What the slide shows is that the percentage of total IPO listings (based on issuance by nationality of exchange) moved in Asia Pacific from 18% to 67% in the 2000–2010 period (top light blue).

You can see a similar trend with equity issuance (based on nationality of issuer) over that same.



This shift may in part be attributed to subdued activity in Europe and the United States post crisis. It is likely, however, with the growth in demand in Asia, that the preference in IPOs and equity listings will continue to rise (at least) in line with the trend that was becoming apparent before the crisis.

Let me now move to my second point—trying to look at the dynamics or drivers for change as the exchange industry seeks to seize the opportunity from the growth that I have just talked about.

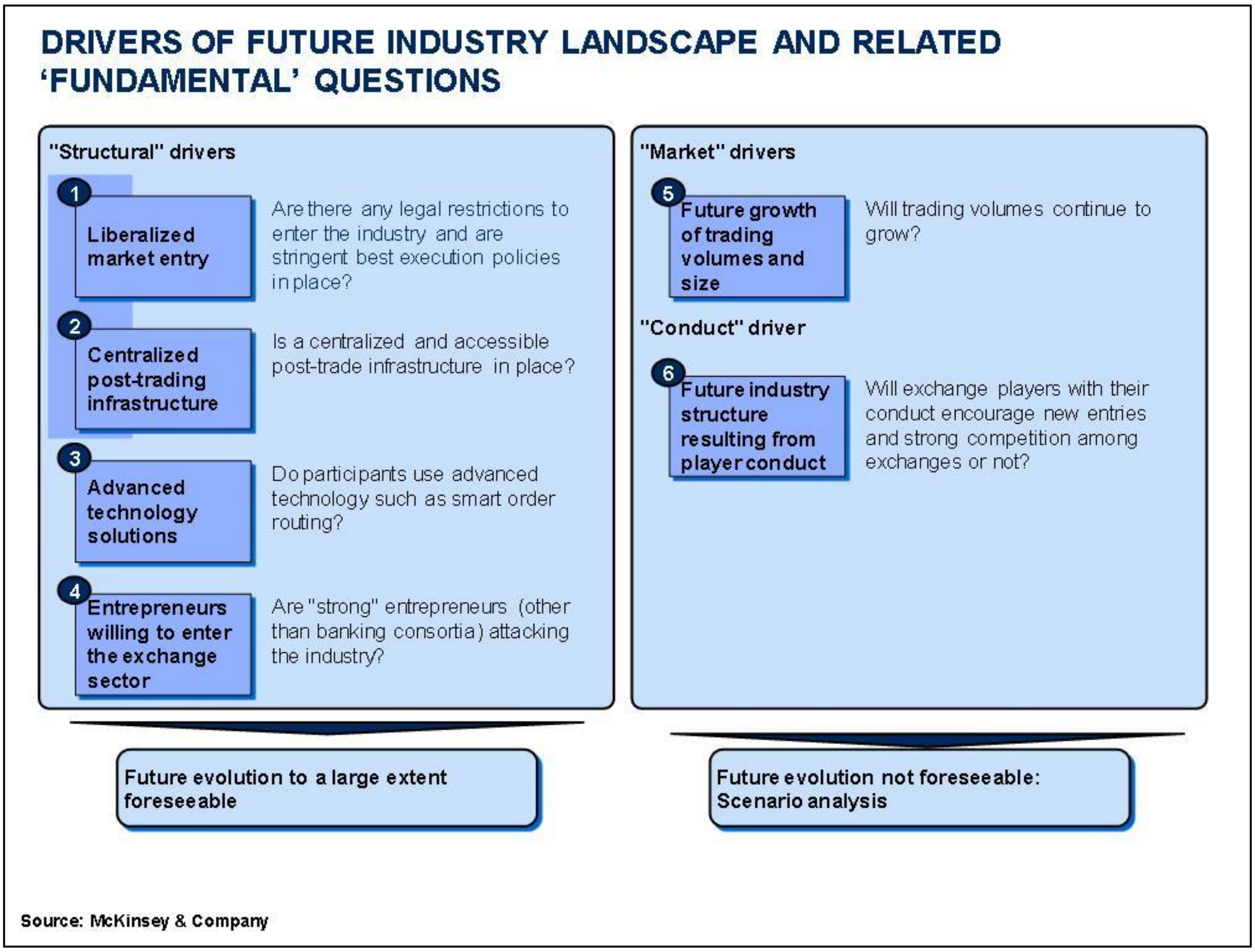
Drivers for change: the intensity of competition

My second point is that exchanges in each of the jurisdictions in Asia and regionally will continue to be subject to the same industry drivers for change (which I will call the 'intensity of competition') as we have seen in Europe and the United States, although Asia is at an earlier stage of development.

What do I mean? Let me try and explain what I mean with the next three slides.

This slide sets out the structural drivers in the exchange industry (on the left):

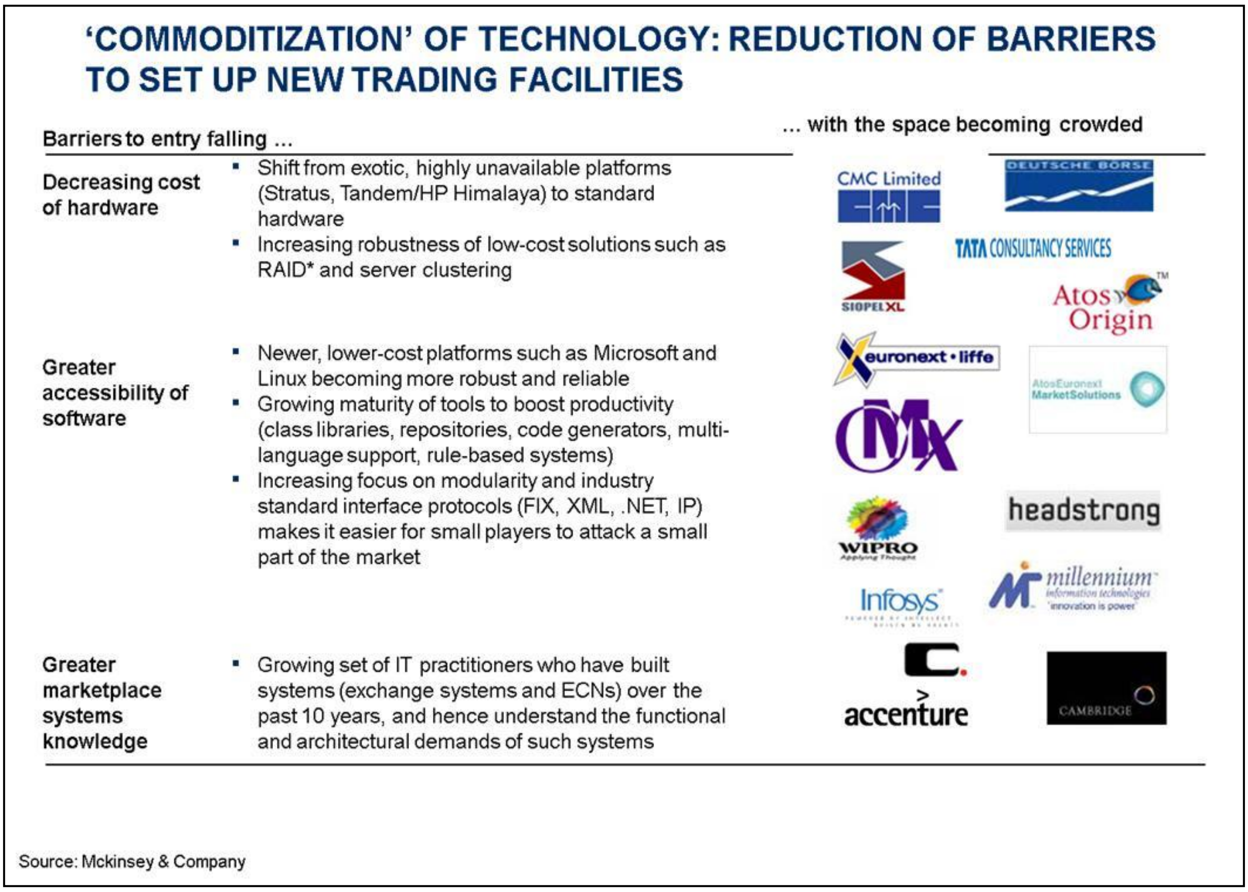
- clearly the regulatory framework—the ease of entry into the market is important;
- accessibility to post trade infrastructure (e.g. clearing and settlement) opens up new opportunities; and
- potential new entrants—this is particularly relevant for the large exchange markets. Do they see the opportunities and niches (e.g. to enter and compete)?



In addition to structural drivers, there are market drivers (on the right):

- clearly the outlook for growth and opportunity; and
- actions of incumbents will also be important: will they behave in ways (e.g. on price) that will encourage or put pressure on the need for competitors to enter the markets?

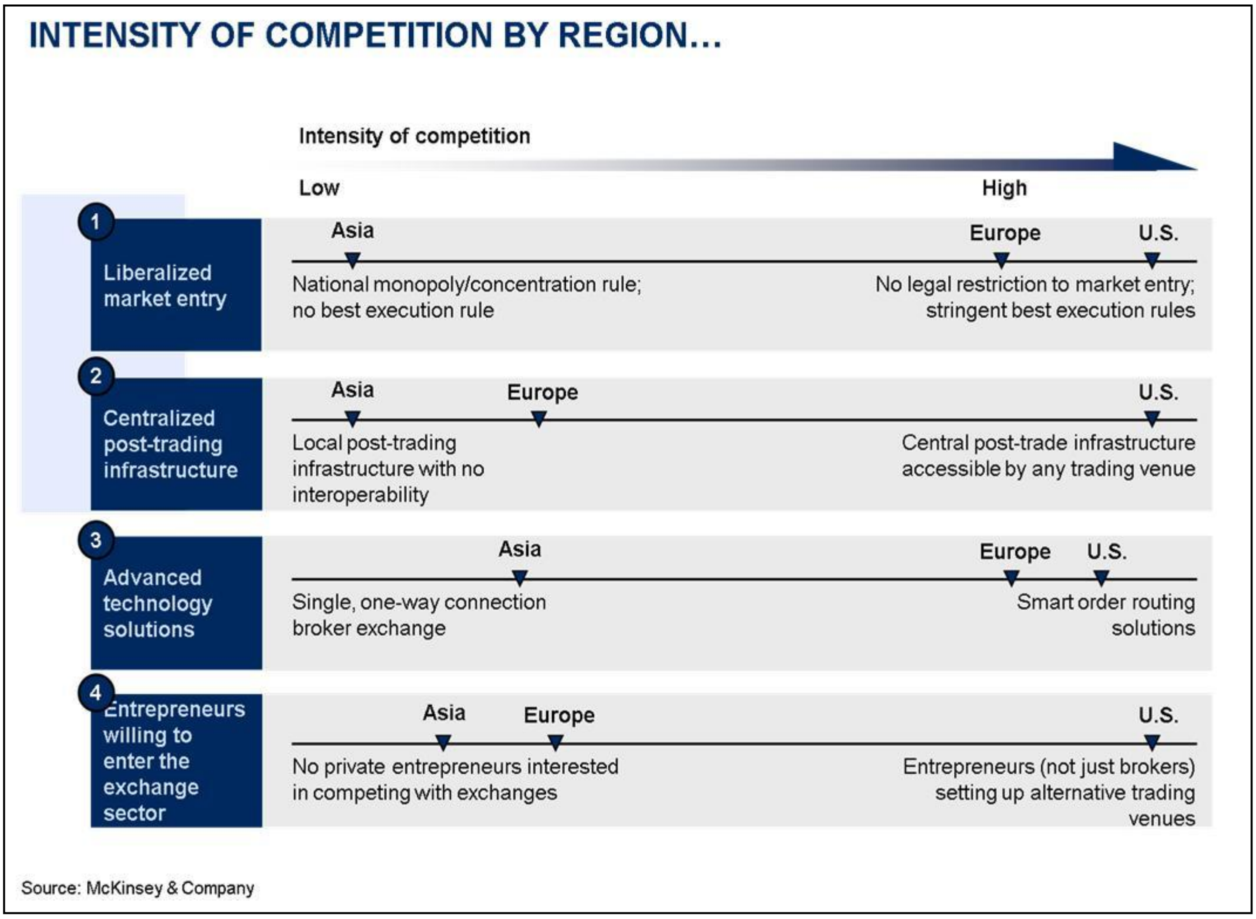
It is useful to illustrate these forces with an example—technology—with this next slide.



This is a busy slide, but its message is what you already know: that developments in technology are reducing barriers to entry into new markets. The other point in the slide is that there is a willingness and investment from the major technology players to invest in new systems for this industry.

When you look at these forces or drivers and how they are playing out, Asia is at a different (earlier) stage of development than Europe and the United States.

In this next slide we have tried to provide a graphic representation of where Asia sits at present. Two extremes are presented of each of the structural drivers with where Asia sits in relation to Europe and the United States. It moves from low intensity of competition to high. I am simply using it to illustrate my point that Asia is at an earlier stage of development than Europe and the United States when it comes to these drivers on what I have termed intensity of competition.



Now the move in intensity of competition (to 'high' in this slide) has not been without problems in Europe and the United States. This has prompted regulators such as the Autorité des Marchés Financiers (AMF), the securities regulator in France, to question the regulatory framework.[3] It has also prompted the European Commission to review the regulatory framework Markets in Financial Instruments Directive (MiFID) to further the objectives of MiFID: of improving the competitiveness of European financial markets and ensuring a harmonised, high degree of protection for investors.[4] The review will also address the new risks to market integrity that have emerged from the introduction of competition and MiFID.

Europe is now dealing with the fragmentation of liquidity and information:

- Fragmentation has meant that investors are struggling to efficiently locate and access liquidity, and to identify the venues with the best prices. Many investors do not have visibility of all prices as the cost of consolidated data is prohibitive. This may lead to investors not

[3] AMF paper, *What are the priorities for financial markets?* March 2011, http://www.amf-france.org/documents/general/9913_1.pdf.
[4] European Commission consultation paper, *Review of the Markets in Financial Instruments Directive (MiFID)*, European Commission, 8 December 2010, http://ec.europa.eu/internal_market/consultations/docs/2010/mifid/consultation_paper_en.pdf.

receiving best execution, which may undermine their willingness to invest. Fragmentation may indirectly create impediments to capital raising.

- European regulators are now looking to enhance controls for dark pools and systematic internalisers to facilitate the search for and access to liquidity. Regulators are also looking at mechanisms to aggregate data from across markets and to improve the quality to ensure investors and companies have a single view of accurate pricing to inform their investment decisions, valuation of assets and to raise funds.[5]

In the United States, the Securities and Exchange Commission (SEC) and the Commodity Futures Trading Commission (CFTC) are now dealing with market integrity and orderliness issues:

- The 6 May 'flash crash' highlighted the lack of harmonised automated controls (e.g. circuit breakers). Market operators responded differently to the price movement, which is thought to have exacerbated the event.[6] The SEC and US exchanges moved quickly to introduce and pilot common circuit breakers and are now reviewing the pilot.
- It also highlighted the lack of a whole-of-market view of trading in equities and derivatives. The SEC and CFTC are looking at ways to coordinate their surveillance.[7] The SEC is also considering a whole-of-equity market consolidated audit trail,[8] moving to ban naked access and put in place minimum controls for direct electronic access.[9]
- Mary Schapiro (Chairman of the SEC) noted that the 6 May flash crash shook investor confidence. She cited a decline in individual investor participation in the equity markets and stated that 6 May 'was clearly a market failure'.[10] Investors should be able to have confidence that they will be able to buy and sell their shares at a fair and efficient price on an orderly market. Companies should have confidence that share prices reflect their value.

It is not possible (as we are already seeing) for the Asian exchanges to escape these structural and market drivers. Not the least reason being the global nature of financial markets. However, Asian exchanges can learn the

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[5] Ibid.
[6] Staff of SEC and CFTC, *Findings regarding the market events of May 6, 2010: Report of the staffs of the CFTC and SEC to the Joint Advisory Committee on Emerging Regulatory Issues*, 30 September 2010, http://www.cftc.gov/ucm/groups/public/@otherif/documents/ifdocs/staff-findings050610.pdf.
[7] For example, through the Joint CFTC–SEC Advisory Committee on Emerging Regulatory Issues, http://www.sec.gov/spotlight/sec-cftcjointcommittee.shtml.
[8] SEC Proposed Rule, *Consolidated audit trail*. (Release No. 34-62174), SEC, 26 May 2010, http://www.sec.gov/rules/proposed/2010/34-62174.pdf.
[9] SEC media release, *SEC adopts new rule preventing unfiltered market access* (Release No. 2010-210), SEC, 3 November 2010, http://www.sec.gov/news/press/2010/2010-210.htm.
[10] ML Schapiro, *Strengthening our equity market structure*, Address by SEC Chairman, Economic Club of New York, New York, 7 September 2010, www.sec.gov/news/speech/2010/spch090710mls.htm.

lessons from Europe and the United States. And this brings me to my third point.

Opportunity for Asian exchanges

My third point is that, given that Asian exchanges are at an earlier stage of development along the intensity of competition axis, there is the opportunity to set business and regulatory frameworks that respond to the needs of the local and regional economies and that learn from developments in Europe and the United States.

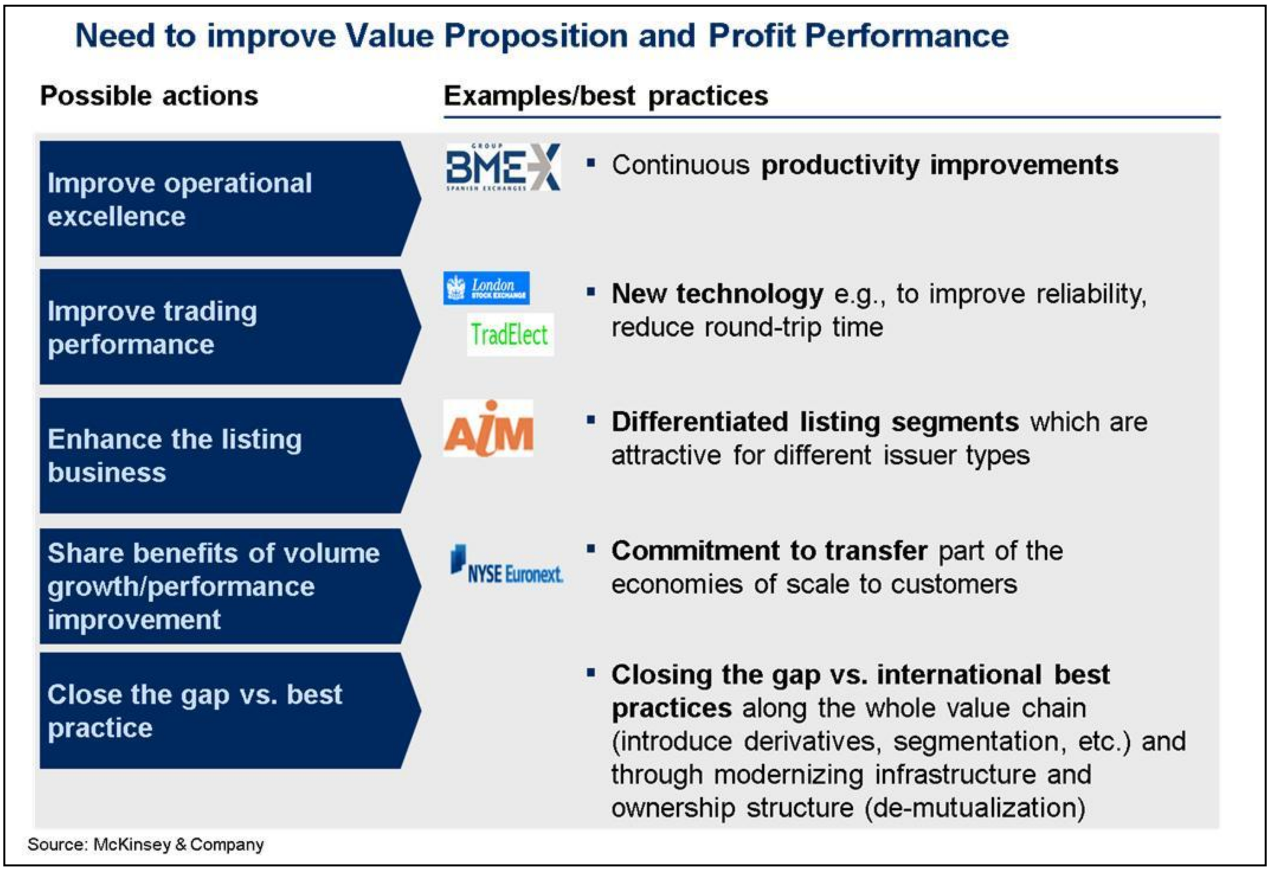
I will expand on this third point by examining three scenarios—each being possible developments in the different markets in Asia. After all, different markets or jurisdictions will have different needs and are at different stages of development. Each scenario points up a series of issues that I think should be approached and worked out through close dialogue and cooperation. As I said at the outset, this will assist policy makers and regulators to handle the emerging issues and to assess the entry of new players and cross-border consolidation.

Scenario 1: The intensity of competition will remain at current levels for the incumbents of so-called monopoly markets.

The first scenario may be a ‘status quo’ type scenario. Here I am speaking of jurisdictions like Hong Kong, Indonesia and Malaysia; jurisdictions that essentially operate with a central market operator or, put loosely, ‘monopoly’ operator. Or jurisdictions like India and China where there are already a small number of dominant operators. These markets will have a choice on how they respond. Japan and Australia are examples of markets where the policy response has been to liberalise the regulatory framework to allow new competitors for trading services.

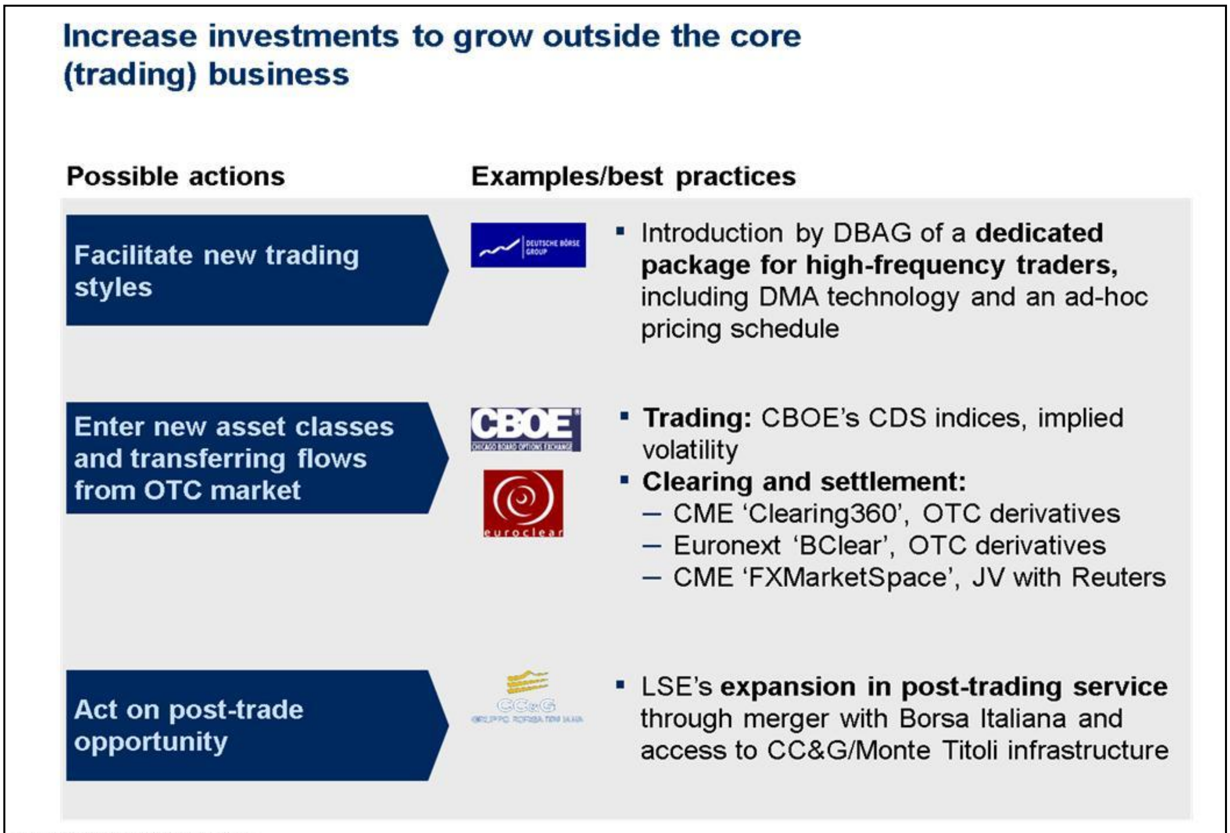
Although these markets may exhibit ‘monopoly’ or dominant players, there will nevertheless be considerable change. However, markets may be at different stages of commercial development. Some incumbents are demutualised and commercial and listed operations with public shareholders (e.g. ASX, Singapore Exchange (SGX)). For these markets, a key driver is to provide returns to shareholders.

Let me expand that with this slide, which sets out some of the way incumbents operating in these markets will drive for improvement (e.g. to improve returns).



We have seen these in other markets, and it can be expected that incumbents in these markets will seek to improve customer satisfaction and shareholder returns through such strategies as enhancing the listing business and improving trading performance. There simply is no option—innovation and improvements have been and will continue to be key drivers.

There will also be opportunities to grow the exchange business outside the core trading activity. This slide shows possible examples of such opportunities.



Source: McKinsey & Company

Both the incumbents and the regulators see the importance of maintaining confidence in the integrity of these markets. However, the tension between profit and integrity will continue to increase and regulators will take a greater role on the oversight of these markets.

Let me expand this last point with the key issues that this scenario (or so called 'status quo' scenario) is throwing up:

1. Changes to trading

Technology has increased the speed, capacity, automation and sophistication of trading. There is no question that technology is contributing to more efficient and better quality trading outcomes for some; for example, the use of algorithms to identify liquidity and execute orders. But it also raises regulatory challenges.

Issuers and traditional investors need to be confident that the new entrants—such as high frequency traders (HFTs), a form of algorithmic trader—and the new venues—such as 'dark pools', that are entering due to technological advances making their business possible—are not creating disadvantages for traditional market participants, as any perceived disadvantages may lead issuers and investors to participate less in the market.

There are questions about whether high frequency trading:

- increases market volatility;
- creates unnecessary noise (with significant order, cancellation and trade volumes);
- is manipulative; and
- has an unfair advantage given their faster access to information and prices.

The types of steps regulators are considering include whether ‘speed bumps’ (e.g. fees for excessive volume or minimum resting periods), minimum testing requirements, order filters, and automated volatility controls to minimise the impact of aberrant algorithms and extreme price movements are necessary. There are also questions about whether HFTs should be subject to formal market making obligations.[11]

On the issue of dark pools (and dark liquidity more generally), there is an overarching question of whether they should be permitted at all. I recognise that they are not permitted in all markets (e.g. India, Brazil and Mexico). It is important to note that in many markets dark liquidity performs a legitimate role in enabling large orders to be executed with minimal market impact.[12] For example, they have been a long-standing feature of the Australian market and will continue to be.

However, there is an emerging trend in North America and Europe, and we are starting to see it in parts of Asia, that smaller uninformed orders are increasingly being executed away from pre-trade transparent markets.[13] This is occurring on dark pools (e.g. Chi-East, UBS PIN) and through broker internalisation (i.e. where brokers match client orders against their own account or between clients).

Theory suggests that if uninformed orders are done off-market, spreads in the primary market will widen.[14] Anecdotal evidence by some in the United States suggests that the level of internalisation and dark trading may have become too high (i.e. to the point it is impacting spreads on public markets). As a result of this order flow being directed through dark pools and broker internalisation processes before it is directed to displayed markets, the order flow that is displayed is sometimes described as being ‘toxic’, because it

[11] For example SEC Concept Release, *Equity market structure* (Release No. 34-613358), SEC, 13 January 2010, http://www.sec.gov/rules/concept/2010/34-61358.pdf; European Commission, Loc.cit; and meetings of the CFTC Technology Advisory Committee, http://www.cftc.gov/About/CFTCCommittees/TechnologyAdvisory/index.htm.
[12] IOSCO Consultation Report, *Issues raised by dark liquidity* (IOSCOPD336), Technical Committee of IOSCO, 27 October 2010, http://www.iosco.org/library/pubdocs/pdf/IOSCOPD336.pdf.
[13] Ibid; SEC Concept Release, Loc cit; and CESR Report, *Impact of MiFID on equity secondary markets functioning* (CESR/09-355), 10 June 2009, http://www.cesr-eu.org/popup2.php?id=5771.
[14] D Easley, NM Keifer & M O’Hara, ‘Cream-skimming or profit sharing? The curious role of purchased order flow’, *Journal of Finance*, vol. 51, 1996, pp. 811–33.

comprises largely informed order flow.[15] The incentives for displaying liquidity in public markets are significantly diminished as the internalisers and dark pools gain first access to the order flow. Wider spreads and less stable liquidity on the public market may result in worse outcomes for all investors dealing on- and off-market.

We need to balance the potential benefits to individual investors of trading in the 'dark' (e.g. managing market impact) against the public good of contributing to price formation on which everyone relies (even those executing in the dark).

Even those jurisdictions that do not permit dark pools or dark forms of liquidity will need to consider whether to facilitate non-displayed block trades, particularly as technology increases the efficiency with which dark trading can occur.

2. New listing venues

Exchanges and regulators will have to respond to new forms of listing to meet needs for capital formation. Some will seek to speculate and establish specialised 'boards' (e.g. mining in Canada). In addition, larger corporates may seek to diversify their funding sources including by moving to list elsewhere (leakage of 'national champions' abroad to where they can source the cheapest capital) or to cross list.

3. New products and new markets

Irrespective of the market structure, as I already noted, technology is increasing the speed of trading. Market operators are responding by offering 'co-location' facilities to minimise latency.

There is also a shift to new types of structural products (e.g. exchange traded funds (ETFs) with new and sometimes opaque structures and leveraged products). These products introduce new risks beyond those of traditional shares and bonds.[16]

In derivative markets, we are seeing competition in similar (although not fungible) contracts with similar or the same underlying asset. For example, ICE Europe's Brent Crude and NYMEX's Light Sweet Crude futures contracts, whose prices tend to track one another. Other examples are the newly authorised Hong Kong Mercantile Exchange, which intends to initially offer trading in US-dollar denominated gold contracts and in

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[15] The causes and issues associated with 'toxic' order flow are discussed in RA Bright's comment on SEC Concept Release *Equity market structure* (Release No. 34-61358), 23 June 2010, www.sec.gov/comments/s7-02-10/s70210-246.pdf.
[16] Financial Stability Board, *Potential financial stability issues arising from recent trends in Exchange-Traded Funds (ETFs)*, 12 April 2011, http://www.financialstabilityboard.org/publications/r_110412b.pdf.

Australia, the Financial and Energy Exchange (FEX) is seeking authorisation to operate a market that will compete with ASX 24 on a coal contract.

Regulators need to consider the impact of these innovations on investor protection, conduct of business, disclosure and also surveillance (processes, systems and alerts).

4. Systemic issues

The GFC illustrated issues around derivatives and over-the-counter (OTC) markets, highlighting the importance of risk controls and capital requirements for market operators, participants and clearers. Each jurisdiction will need to assess and be comfortable that essential infrastructure (e.g. clearing and settlement) can be regulated to manage potential systemic risks.

Any regulatory blueprint would have to assess potential sources of systemic risk intrinsic to the stage of financial and economic development of each jurisdiction, including systemic risks arising from the settlement system.

Clearing houses are becoming more systemically important as G20 initiatives require more products to be centrally cleared. This is recognised in the *Dodd–Frank Wall Street Reform and Consumer Protection Act 2010* in the United States, which gives regulators new powers to ensure the stability of systemically important clearing houses. Apart from ensuring high risk management standards for clearing houses are in place and maintained, policy makers and regulators need to assess how issues with a central counterparty (CCP) that clears OTC derivatives may spill over to other facilities, such as markets or settlement facilities. Central clearing of OTC derivatives has the primary benefit (because it is clearer where the risks are) of concentrating more risk in one place where it can theoretically be best managed, but regulators need to understand how a significant problem with the CCP will affect industry participants and other essential market infrastructure.

5. Interconnection of trading of products on competing markets and between cash and derivative markets

Many cash and derivative products are intrinsically linked (e.g. where one is priced by reference to the other, like ETFs referred to earlier). This interconnection means that price movements on either the cash or derivatives market can flow through to the other—in both normal trading conditions and when there are extreme price movements (e.g. the 6 May flash crash). As already noted, controls to address anomalous order entry and to manage volatile trading conditions should be coordinated.[17]

[17] Staff of SEC and CFTC, Loc cit.

As can be seen, Scenario 1, which essentially may be seen as 'status quo' for a number of markets in Asia, nevertheless has significant policy and regulatory issues to be worked through.

Scenario 2: Intensity in competition increases through the issue of new market operator licences (e.g. for trading services)

The difference between this scenario and the first is the potential introduction of new market operators (e.g. in Japan and Australia, the entry of Chi-X in competition with the incumbent Tokyo Stock Exchange (TSE) and ASX). Generally, such entry will require licensing or liberalisation of the existing regulatory framework and, as such, involves key decisions for policy makers and regulators. ASIC issued a licence to Chi-X today, 4 May 2011.[18]

Proponents of increasing intensity in competition in this way point to these benefits:

- more innovation in products and services, more choice in markets, and maintained or improved market quality (including market depth, liquidity and price formation). This may attract new players, new trading strategies and new liquidity. In Australia, we are already seeing the ASX introducing a new larger co-location facility and plans for a faster trading platform (PureMatch);[19]
- faster and more efficient trading experiences resulting from developments in technology; and
- reduction in overall costs of execution, due to a reduction in transaction costs (e.g. market operator fees, brokerage commissions, bid–ask spreads and market impact). Academic studies have shown that competition has increased depth and narrowed spreads. For example, a study into Dutch index stocks when offered on the London Stock Exchange (LSE) in 2003 showed that the depth at the best prices increased by between 35% and 50%, and at the best four prices, between 35% and 78%.[20]

Experience in Australia has been that the threat of competition possibly led the ASX to reduce its trading fees. In July 2010, ASX reduced its headline execution fee of 0.28 basis points (bps) by almost half to 0.15 bps, and it also reduced its fees for crossings.[21]

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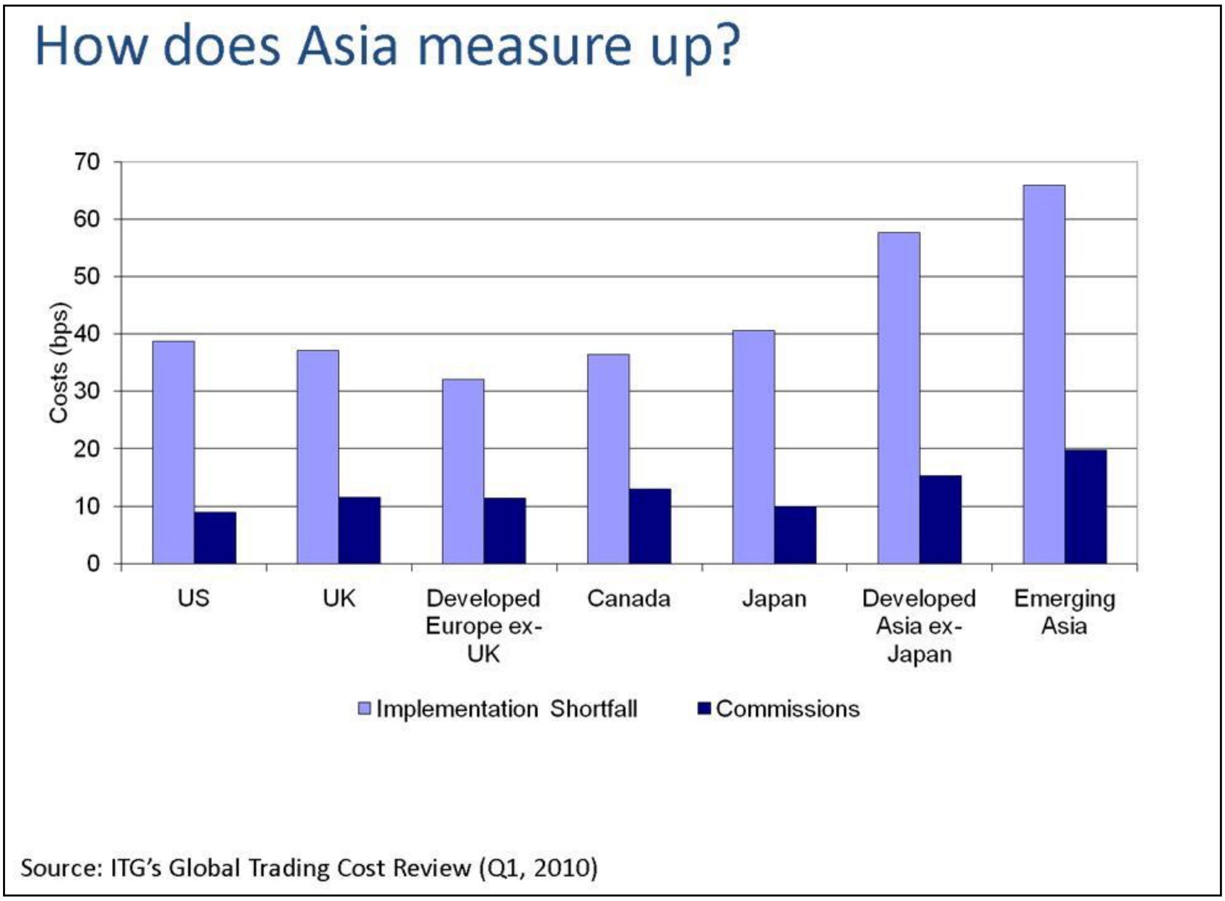
[18] ASIC Advisory (11-89AD) *ASIC publishes Chi-X licence* (4 May 2011).
[19] *ASX Trade—new market services*, http://www.asx.com.au/trading_services/new_market_services.htm#purematch.
[20] Foucault, T and Menkveld, A (2008), 'Competition for order flow and smart order routing systems', *Journal of Finance* 63(1).
[21] Figures based on the ASX announcement to the market dated 3 June 2010 titled 'ASX fees and activity rebates'.

Comparisons on cost (covering market impact and commissions) are difficult, but suggestions are that comparatively costs in Asia are higher than in Europe and the United States, suggesting that competition may provide opportunities to reduce those costs.

This next slide illustrates this point using commissions and implementation shortfall (i.e. a measure of market impact—the difference between the price when the decision to trade was made and the final execution price).[22] With the exception of Japan, both commissions and implementation shortfall are substantially higher in Asia than in North America and Europe.



Of course, increase in competition in the exchange industry can occur not only with introducing new entrants for trading but also for other parts of the exchange business which could be considered contestable (e.g. listings, clearing and settlement, and data).

For regulators, the experience in Europe and the United States with introduction of competition for trading services will immediately point up a

[22] ITG, *ITG's global trading cost review*, Q1 2010, http://www.itg.com/news_events/papers/ITGGlobalTradingCostReview_2010Q1.pdf.

range of new issues (over and above those in the first scenario, or status quo).[23]

These are:

1. Ensuring client orders are routed to the market delivering the best outcome (best execution)

A best execution rule is important to ensure participants do not place their own interests ahead of those of their clients (e.g. by exploiting information asymmetries or availing themselves of kick-backs at the expense of their clients). In some jurisdictions (the United States, Canada), best execution is overlaid with an order protection (‘trade-through’) rule to ensure lit orders receive priority over dark orders.

2. Ensuring market operators cooperate in a multimarket environment is critical for market integrity

It will help to minimise regulatory arbitrage opportunities between markets, contribute to market integrity, and assist market operators in their obligation to operate a fair, orderly and transparent market. For example, it is important that when one market suspends trading in a product in response to price sensitive information or disorderly trading reasons, that all markets suspend trading. As already noted, this was a key lesson from the flash crash. Sharing of information about participant conduct and enforcement matters is also crucially important.

3. Experience in the United States and Europe has been that, while in some cases incumbents have been slow to respond, they do compete aggressively on prices

They may also cross subsidise different products. An incumbent exchange that is vertically integrated may be tempted to use profits from its monopoly businesses (e.g. clearing and settlement) to seek to out-compete new entrants in trading services. Given that central securities depository (CSD) functions are very rarely contestable in practice, if an incumbent exchange owns a country’s CSDs and a government wants to successfully introduce competition in trading services, it will need to closely consider pricing controls to prevent anti-competitive conduct from occurring. As identified in a McKinsey report on the subject in 2008, ‘after all, competing with an incumbent exchange isn’t easy if trades must be settled through its facility’.[24]

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[23] Consultation Paper 145 *Australian equity market structure: Proposals* (CP 145) and ASIC report *Australian equity market structure* (REP 215).
[24] The McKinsey Quarterly, *What’s next for exchanges?*, March 2008, http://www.mckinseyquarterly.com/Whats_next_for_exchanges_2111.

4. In order to succeed, new entrants need liquidity (trading)

Mechanisms that new entrants are using to attract liquidity include:

- innovative pricing structures to attract liquidity (e.g. maker-taker pricing, a range of other rebates, equity stakes in the market);
- innovative order types (e.g. pegged, volume-weighted average price (VWAP) and other referenced orders, flash orders, indications of interest, hidden order types on lit books); and
- the sale of data.

All of which have their own regulatory issues.

More fundamentally, the introduction of competition for trading services raises the question of whether those exchanges (incumbents) who perform a supervisory role for their markets can continue to do so or whether the supervisory role needs to be transferred to a new regulatory body or to an existing regulator. The potential for conflict where a market operator supervises itself and other market operators, which it competes with, may be too great and could affect confidence in the integrity of the markets.

It is useful here to look at the Australian experience. In Australia, the Government made the decision that on balance, it considered that the benefits of competition outweighed the risks and that the risks could be managed by an appropriate regulatory framework. This involved the first stage of transferring ASX surveillance of the market (not listings) to ASIC. ASIC was preferred over a new body. That transfer was very much a precondition to issuing a license to any new market operators for trading services and commenced on 1 August 2010.[25]

Introduction of a competitor has also involved new rules. ASIC has adopted a two-stage approach to the introduction of new rules, which can be summarised as follows:

- first stage—application of the market integrity rules that currently apply to market participants on ASX to new markets (e.g. relating to conduct);[26] and
- second stage—developing a set of new rules that address the new risks posed by competition in exchange markets. For example, harmonisation of pre-trade and post-trade transparency rules, consolidation of market

[25] The Hon Chris Bowen MP, Minister for Financial Services, Superannuation and Corporate Law and the Hon Wayne Swan, Treasurer, Media Release No. 013, *Reforms to the supervision of Australia's financial markets*, 24 August 2009, http://ministers.treasury.gov.au/DisplayDocs.aspx?doc=pressreleases/2009/013.htm&paragraphsID=003&min=ceba&Year=2009&DocType=0.

[26] ASIC Market Integrity Rules (Chi-X Australia Market) 2011, http://www.asic.gov.au/asic/pdflib.nsf/LookupByFileName/ASIC-market-integrity-rules-Chi-X-Australia-market-2011.pdf/$file/ASIC-market-integrity-rules-Chi-X-Australia-market-2011.pdf.

data, best execution, tick sizes, extreme trade cancellation ranges and market operator cooperation.[27]

The key difference between ASIC's approach with these new rules and the United States and Europe are:

- the United States—we have not introduced a mandated 'trade-through' rule. While it was attractive, it did not seem consistent with the existing flexibility of trading outcomes for the Australian institutional market. We have put in place harmonised extreme trade cancellation ranges and continue to prohibit naked (unfiltered) access to markets; and
- Europe—to minimise market data fragmentation and promote data quality, we require all off-market trading by market participants to be reported to a market; market operators must ensure data published is and remains complete, accurate, up to date; and we are putting in place best practice guidance for data consolidators.

The Australian regime is notably different from both the United States and Europe. We do not have a tailored alternative trading venue regulatory regime (like the alternative trading system (ATS) regime in the United States and multilateral trading facility (MTF) in Europe). We have a single real-time market surveillance function (within ASIC). We require certification of automated order processing systems.

We also recognise that we need to respond to the recent market developments that I mentioned earlier (e.g. responding to enhancements in technology, electronic trading and dark pools) that are in train, irrespective of the introduction of competition—although competition may exacerbate them. We intend to continue to engage with industry with the aim of settling further rules, where necessary, in early 2012. We anticipate that we will need to continue to monitor developments and be prepared to respond quickly.[28]

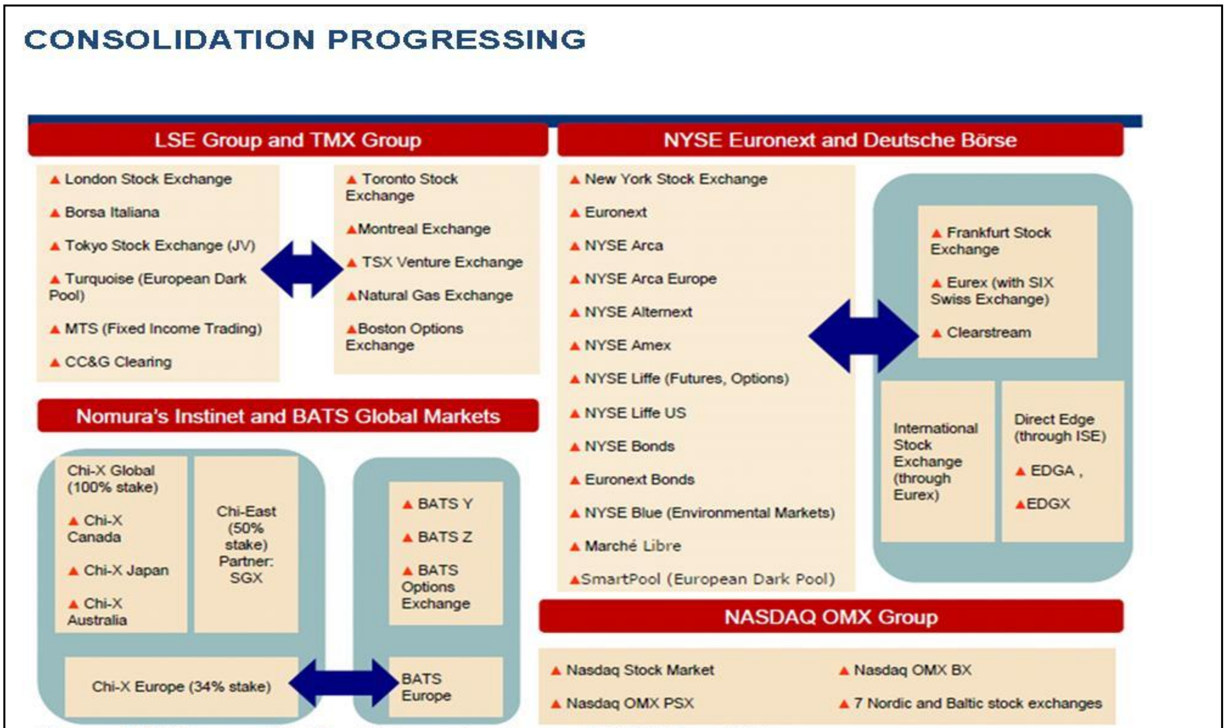
In short, this second scenario throws up challenges for policy makers (particularly as technology continues to open up contestable areas of the exchange business) and for regulators who, along with the incumbents and new entrants, need to keep market integrity at the forefront.

[27] ASIC Market Integrity Rules (Competition in Exchange Markets) 2011, http://www.asic.gov.au/asic/pdflib.nsf/LookupByFileName/ASIC-market-integrity-rules-competition-in-exchange-markets-2011.pdf/$file/ASIC-market-integrity-rules-competition-in-exchange-markets-2011.pdf.

[28] Media Release (11-87MR) *ASIC publishes final competition market integrity rules* (29 April 2011) and ASIC *Background paper: ASIC's regulatory framework on competition in exchange markets*, 29 April 2011 http://www.asic.gov.au/asic/pdflib.nsf/LookupByFileName/11-87MR-backgrounder.pdf/$file/11-87MR-backgrounder.pdf.

Scenario 3: Intensity in competition continues to quicken and brings to Asia a wave of potential cross-border consolidations

No doubt you have seen slides such as this one, which represent the global wave of consolidation that is going on.



Source: TABB Forum – The New Exchange Landscape: A TABB Group Picture

These slides are usually accompanied by the benefits from such consolidation.

Expected revenue streams and market share overview from the current consolidation wave

BATS-Chi X	•A combination of BATS's European platform, known as BATS Europe, and Chi-X Europe, would hand more than a third of trading in British blue-chip stocks •Chi X currently has ~17% of Pan European trading volume share
NYSE-Deutsche Borse	•The prospective deal's combined exchanges and clearing houses would generate an annual $5.5 billion (€4.0 billion)in revenues, more than any other exchange group. •Estimated synergies between Deutsche Boerse and NYSE Euronext worth $533 million. •Deutsche Boerse and NYSE Euronext would emerge from the deal with a combined market cap of $25.6 billion, eclipsing that of current market leader Hong Kong Exchanges and Clearing Ltd
NYSE-NASDAQ[1]	•The merger is expected to generate $1.8 billion in revenues and create net synergies worth $740 million that will be fully realized by the end of the third year •The deal is expected to be accretive within 12-18 months and will achieve double-digit growth beyond that period
LSE-TMX	•The TMX-LSE merger would create the world's fourth largest stock exchange in annual trading volume, with more than 6,700 listings in 20 exchanges and trading venues in seven countries, and total equity market capitalization of 5.8 trillion dollars •The combined LSEG-TMX group is targeting revenue benefits of ~$54 million (£35 million) in the third year following the merger, rising to ~$156 million (£100 million) annual run-rate revenue benefits by year five

1 NASDAQ along with ICE has made a counter bid for NYSE which is already in merger talks with Deutsche Borse

SOURCE: Press reports

Domestic mergers (e.g. acquisition of derivatives exchanges) have been a feature of the exchange industry in Asia. So mergers and acquisitions are not new to the industry. What is new is the potential for cross-border consolidations.

Just as the introduction of competition in Scenario 2 requires policy and regulatory responses, which come on top of those for Scenario 1, so does the so-called wave of consolidations.

And we are seeing such policy and regulatory responses with the ASX–SGX proposal, which the Australian Government has not approved, and also relevant in this context is the Toronto Stock Exchange (TSX) merger with LSE, which is under consideration by the Canadian Government.

The Australian Government, in rejecting the ASX–SGX merger outlined what the policy and regulatory hurdles it took into consideration.[29] Some quotes from the Treasurer's statement of 8 April 2011:

> To diminish Australia's economic and regulatory sovereignty over the ASX could only be justified if there were substantial benefits for our nation, such

[29] The Hon Wayne Swan, Treasurer, Media Release No. 030. *Foreign investment decision*. 8 April 2011, http://www.treasurer.gov.au/DisplayDocs.aspx?doc=pressreleases/2011/030.htm&pageID=003&min=wms&Year=&DocType=0.

> as greatly enhanced opportunities for Australian business and investors to access capital markets.

Note the emphasis on capital formation, which ASX delivers well in Australia and proved to be the case during the GFC.

> The ASX also operates infrastructure that is critically important for orderly and stable operation of Australia's capital markets. However … not having full regulatory sovereignty over ASX–SGX holding company would present material risks and supervisory issues …

The Treasurer did not rule out solutions other than 'full sovereignty' and has asked the Council of Financial Regulators to examine the regulatory issues further. These issues deal with clearing and settlement and potential systemic risks.

In his statement of 8 April 2011, the Treasurer outlined other policy issues which need to be addressed. Such proposals need to:

- protect the integrity of Australia's financial architecture and regulatory framework;
- build Australia's standing as a significant financial services centre in Asia;
- increase Australia's interjection into global markets;
- meaningfully boost capital for Australian business;
- support growth in high quality jobs in Australia; and
- be consistent with increased competition between financial exchanges in Australia.

In the case of Canada, last week the Ontario Legislative Assembly Select Committee on the proposed TSX–LSE transaction released its recommendations.[30] While the Select Committee has no power to impose its view on the proposed merger, it made nine recommendations which it encouraged proponents of the transaction to address. These included:

- continued regulatory oversight of TMX Group with 'no diminution in the role of the Ontario Securitisation Commission'.;
- development and introduction of new technology to be carried out in Canada;
- irrevocable commitment that operations, assets and staff of TMX Group remain in Canada; and
- protection of the mining sector listings.

[30] Ontario Legislative Assembly Select Committee Final Report, *Select committee on the proposed transaction of the TMX group and the London Stock Exchange Group*, 19 April 2011, http://www.ontla.on.ca/committee-proceedings/committee-reports/files_pdf/Final-Select-Report-TMX-LSEG-(English).pdf.

These developments really emphasise the complexity of the issues where exchanges are involved. Policy makers and regulators in those markets will be cautious in assessing the benefits of proposed mergers. In many cases, as in Australia, such mergers may require legislative approval (in addition to ministerial approval), for example, because of ownership limitations. This adds to the need for greater clarity of benefits and how issues identified by policy makers are addressed.

Addressing the issues that are being thrown up will not be easy, and may require bilateral agreements or other arrangements between regulators of the different jurisdictions.

To this end, the IOSCO Objectives and Principles of Securities Regulation[31] provide a strong foundation for exchange operators and regulatory authorities to pursue multilateral and bilateral arrangements around their financial markets, to ensure investor protection and the integrity of their markets.

In addition, when considering opportunities for cross-border consolidations, regulators need to be mindful of systemic issues. That is, regulators need to assess potential sources of systemic risk intrinsic to the stage of financial and economic development of each jurisdiction. In particular, each jurisdiction will need to assess and be comfortable that essential infrastructure (e.g. clearing and settlement) can be regulated in a manner that enables any potential systemic risks which may arise to be managed in a timely and effective manner.

We need to get to a point with such proposed consolidations where we have slides similar to the revenue/expense synergies (see above) setting out the benefits for the sort of policy and regulatory issues referred to above. These benefits will be important for regulators and policy makers as much as the revenue/expense synergies are important for shareholders.

Conclusion

Exchanges in Asia are at an important stage of their development and have the opportunity to make the most of the growth opportunities and in doing so, to learn from developments in Europe and United States.

I have used three possible scenarios to illustrate the type of policy and regulatory issues which are being thrown up.

[31] IOSCO *Objectives and Principles of Securities Regulation*. May 2003, www.iosco.org/library/pubdocs/pdf/IOSCOPD154.pdf.

Given the forces or drivers of change, there is some immediacy in dealing with the issues. The objective of the dialogue and cooperation should be to create a possible blueprint to guide policy makers and regulators and incumbents and new entrants on the issues which are being thrown up.

We have seen examples of close dialogue and cooperation post GFC. Building on those, there are bodies such as the IOSCO Asia Pacific Committee which could coordinate and develop the regional framework. The regional body would need to be linked into domestic markets through either existing or newly formed groups representing all the stakeholders and they should specifically focus on the type of key issues covered above. Because of the complexity of those issues, relying on the existing and usual domestic and regional consultation processes may not be enough to provide the timely responses now needed by the markets.

The result (a possible blueprint) should see a clearer evolution of Asian exchanges, both domestically and regionally, to a position of sustained strength while allowing innovation and progress to meet the needs of their growing and dynamic region.

Thank you.