

Competition in global Exchange Industries and Challenge for Asia-Pacific Exchanges

파생상품연구센터

- 1** Environments Around Exchange Industries
- 2** Global Competition in Exchange Industries
- 3** Challenges for Asia-Pacific Exchanges

Environments Around Derivatives Market



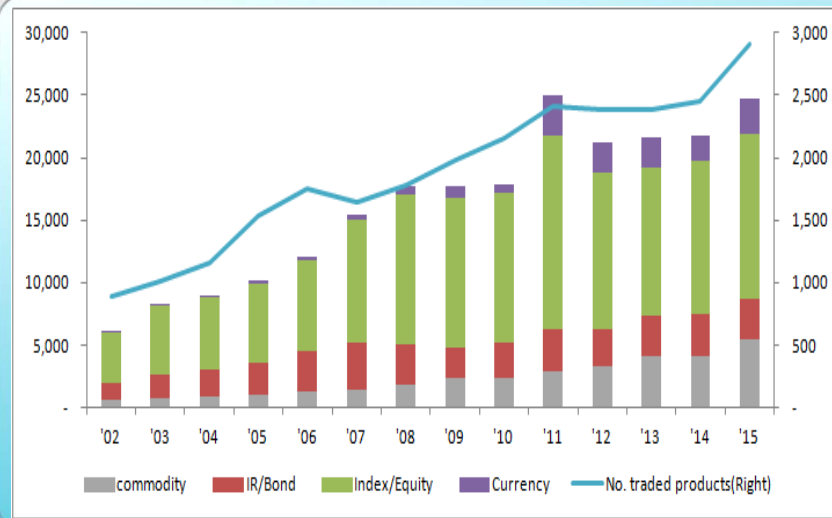
Over the last decades global derivatives market has grown drastically.

At the end-2012, the size of the global derivatives market was estimated to total around USD 685 trillion, which is about 9 times the nominal GDP of the world.

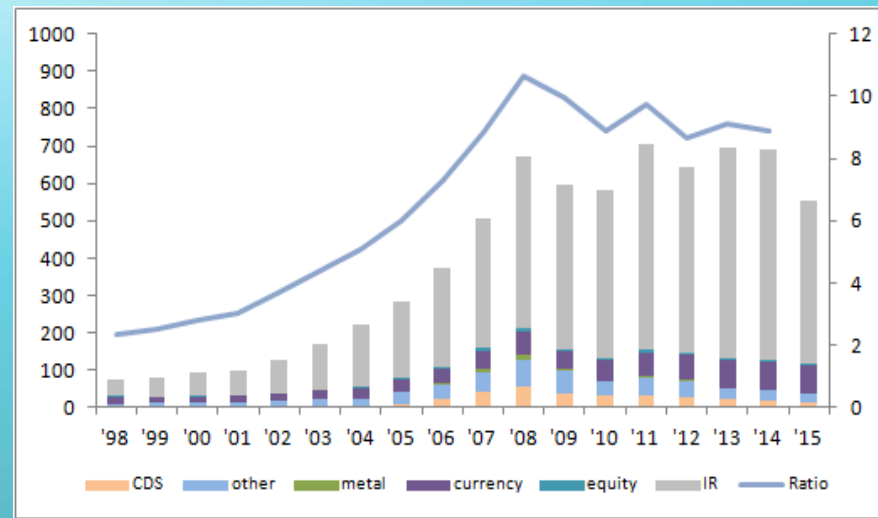
In 2015, total trading volume of exchange derivatives markets and total number of traded products have continuously increased.

⇒ In 2015, recorded 24.7 billion Contracts, 2,916 issues

[Trading Volume of ETD worldwide] (Unit: mn contracts)



[Amount of OTC Derivative Outstanding] (Unit: USD \$ trill)



Ratio: Total notional amount/World GDP

Competition among exchanges has played an essential role for the high growth of ETD markets.

⇒ Competition among exchanges has been encouraged by various factors, especially by the following:

Factors	Progress or Impacts
Stock Market Fragmentation	Reg NMS('05) in the US and MiFID('07) in EU ⇒ Promoting Competition among equity market trading platforms ⇒ Commercialization of Exchanges
Rapid Growth of Emerging Countries	The axis of growth and market activity shifts from West to South and East ⇒ The emerging markets are set to be the focus of the next wave of change.
Reform of OTC Derivatives Market	Expanding Business Opportunities to OTC derivatives market ⇒ Facilitating Diversification of Exchange Business
Advance of ICT	<ul style="list-style-type: none"> • Has decreased transaction costs and increased liquidity • Promoting cross-border trading by installing local access points or DMA ⇒ Heightened competition among exchanges, especially derivative exchanges

Regulation on Market Fragmentation has been introduced, in order to enhance market efficiency through Competition between Exchanges.

	US	Europe
Regulation	<p>Reg NMS('05)</p> <ul style="list-style-type: none"> - Consolidated the rules promoting the national market system - Order Protection Rule, Access Rule, Sub-Penny Rule, Market Rule 	<p>MiFID('07)</p> <ul style="list-style-type: none"> - Abolished the concentration rule in countries of the EEA
Effects	<p>Market</p> <ul style="list-style-type: none"> - Reduction in trading fees and improvement in the quality of market <p>Exchange Industries</p> <p>Promoting Competition in Exchange Industries</p> <ul style="list-style-type: none"> - From monopolies of primary exchanges to competition - Demutualize and Commercialize <p>⇒ M&A LSE-Borsa Italia, NYSE-Euronext('07), BATS - Chi-X('11)</p>	

Environments Around Derivatives Market

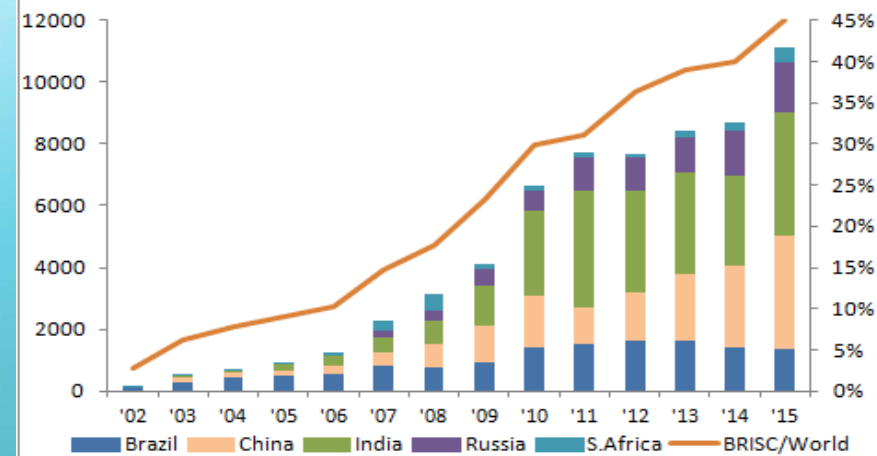
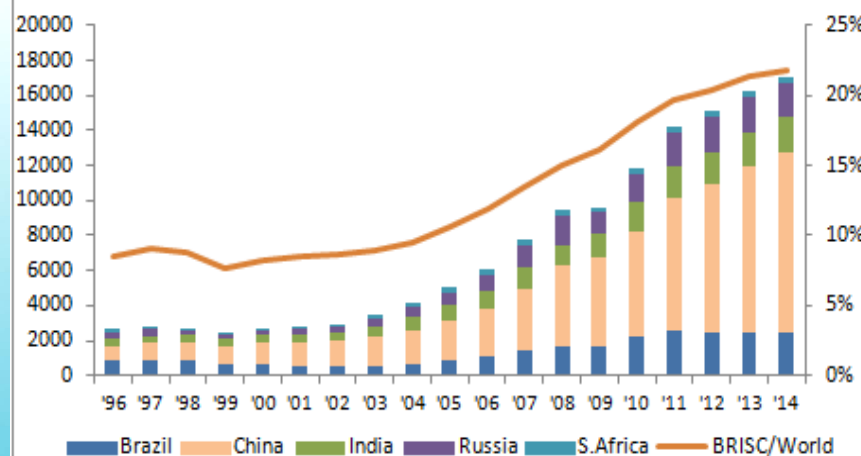


The growing role of emerging markets is changing global exchange industries.

⇒ The emerging markets are set to be the focus of the next wave of transformational change.

[GDP Growth of BRICS]

[Proportion of ETD Trading volume of BRICS]



⇒ Search for the next fastest growing countries.

BRIC	BBVA EAGLES	N-11	CIVETS
Based on absolute size	Based on absolute growth	Based on population/GDP size	Based on young people
Static concept	Dynamic concept	Static concept	Static concept
Brazil, Russia, India, China			Columbia, Indonesia, ...

Environments Around Derivatives Market



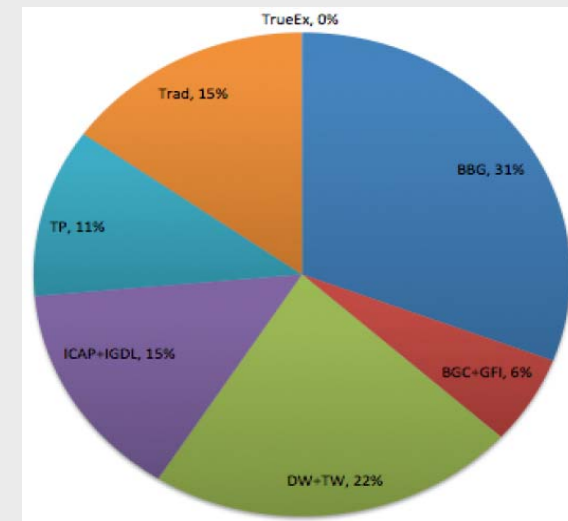
Business of exchange is being extended to OTC infrastructure like CCP and SEF.

Agreements of G20	New Business Area
· All standardized OTC derivatives should be cleared thorough central counterparties.	CCP
· OTC derivative contracts should be reported to trade repositories.	Collateral Management
· All standardized OTC derivatives should be traded on exchanges or e-platforms	SEF
· Futurization	Products Line up

[global major CCPs]

	Country	IRD	credit	currency	stock etc
LCH Clear Ltd	UK	o		o	o
ICE Clear Europe	UK		o	o	o
ICE Clear Credit	US		o		
CME Group	US	o	o	o	o
CME Clearing Europe	UK	o			o
Eurex Clearing AG	Germany	o	o		o
LCH Clearent SA	France		o		
CDCC	Canada				o
NASDAQ OMX Stockholm	Sweden	o			o
SGX Asiaclear	Singapore	o		o	o
Japan Securities Clearing	Japan	o	o		
BM&F Bovespa	Brazil	o		o	o

[global major SEFs and market share in IRD]



Environments Around Derivatives Market



Advances in technology have long influence market structure and played an essential role for the change of exchange industries.

[Economies of scale and the liquidity externality]

- At the beginning of the competition, the technological development reduced the establishment costs of trading system ⇒ Led to greater competition in exchange industries
- During the past decade, economies of scale and the liquidity externality are reemphasized
The pressure for lower trading costs, improved liquidity and immediate access to international trading, differentiated services ⇒ facilitating an alliance or merger between exchanges

Area	Impacts of advance of ICT
Trading	Reduction of transaction costs and increase of liquidity ⇒ Facilitating multi-venue trading and HFT ⇒ Increase of participants and ETD Market size Development of Computer based Trading ⇒ enabled to manage complicated products, complex orders and portfolios Strengthening global Access ⇒ Made cross-border trading possible and global market has been virtually consolidated
Exchange Industries	<ul style="list-style-type: none"> · Exchange industries tend to be technology- and scale-intensive · Importance of economies of scale and the liquidity externality are reemphasized ⇒ Facilitating intra/inter-regional M&A ⇒ Consolidation of markets

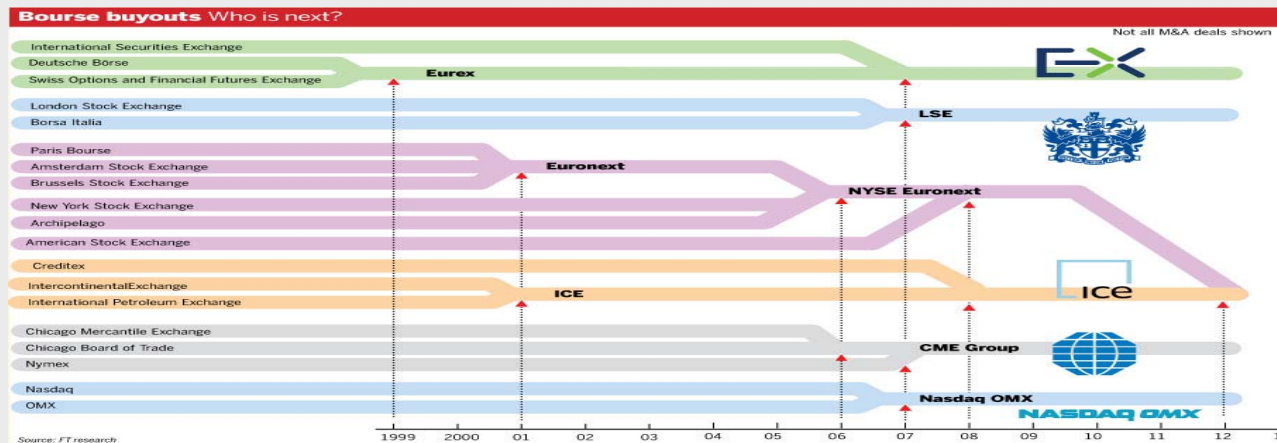
1 Environments Around Exchange Industries

2 Global Competition in Exchange Industries

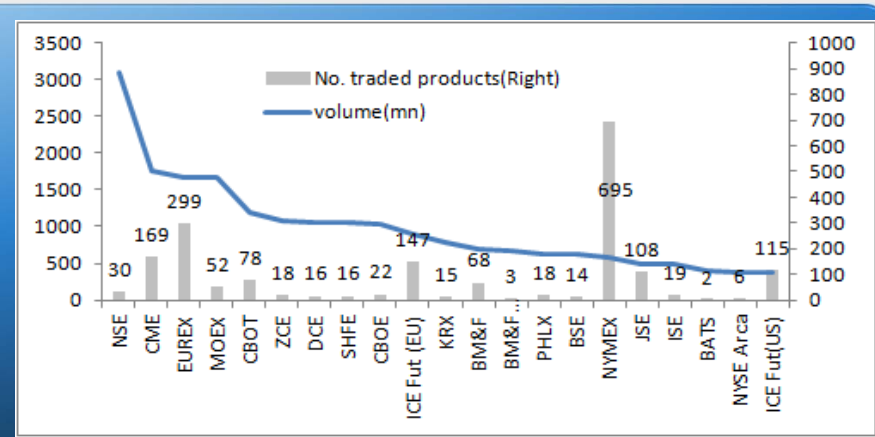
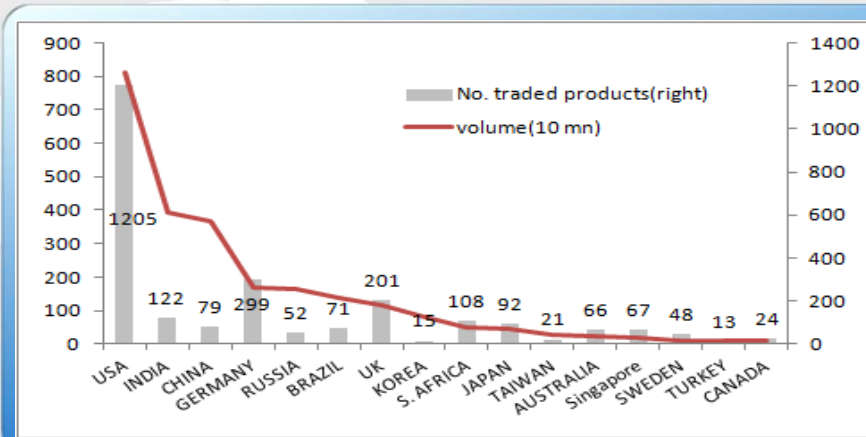
3 Challenges for Asia-Pacific Exchanges

Competition in Global Exchange Industries

Competition started in stock exchanges has been flourished in derivative exchanges.



[Trading Volume and Number of Traded Issues by Country] [Trading Volume and Number of Traded Issues by Exchange]



Competition in Global Exchange Industries



Global leading exchanges diversify business area and expand global business networks competitively.

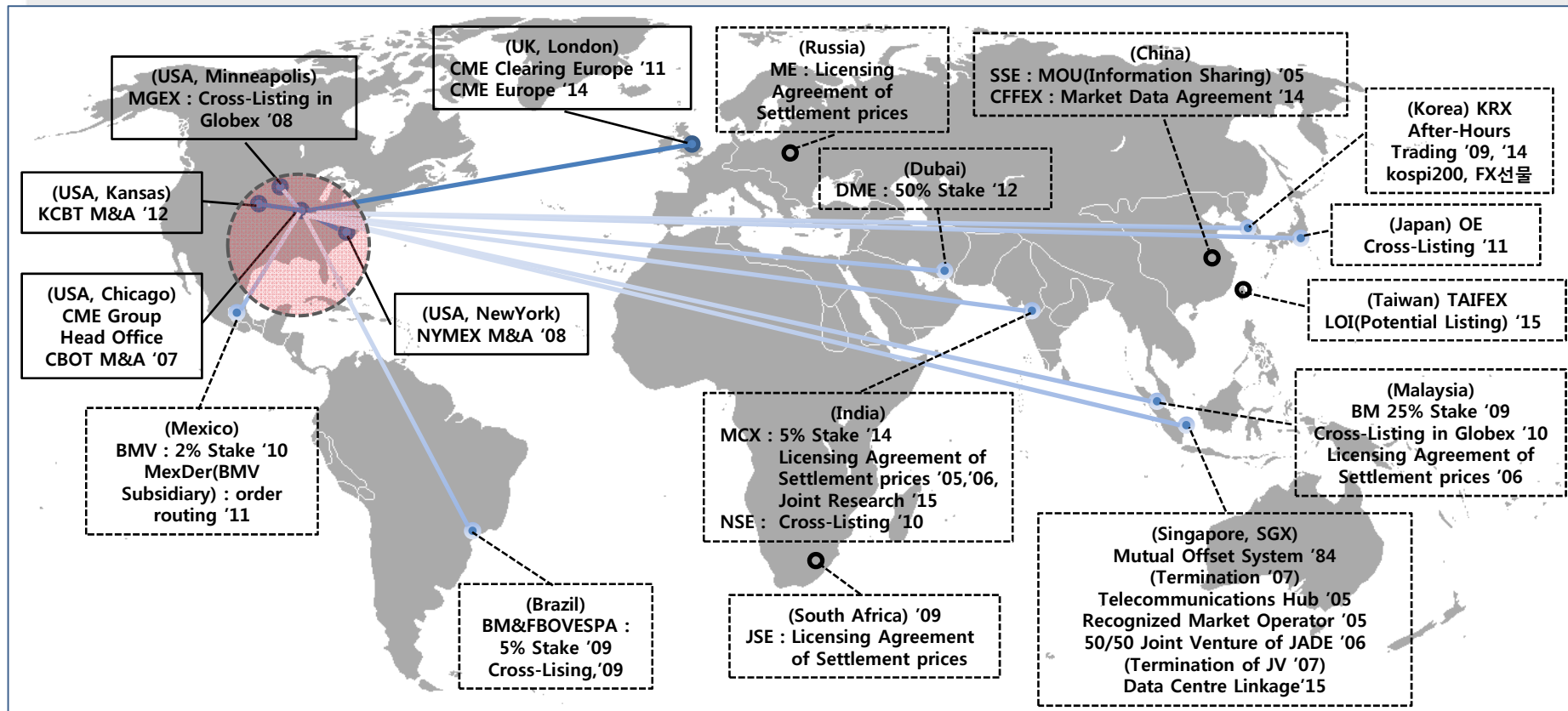
- In the US and Europe: M&A or Unified Trading Platforms
- In Asia-Pac: Seeking to find business models

[Business of major derivative exchanges]

Exchange	Before 2008	After 2008
CME(1898 established)	<ul style="list-style-type: none"> • Listing new Products, Domestic M&A • Possess 4 major exchanges in the US (CME, CBOT, NYMEX, COMEX) 	<ul style="list-style-type: none"> • (Diversification) CCP, Derivatives-related market indices, IT Services, • (US, Europe) Clearing & Settlement, OTC Infra • (Emerging Markets) Strengthening Market Access through Cross-Listing, Order Routing, and so on
DB('1853 established)	<ul style="list-style-type: none"> • merger of derivative exchange Eurex('98) and depository & settlement Clearstream('00) • acquisition of derivative exchange ISE in US ('07) • establish an exchange for retail structured products Scoach('07) 	<ul style="list-style-type: none"> • (Diversification) ATS, Offering Indices, Acquisition of share, Pre- and Post-Trade business • (Asia) cross-listing, JVs, establishment of exchange and clearing • (US, Europe) M&A, Acquisition of share, JVs
ICE(2000 established)	<ul style="list-style-type: none"> • M&A of derivative exchanges in North America and Europe 	<ul style="list-style-type: none"> • (Diversification) Business diversification through continuous M&A after M&A of NYSE Euronext ('13) <ul style="list-style-type: none"> - strengthening clearing, OTC infra business, expanding to IT related business • (Asia) M&A or establishment of clearing and exchange

Competition in Global Exchange Industries

[Expansion of Global Business Networks by CME Group]

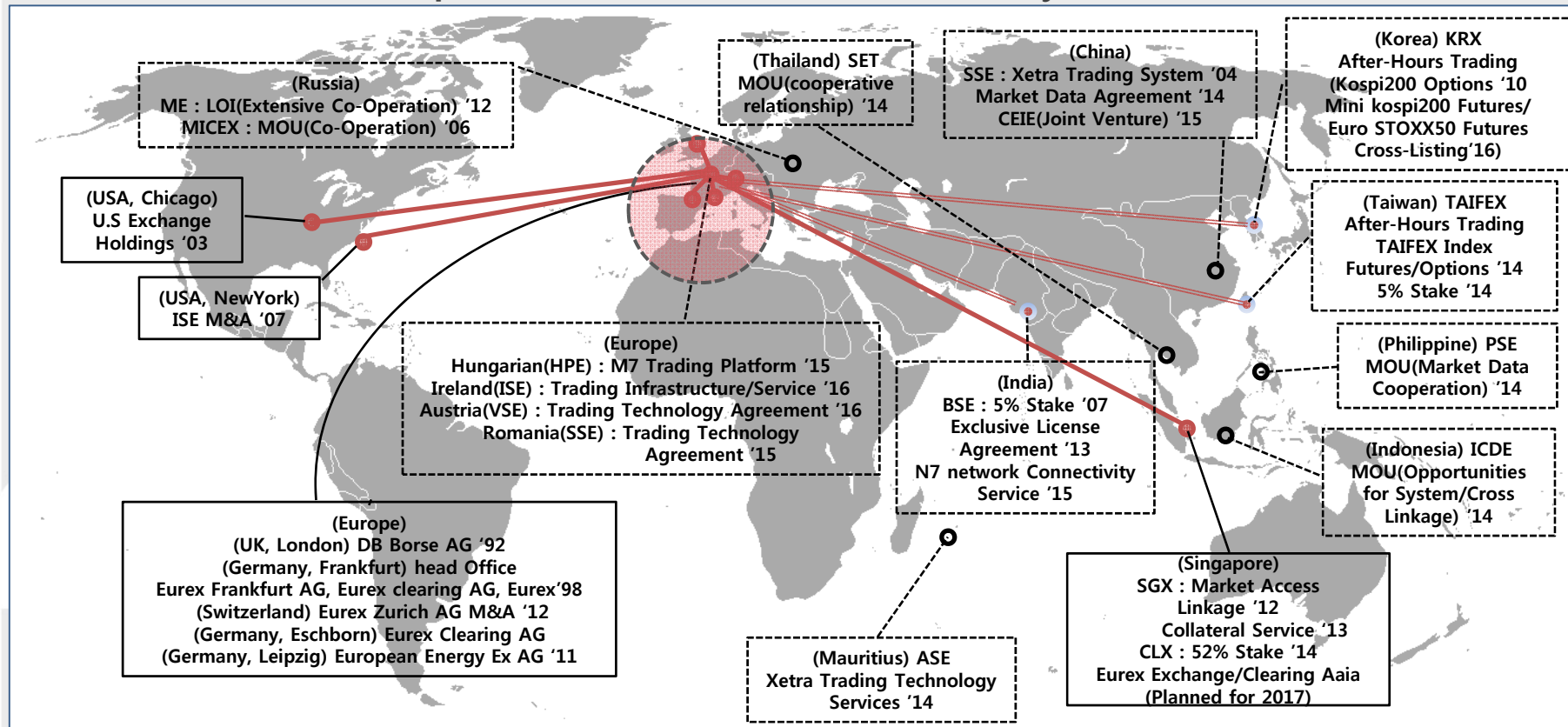


● CME — Subsidiary ● Acquisition of Stake, Cross-Trading (Cross-Listing)

Competition in Global Exchange Industries



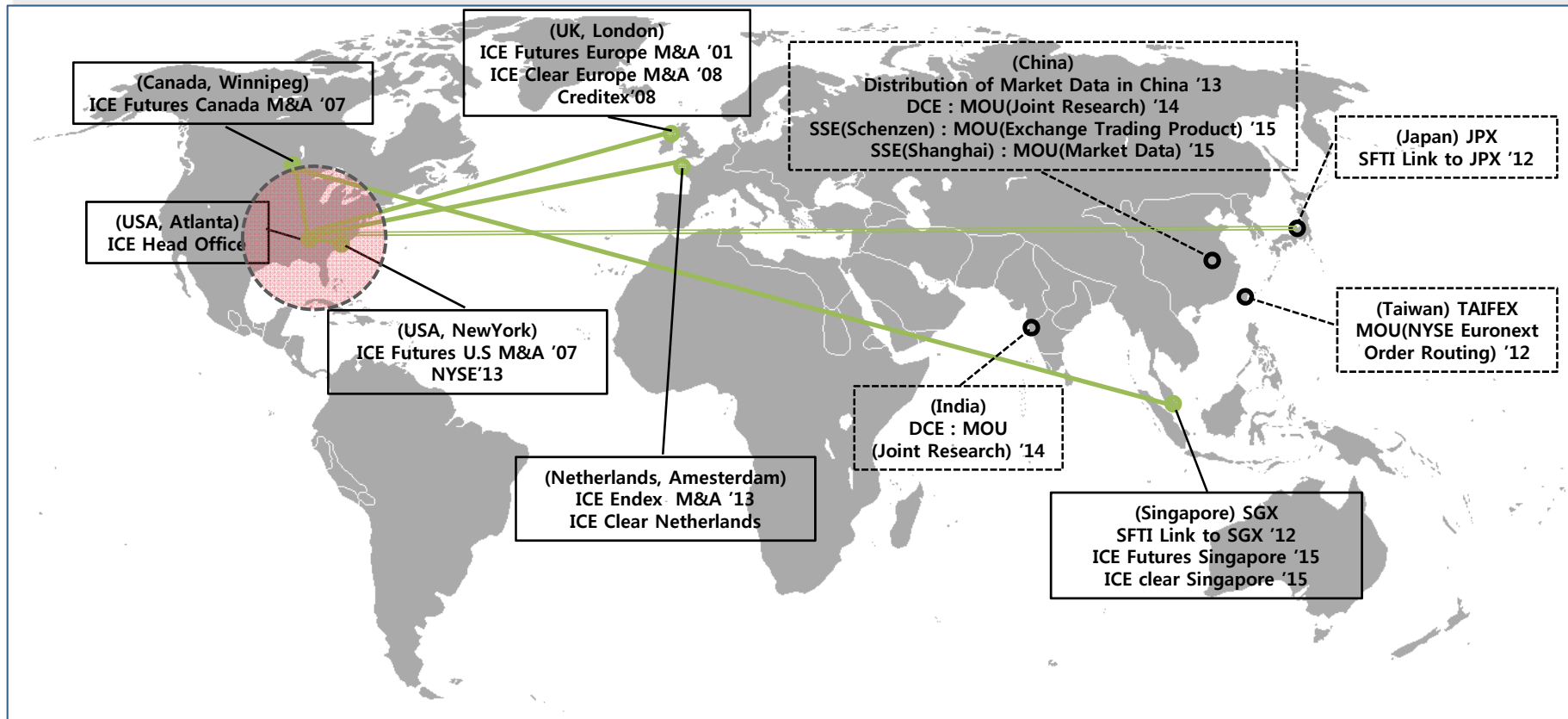
【Expansion of Global Business Networks by DB】



● DB — Subsidiary ● — Acquisition of Stake, Cross-Trading (Cross-Listing)

Competition in Global Exchange Industries

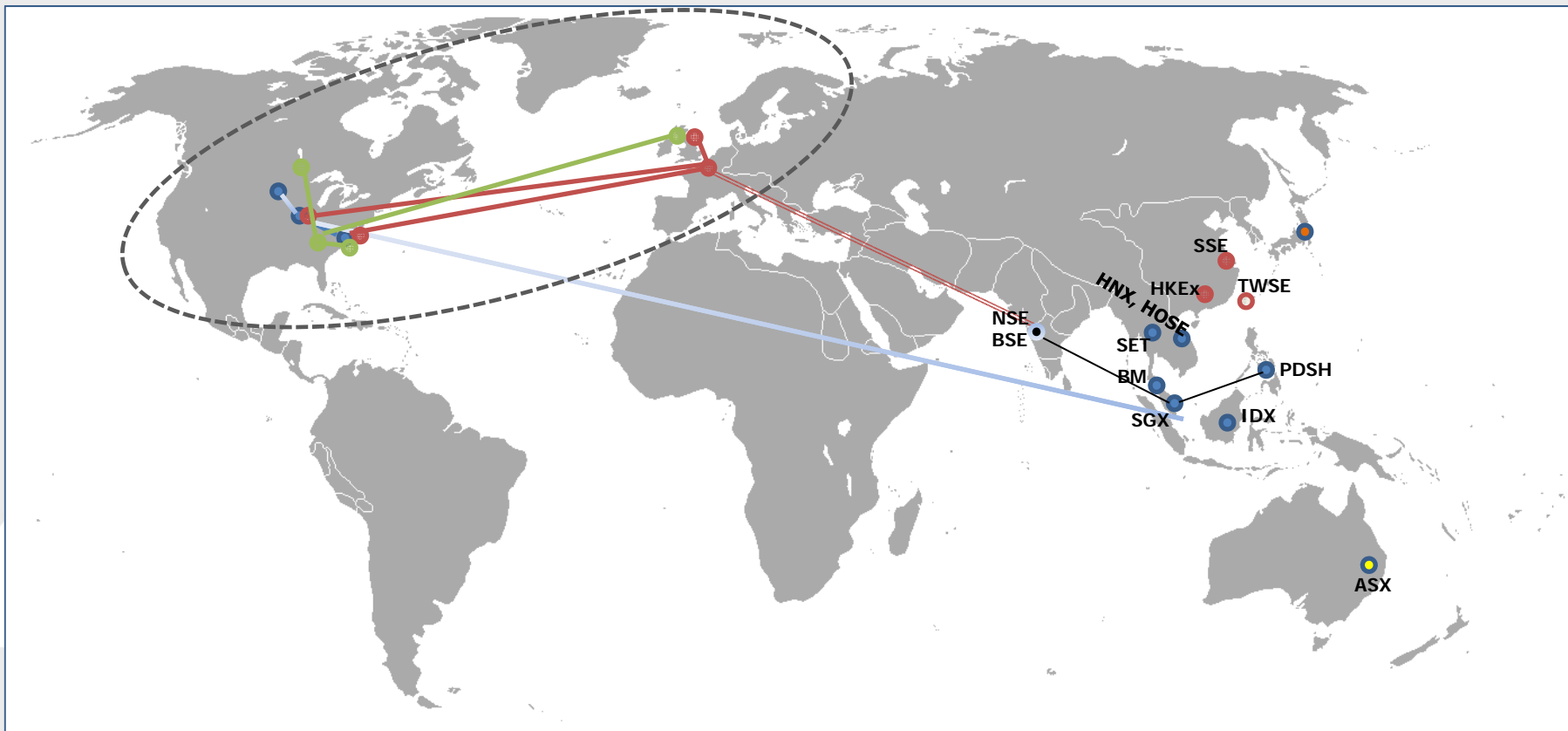
[Expansion of Global Business Networks by ICE]



● ICE — Subsidiary ● — Acquisition of Stake, Cross-Trading (Cross-Listing)

Competition in Global Exchange Industries

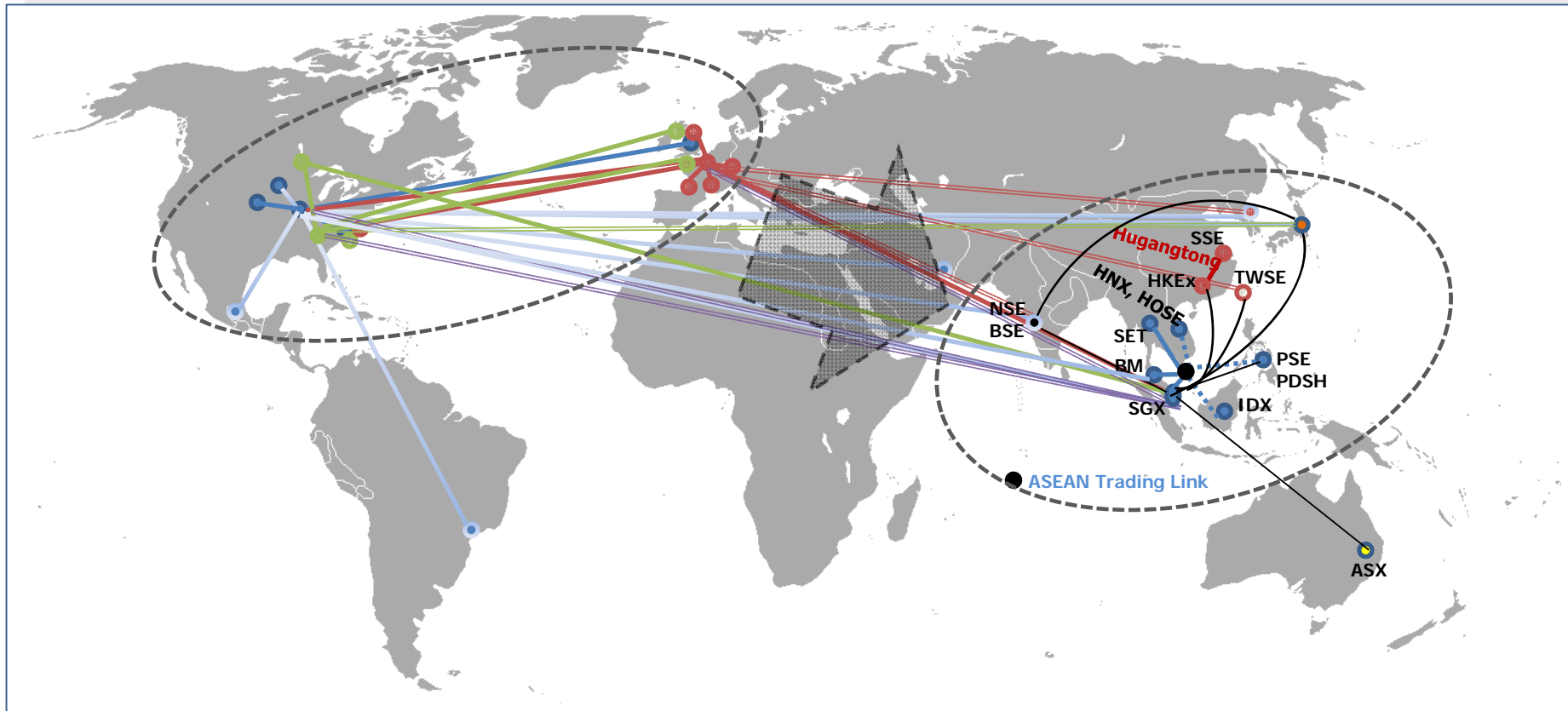
Before 2008 global business networks among exchanges has been centered at US-Europe.



- CME — Subsidiary ● Acquisition of Stake, Cross-Trading (Cross-Listing)
- DB — Subsidiary ● Acquisition of Stake, Cross-Trading (Cross-Listing)
- ICE — Subsidiary ● Acquisition of Stake, Cross-Trading (Cross-Listing)
- SGX ● — Acquisition of Stake, Cross-Trading (Cross-Listing)

Competition in Global Exchange Industries

After 2008 connection between exchanges is being extended to East Asia.



- CME — Subsidiary ● Acquisition of Stake, Cross-Trading (Cross-Listing)
- DB — Subsidiary ● Acquisition of Stake, Cross-Trading (Cross-Listing)
- ICE — Subsidiary ● Acquisition of Stake, Cross-Trading (Cross-Listing)
- SGX — Acquisition of Stake, Cross-Trading (Cross-Listing)

1 Environments Around Exchange Industries

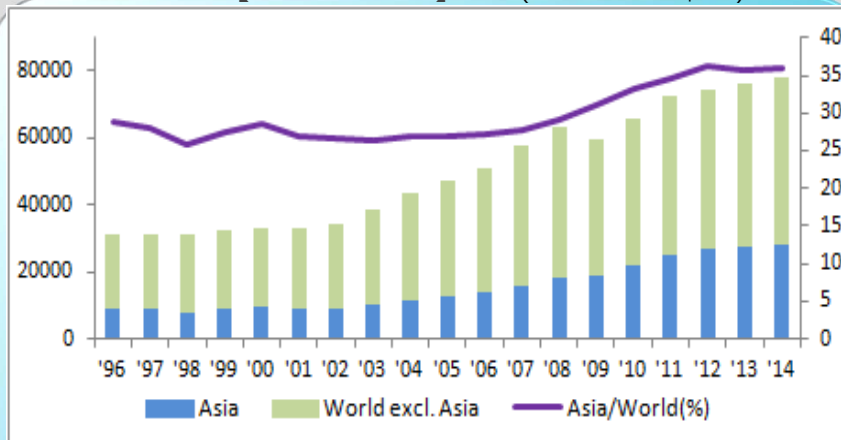
2 Global Competition in Exchange Industries

3 Challenges for Asia-Pacific Exchanges

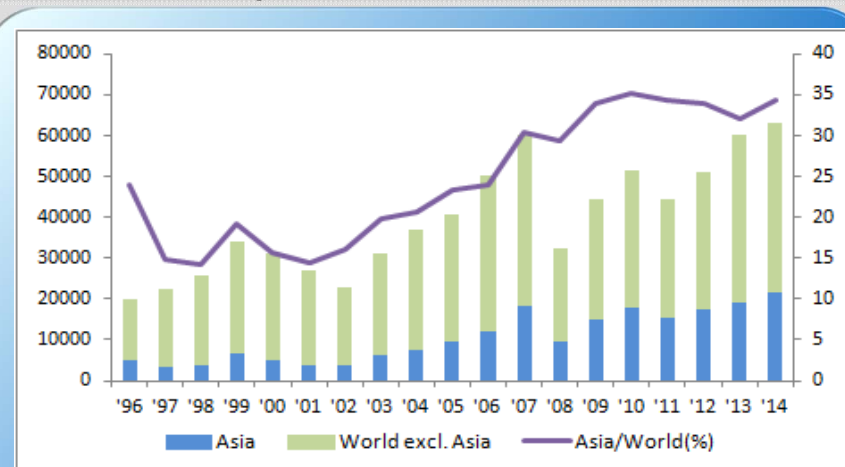
Challenges for Asian-Pacific Exchanges

Economies of Asia are highly growing.

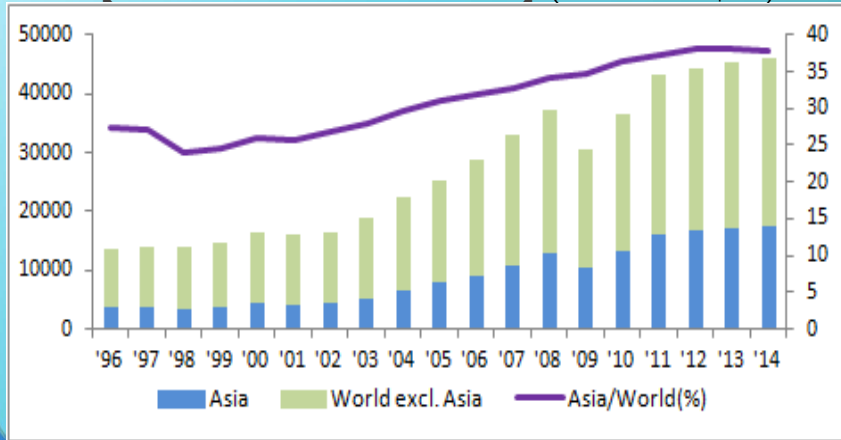
[GDP of Asia] (Unit: USD \$bn)



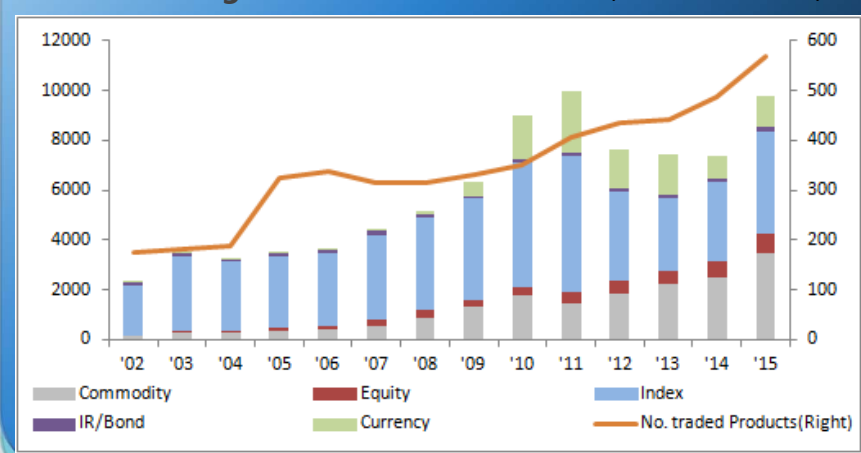
[Capitalization in Asia] (Unit: USD \$bn)



[International Trade of Asia] (Unit: USD \$bn)



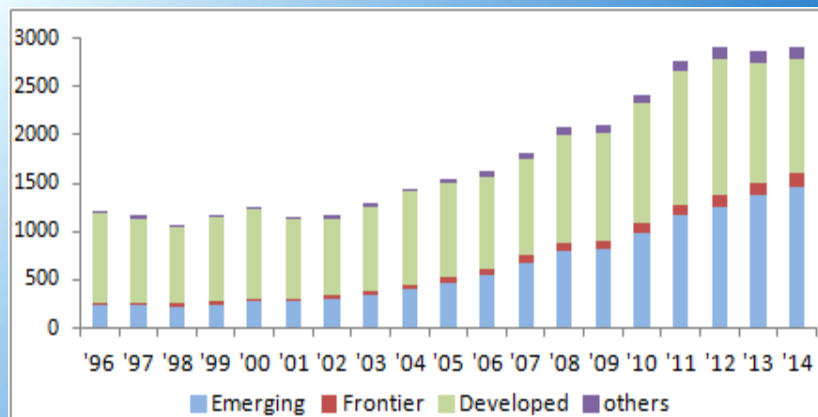
[Trading Volume of Asia ETD] (Unit: mn cont)



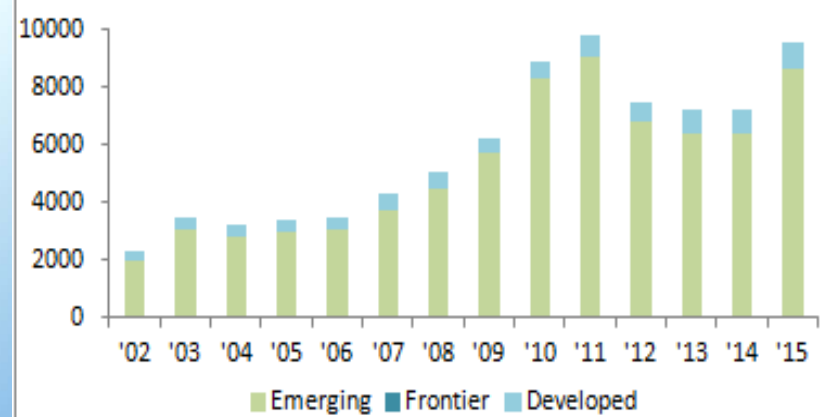
Challenges for Asian-Pacific Exchanges

The growth of Asian economies is led by emerging countries.

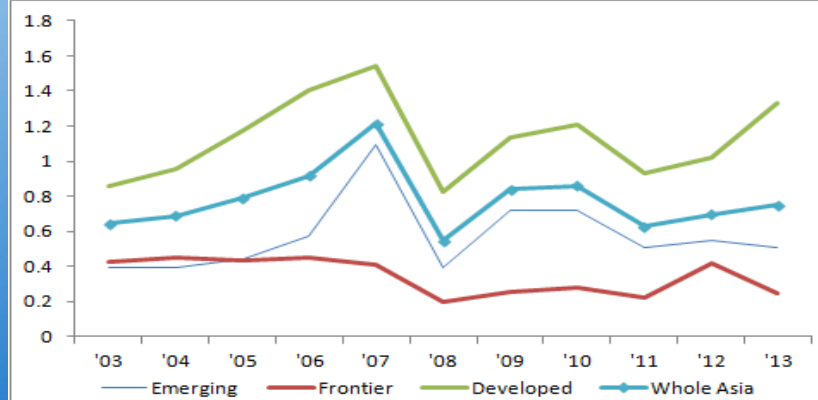
[GDP of Asia] (Unit: USD \$bn)



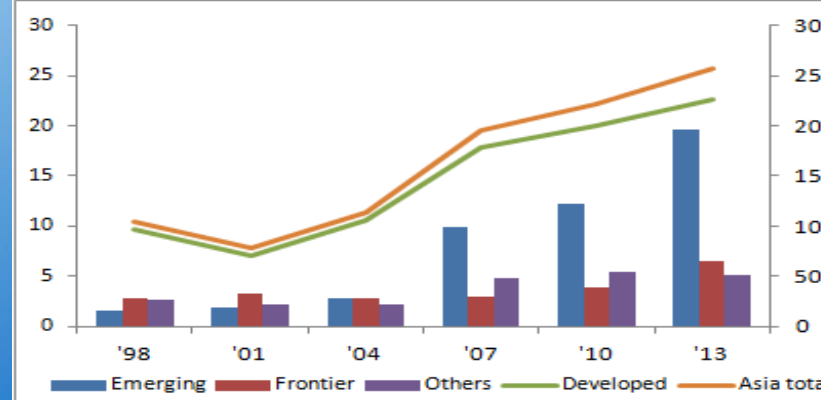
[Trading Volume of ETD Asia] (Unit: mn contracts)



[Capitalization Ratio over GDP]



[OTC Trading Amount] (Unit: USD \$bn)



Challenges for Asian-Pacific Exchanges



Derivative markets in emerging countries are strongly different in the development level.

[Derivative Markets in Asia]

Country	Agriculture	Energy	Precious M.	Non-Precious	Currency	Stock/Indices	IR/Bonds
Pakistan	◎	◎	◎				
Taiwan			○		◎	○	
Malaysia	○					○	○
Arab Emirates		○	◎	◎	◎	◎	
India	○	○	○	○	◎	○	◎
Indonesia	◎		◎	◎			
China	○	○	○	○	◎	○	○
Qatar							
Thailand		◎	◎		◎	◎	
Turkey		◎	○		○	○	
Philippine							
S. Korea			○		○	○	○
New Zealand		◎					○
Singapore	○	◎	◎	◎	◎	○	○
Israel					○	○	
Japan	○	○	○		○	○	◎
Austria	○	○				○	○

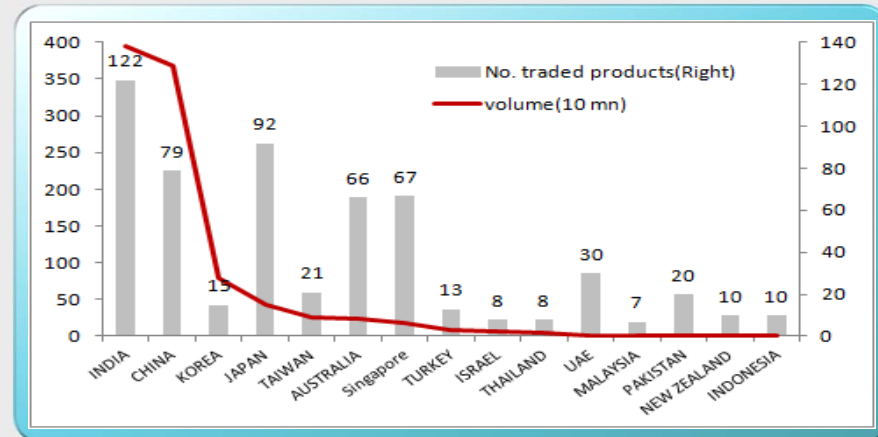
◎ market established after 2007

Challenges for Asian-Pacific Exchanges

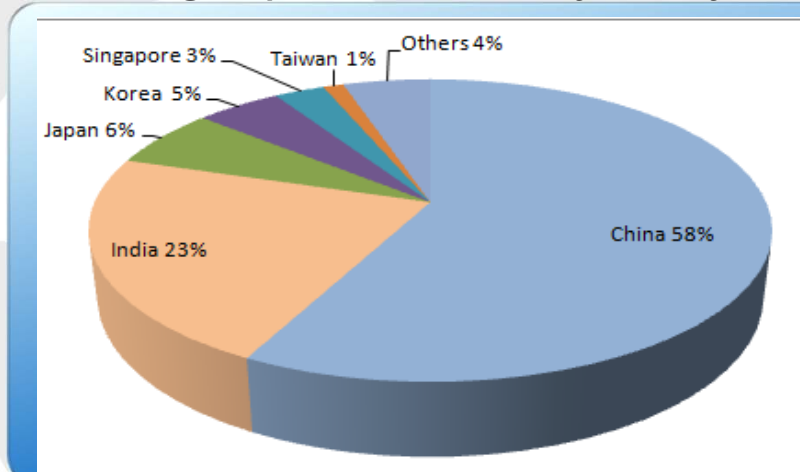
Trading activity is concentrated on a few countries and products line up is relatively narrow.

- Trading volume of futures in China and India accounts for 81% of total trading volume of futures in Asia .
- Trading volume of options in India and Korea accounts for 86% of total trading volume of futures in Asia.

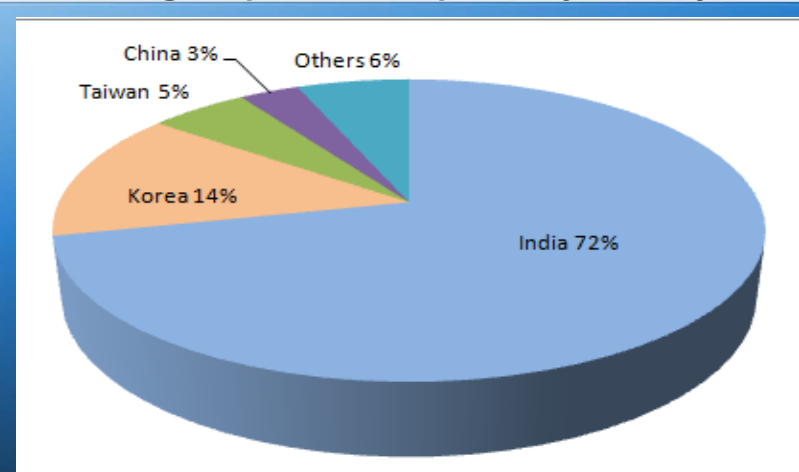
【Number Of Traded Products ETD('15)】 (Unit: issue)



【Trading Proportion of Futures by Country('15)】



【Trading Proportion of Options by Country('15)】



Challenges for Asian-Pacific Exchanges

Intra-Asian exchange consolidation looks a long time away given the political/regulatory considerations.

- Degree of regulatory liberalization and Ownership structure are different among countries
- Development level of financial markets is strongly differentiated between countries

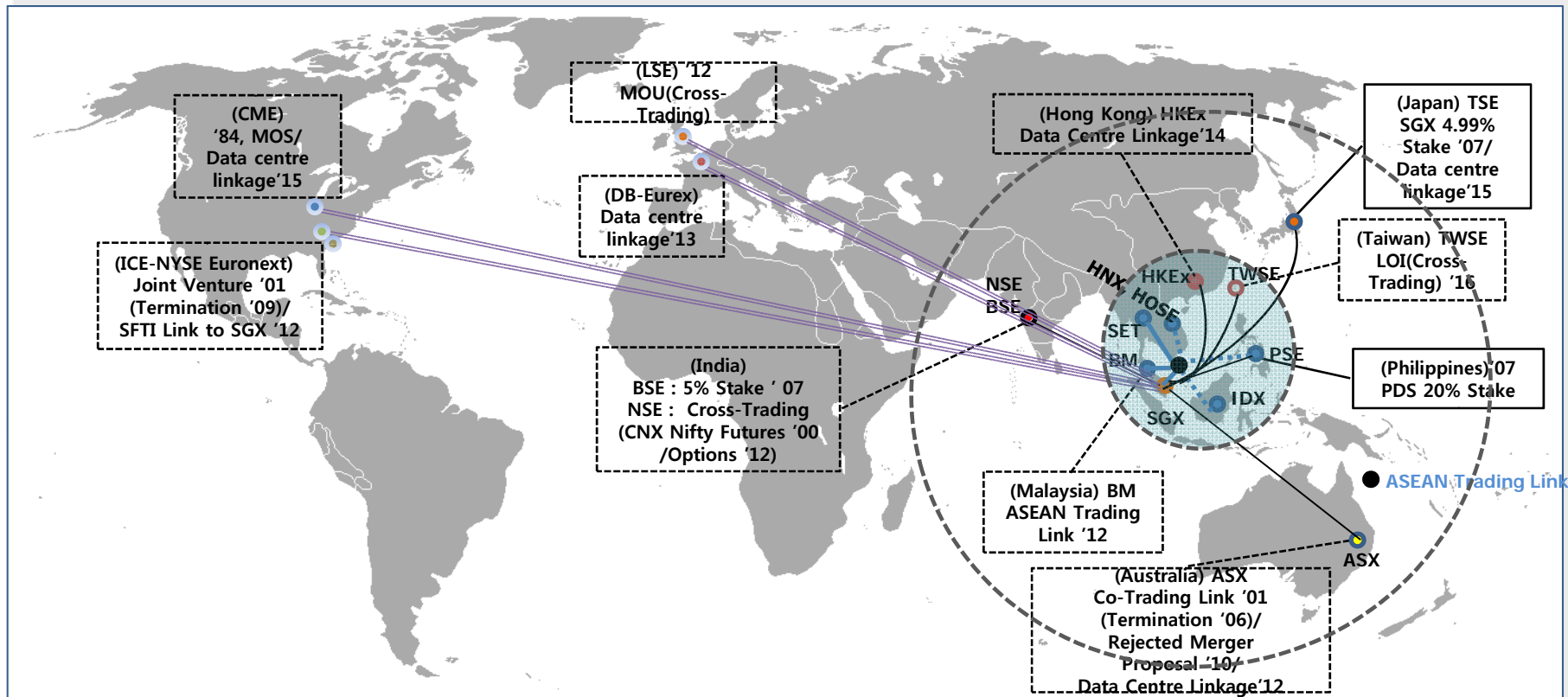
⇒ Weak competitiveness of Asia-Pac exchanges compared to West

➔ Find business area and form for collaboration between Asia-Pacific exchanges

Challenges for Asian-Pacific Exchanges

Expect to see alliances/JVs between exchanges in Asia-Pac, but at present it seems to be not successful.

- ASEAN Link launched in 2012 is a collaboration of 7 stock exchanges, to promote the growth of the ASEAN capital markets.



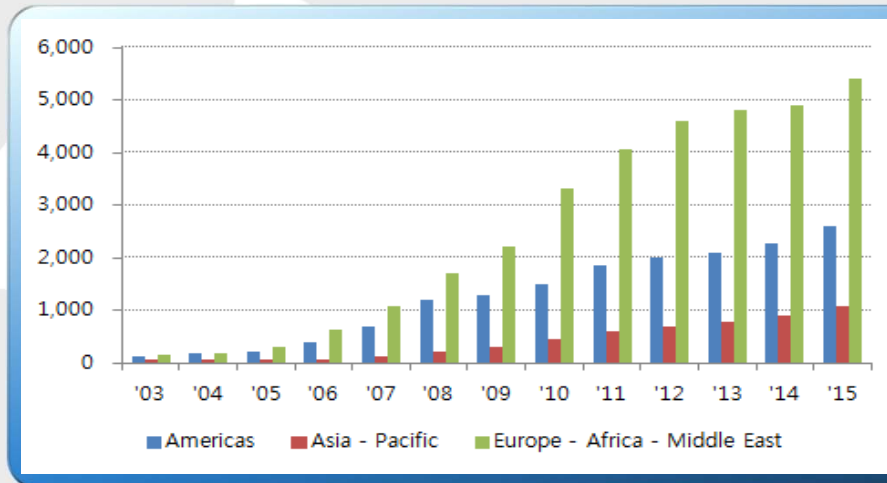
Challenges for Asian-Pacific Exchanges

Index development and ETF/ETP market creations are proper areas for collaboration.

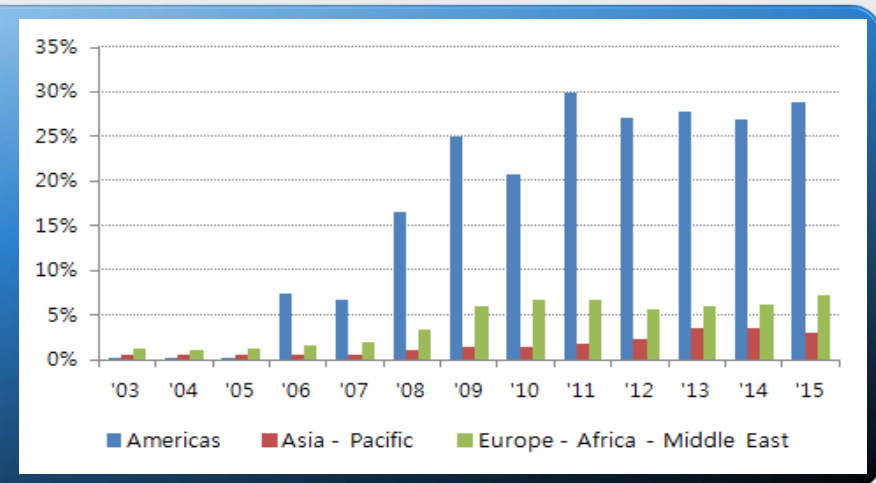
⇒ ETFs are no longer considered a niche product and a growing number of organizations are likely to enter into this market in the future.

Growing Demand	Effects for related Markets
<ul style="list-style-type: none"> · Growing Popularity of Multi-Asset Investment Strategies · Structural Flexibility <ul style="list-style-type: none"> - Various Profit Structure combined with Derivatives - Expanding Asset Classes From Equity To FI, Commodities 	<ul style="list-style-type: none"> · Facilitating investment into Financial Market · Liquidity Creation for Derivatives Market

【 Number of Listed ETFs 】

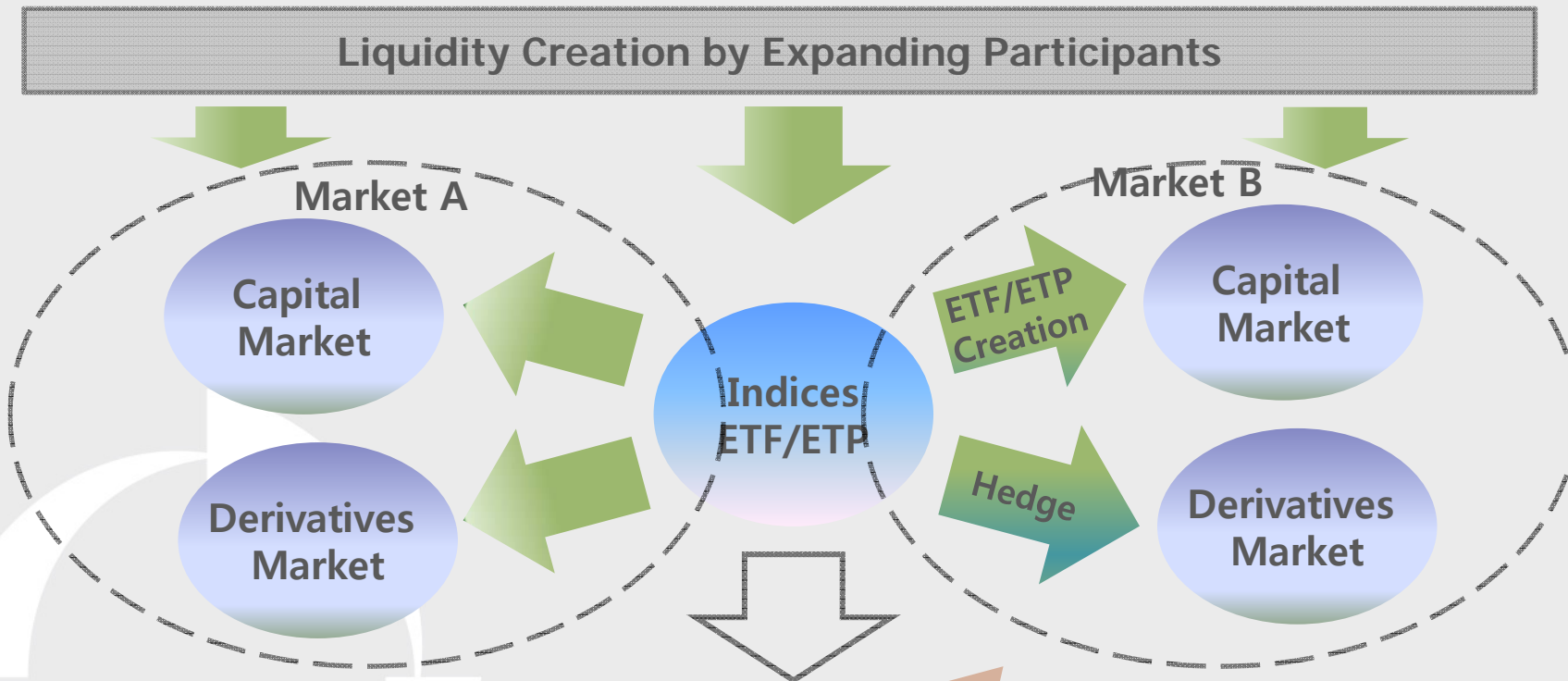


【 ETF/Stock trading amount ratio 】



Challenges for Asian-Pacific Exchanges

ETF/ETN markets facilitate the investment and trading activity in capital market and derivatives market.



The Next Step Collaboration

Thanks