

HKEx's Derivatives Market Development Update

20 March 2014



Group Strategic Vision and Mission for 2013-2015



Vision

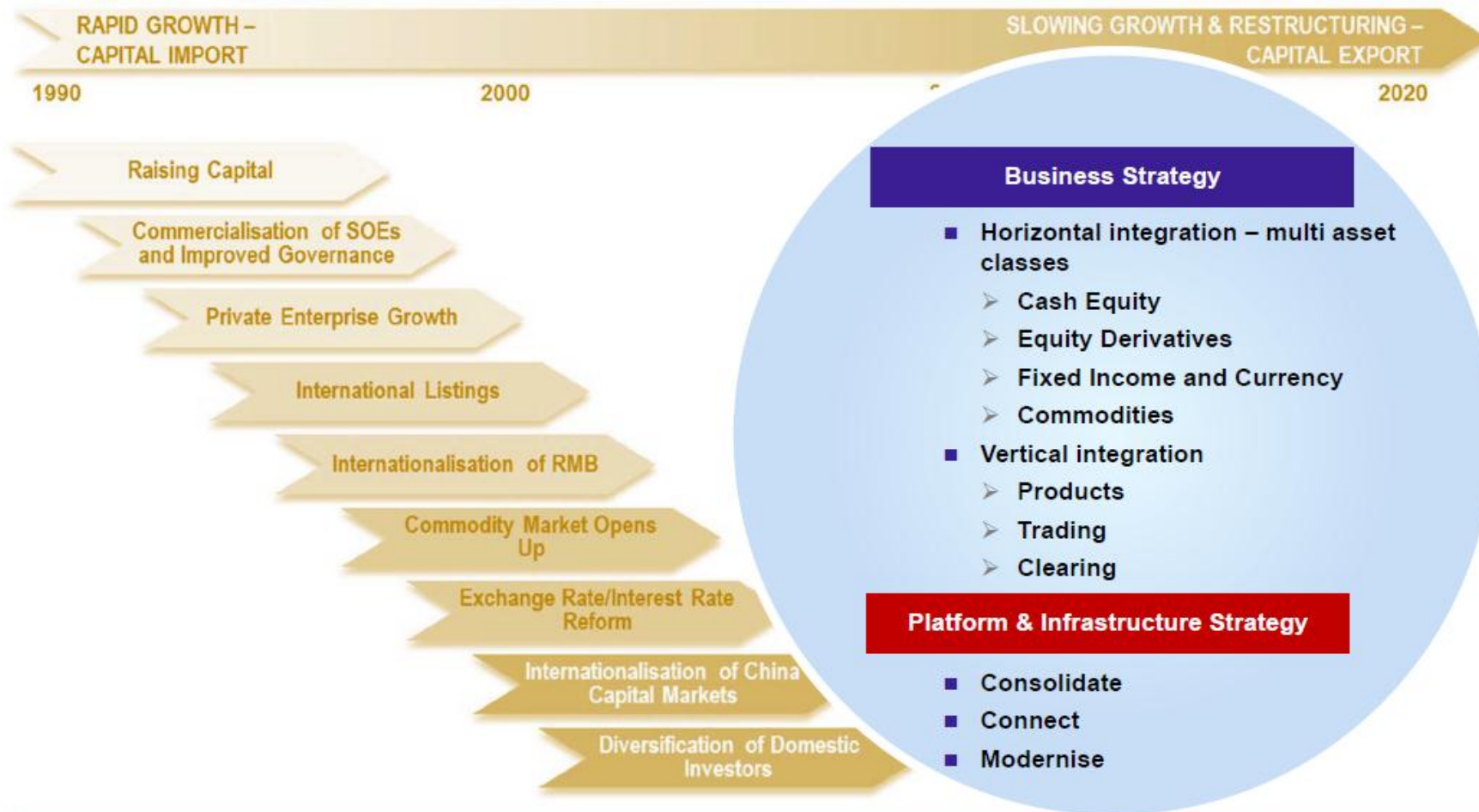
*To build HKEx into a leading global vertically-integrated multi-asset class exchange...
...and prepare ourselves for the managed but accelerating opening of China's capital account*

Mission

Aim to be the Global Exchange of Choice for our China clients and our international clients seeking China exposure

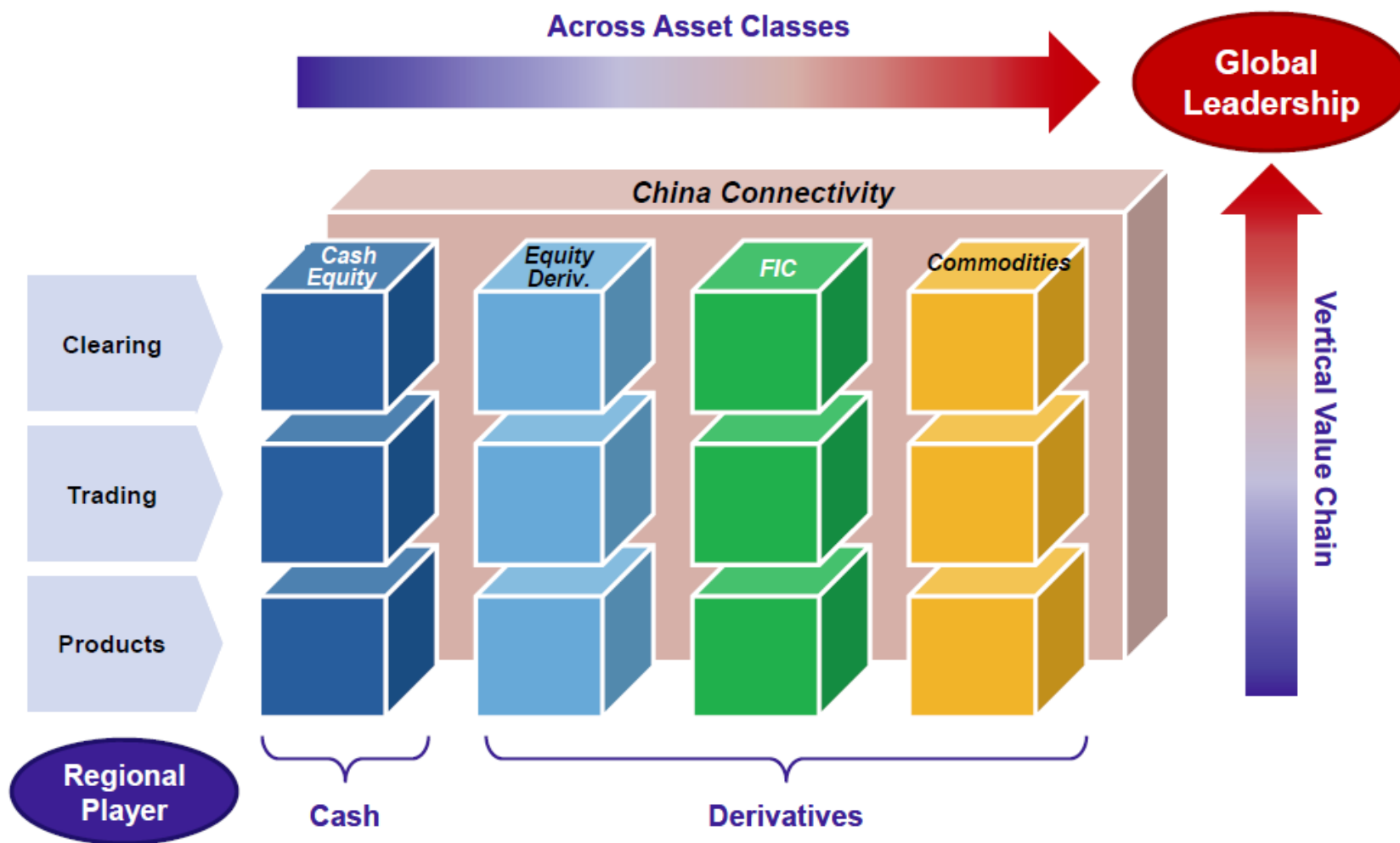
HKEx Strategic Plan 2013-2015

Leverage China's Capital Account Opening and Aim for Global Leadership



Strategic Focus 2013-2015: Mutual Market Access with China + Global Leadership

Global Leadership: Horizontal Assets Classes + Full Vertical Integration



Overview of Derivatives Market



Basic Information in Derivatives Market

No. of Futures Broker Participants*	179
No. of Market Makers (Futures & Options)*	29
No. of Stock Options Broker Participants*	91^
No. of Market Makers (Stock Options)*	33
Daily Contract Volume#	532,905

* as at the end of February 2014

^ 87 OTEPs and 4 OBEPs for stock options

figures in 2013

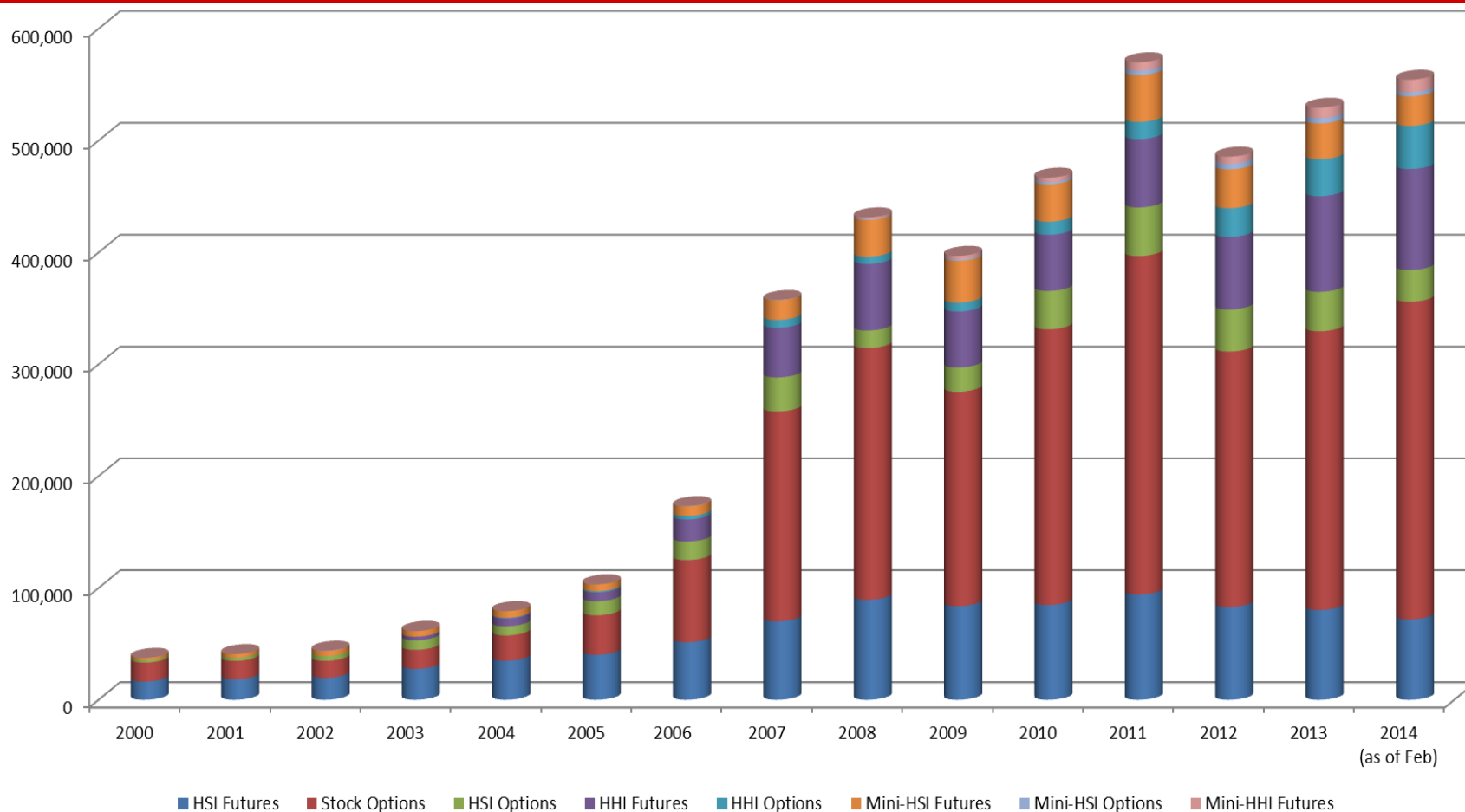
International ranking of HKEx's equity derivatives products in 2013 vs. 2012

Products	FY 2012 Ranking	FY 2013 Ranking
Stock Index Futures	10	9
Stock Index Options	12	13
Stock Options	10	10

Note: Rankings are in terms of number of contracts traded

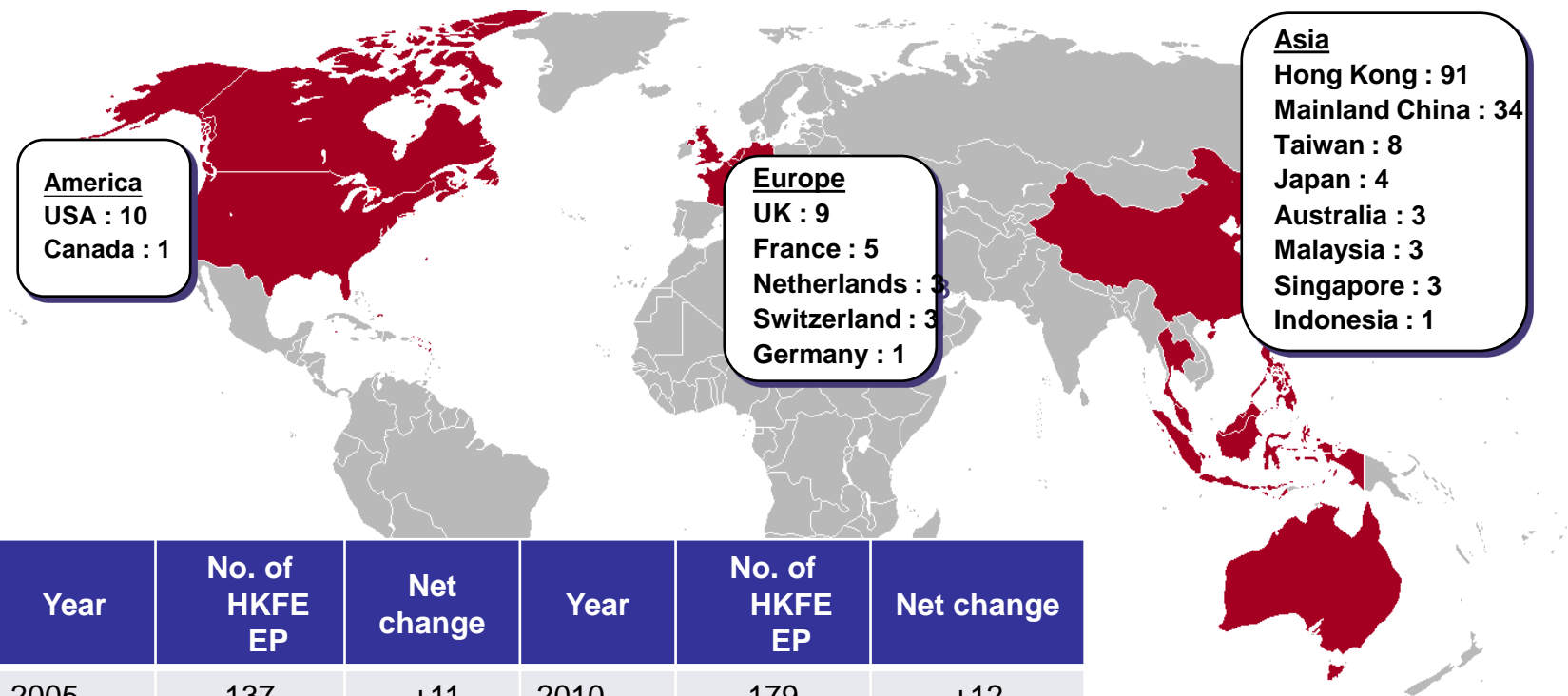
Source: The World Federation of Exchanges (WFE); 2012 and 2013

Average Daily Turnover of Major Derivatives Products has Increased in 2014 vs. 2013



Equity-based products remain the main drivers of the derivatives market
Stock Options is the fastest growing product

Distribution of Exchange Participants by Origin is Diversified



Year	No. of HKFE EP	Net change	Year	No. of HKFE EP	Net change
2005	137	+11	2010	179	+12
2006	135	-2	2011	182	+3
2007	140	+5	2012	185	+3
2008	148	+8	2013	179	-6
2009	167	+19	2014 Feb	179	unchanged

HKFE: Hong Kong Futures Exchange

Derivatives Products are Traded on HKATS



Developed by

- NASDAQ OMX (on GENIUM platform)

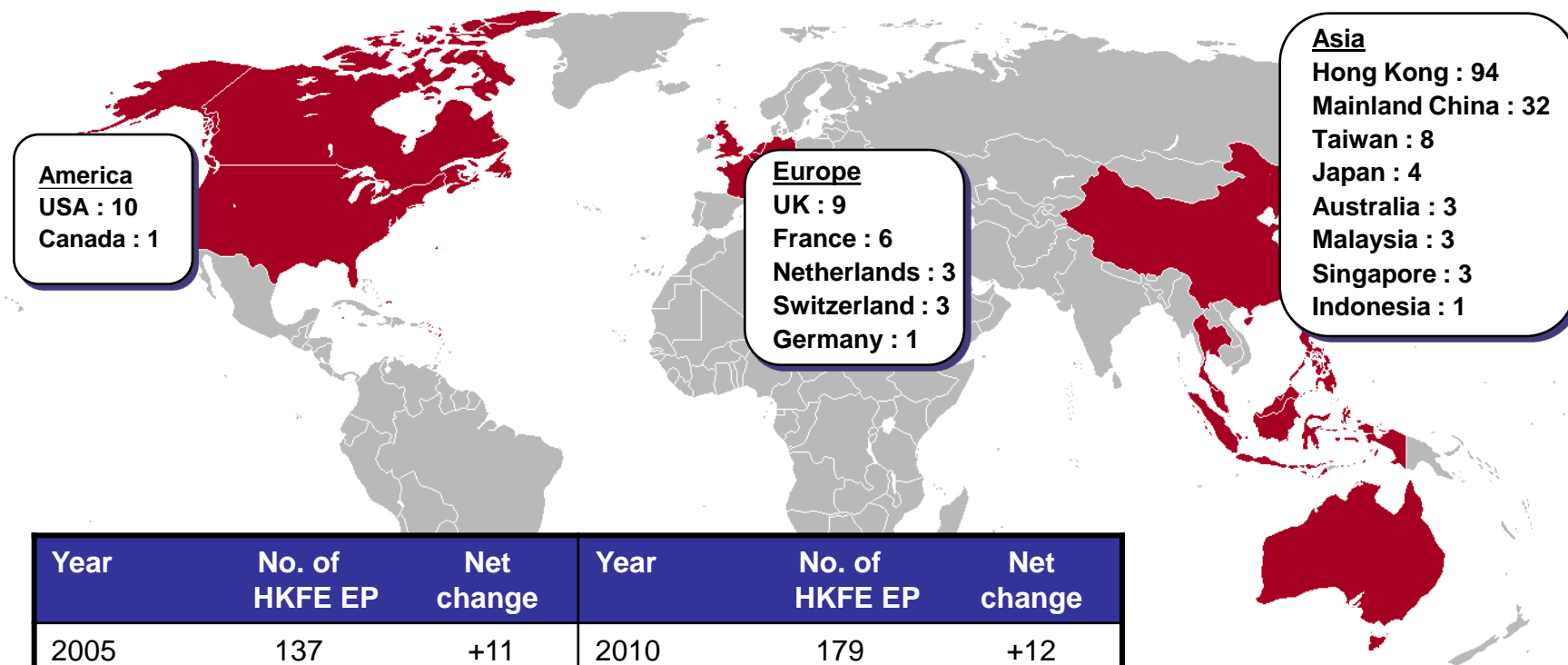
Clearing Integration

- Integrated system (i.e. trading and clearing straight-through processing)

Capacity and Speed

- 200,000 order book changes per second; historical peak at 16,626 order book changes per second
- Average 125 microseconds order processing latency with central gateway's centralized architecture

HKEx's Exchange Participants by origin



Year	No. of HKFE EP	Net change	Year	No. of HKFE EP	Net change
2005	137	+11	2010	179	+12
2006	135	-2	2011	182	+3
2007	140	+5	2012	185	+3
2008	148	+8	2013 May	181	-4
2009	167	+19			

HKFE: Hong Kong Futures Exchange

HKEx's Derivatives Products



Major Products

Futures	Options
1. Hang Seng Index Futures	1. Hang Seng Index Options
2. Mini-Hang Seng Index Futures	2. Mini-Hang Seng Index Options
3. H-Shares Index Futures	3. H-Shares Index Options
4. Mini H-Shares Index Futures	4. Stock Options
5. Stock Futures	5. H-shares Index Flexible Options
6. RMB Currency Futures	6. H-shares Index Flexible Options
7. CES 120 Index Futures	
8. HSI / HSCEI Dividend Point Index Futures	
9. HSI Volatility Index Futures	

International Comparison of Equity Index Futures Trading Activities



- Average Daily Volume (ADV) of H-shares Index (HHI) futures posted strong growth (32%) in 2013.
- HSI futures and HHI futures growth outperformed most major overseas index futures
- HHI futures has strong 5-year ADV CAGR of 11%, compared to other major stock index futures markets.

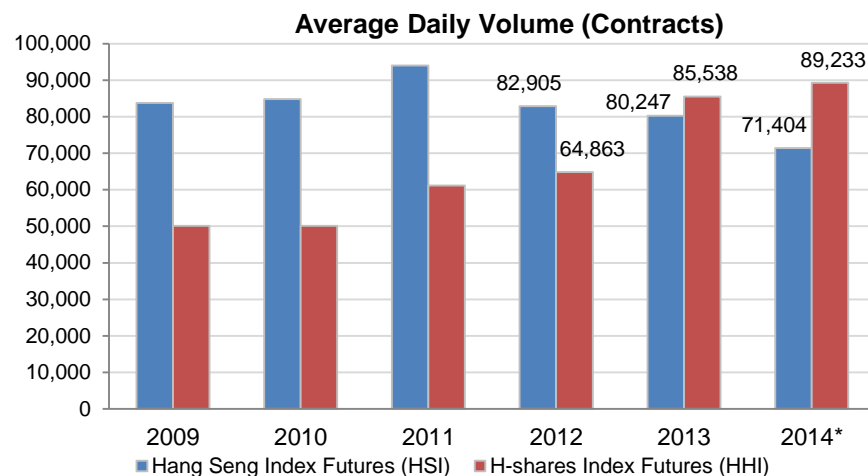
Rank	Futures	Average Daily Volume [#]		Year End Open Interest	
		2013 vs 2012	5 Year CAGR*	2013 vs 2012	5 Year CAGR*
2	N225 Futures	70%	4%	11%	5%
3	HHI Futures	32%	11%	20%	24%
4	HSI Futures	-3%	-1%	-23%	9%
5	E-mini S&P 500 Futures	-5%	-4%	1%	3%
6	S&P 500 Futures	-17%	-17%	-23%	-15%
7	Euro Stoxx 50 Futures	-18%	-5%	2%	6%
8	Kospi 200 Futures	-21%	-10%	3%	2%

Comparison of Equity Index Products within HKEx

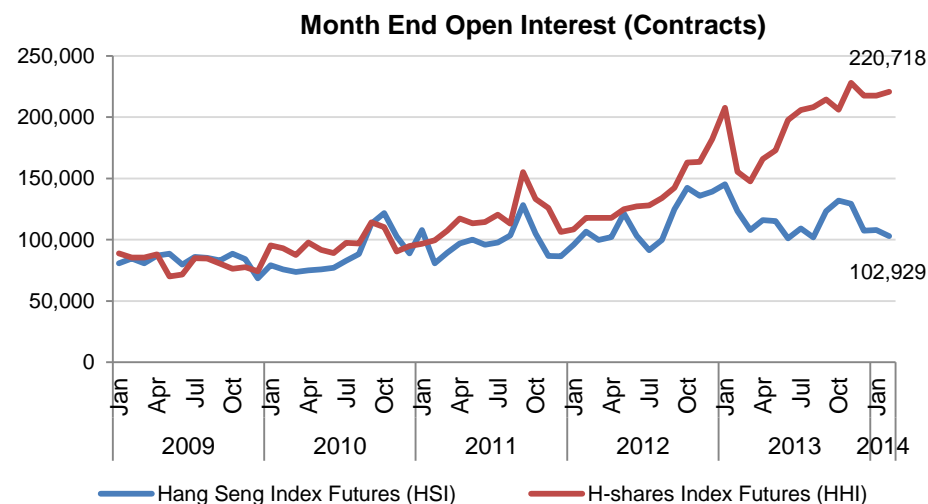


2013 ADV	vs 2012	5Y CAGR
HSI futures	-3.2%	-0.9%
MHI futures	-7.5%	-3.0%
HSI Index Options	-6.2%	10.2%
HHI futures	31.9%	11.3%
MCH futures	45.2%	23.4%
HHI Index Options	28.2%	32.9%

2013 Dec OI	vs 2012	5Y CAGR
HSI futures	-23.0%	9.4%
MHI futures	-12.1%	5.6%
HSI Index Options	-33.6%	-0.3%
HHI futures	19.6%	24.0%
MCH futures	58.5%	37.2%
HHI Index Options	45.7%	47.2%



* 2014 data are updated to 4 March, 2014.



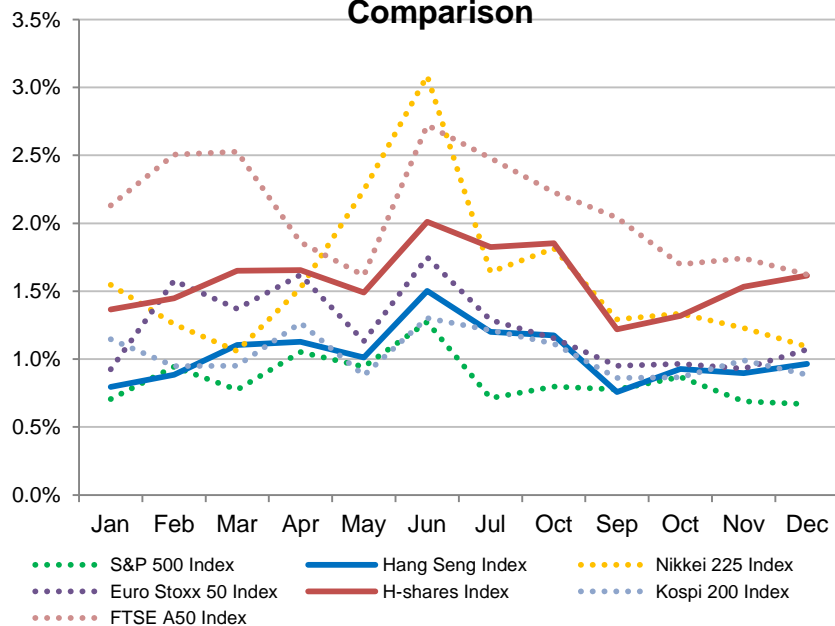
International Comparison of Index Volatility



Money goes after more volatile markets:

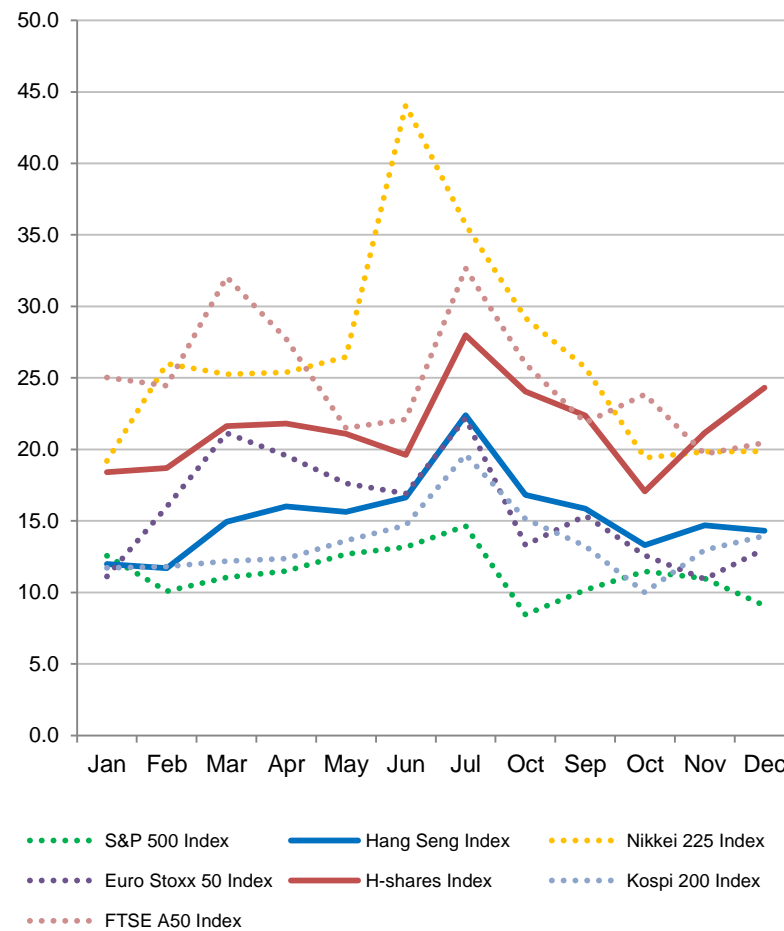
- HHI are the most volatile index by the end of 2013
- Significant increase in ADV in 2013 vs 2012: +32%
- Increase in OI in 2013 vs 2012: +20%

2013 Index Intraday Price Range Comparison



* Intraday price range is calculated as (Day High – Day Low) / Average of Day High and Day Low.

2013 Index Volatility (30D) International Comparison

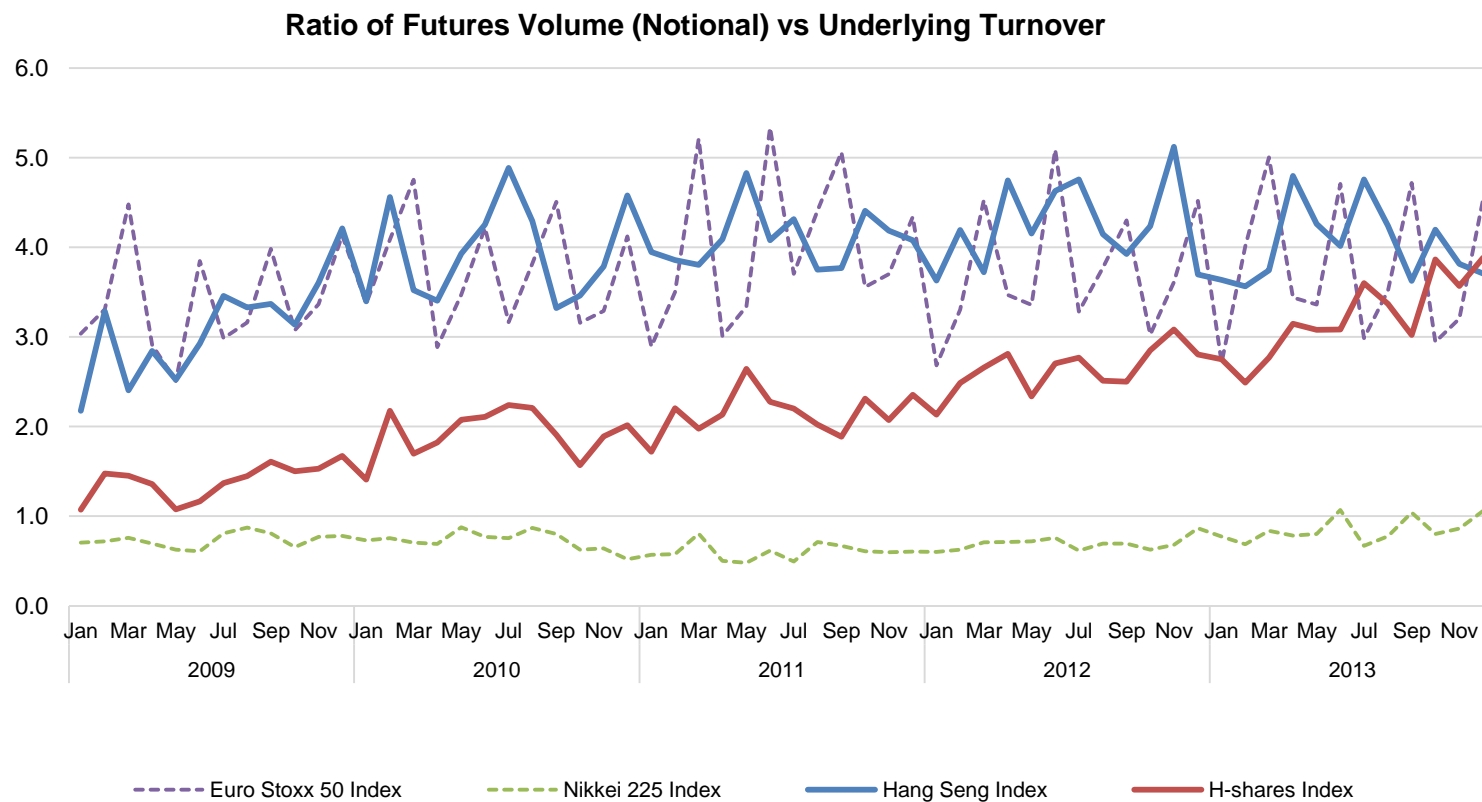


Source: Bloomberg

Trading activities by int'l standard



- ADV of HSI futures and HHI futures in notional terms are 4 times the underlying turnover

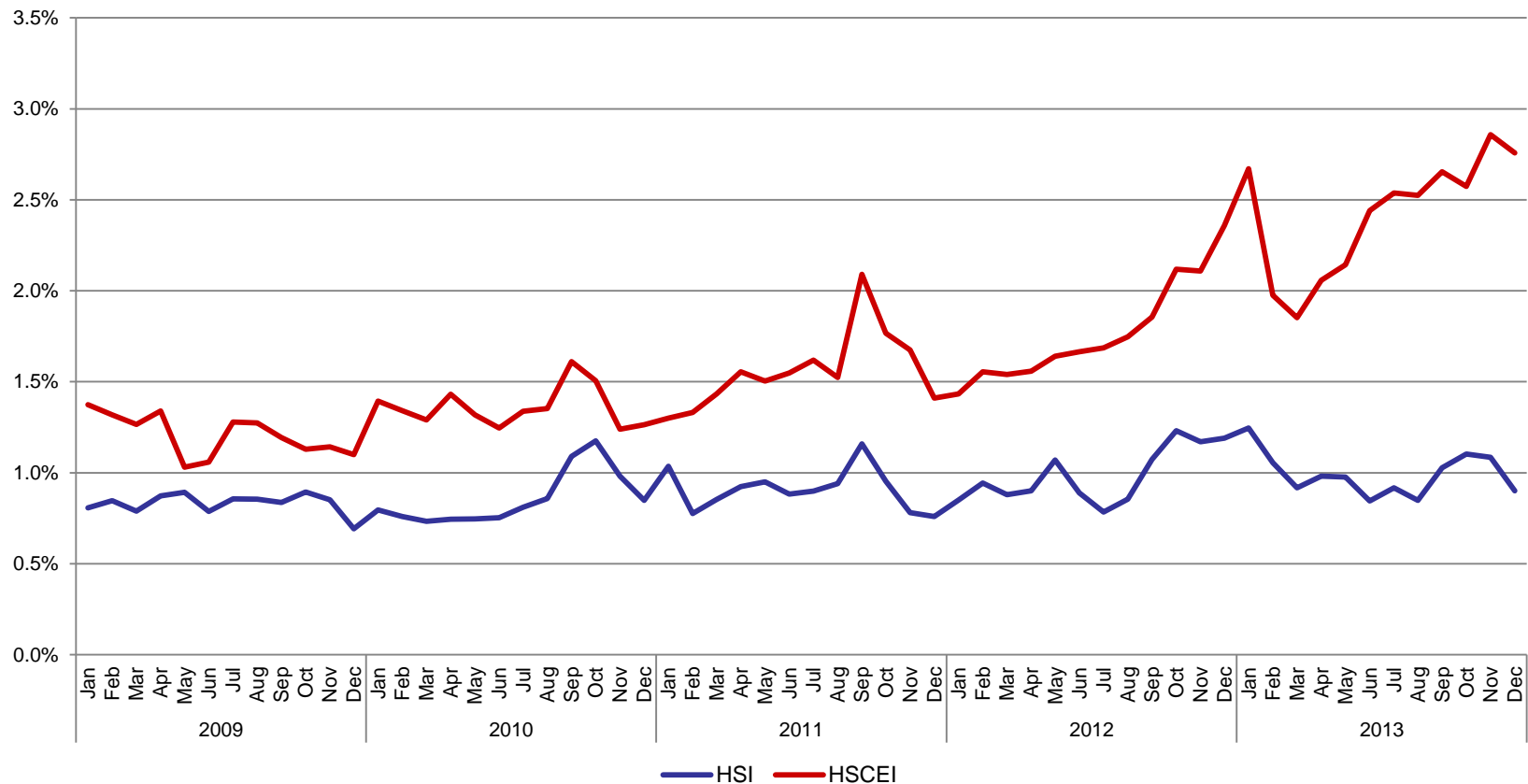


Open Interest Compared to Underlying Cash Market



- Ratio of HHI futures' open interest to underlying market capitalization is much higher

Ratio of OI (Notional) vs Underlying Market Capitalization

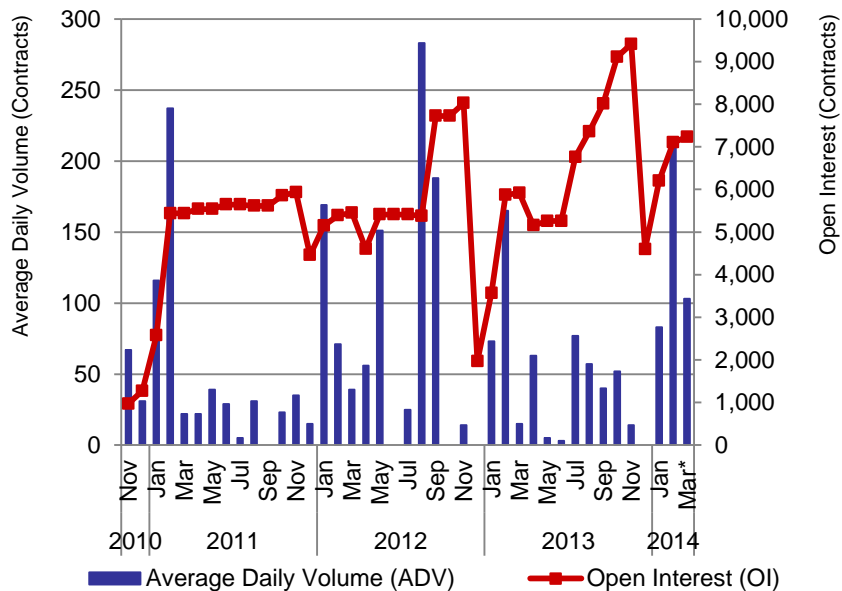


Derivatives Market Highlights: HSI & HSCEI Dividend Futures

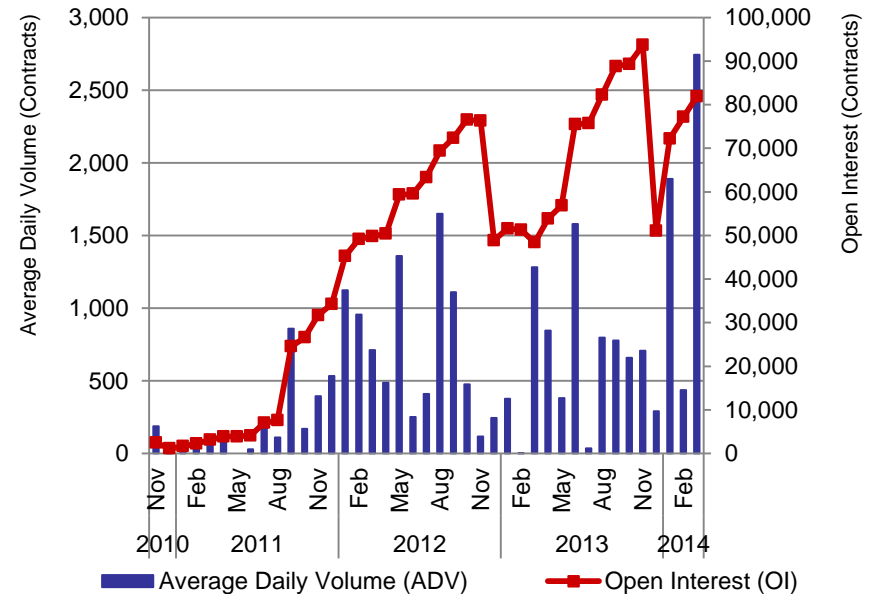


	2012	2013	% Growth
Average Daily Volume	838	687	-18.0%
Open Interest (end Oct)	50,848	55,674	+9.5%

**HSI Dividend Point Index Futures
ADV vs OI**



**HSCEI Dividend Point Index Futures
ADV vs OI**



*Market Makers: BNP Paribas, Goldman Sachs and SG Securities

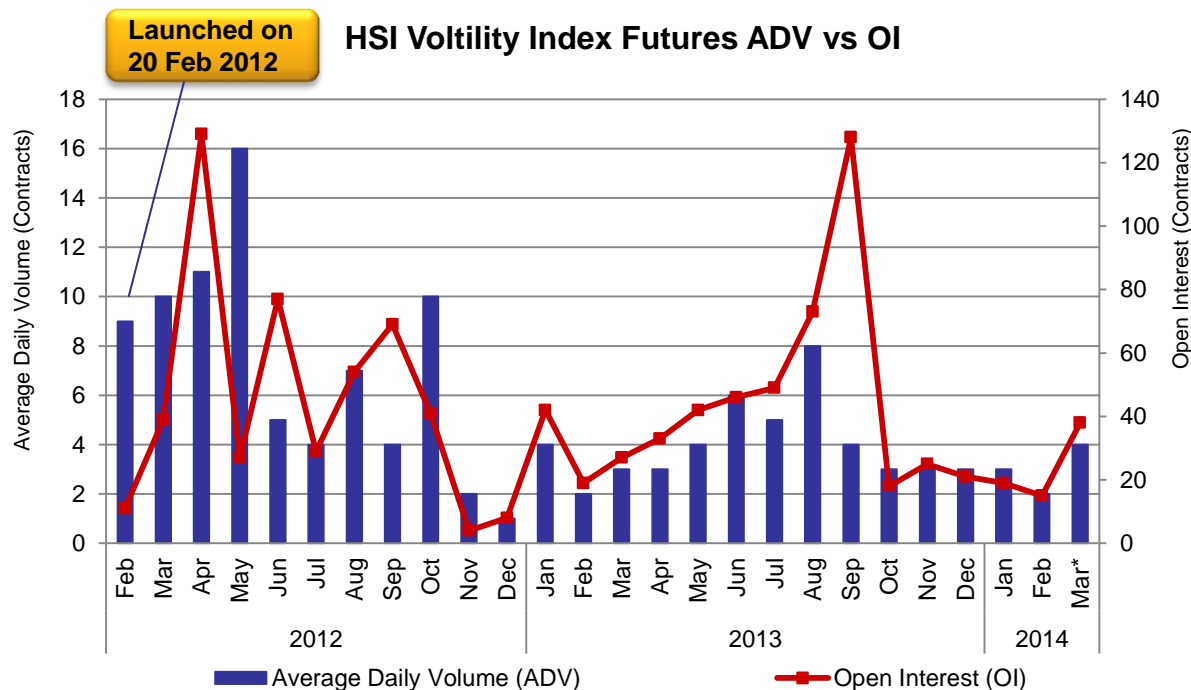
Dividend trading takes off as more buy-and-hold-type investors enter the market

Derivatives Market Highlights: HSI Volatility Index (VHSI) Futures



Equity Volatility as an Asset Class

- VHSI Futures was Asia's first listed product for pure volatility trading
- The product of choice for managing volatility risk of the market
- Market participants still mostly limited to sophisticated investors



Market Makers

BNP Paribas

Goldman Sachs

Corporate Client of Newedge

HKEx is well positioned to product innovation to meet evolving trading demand

Stock Options Revamp



Changing Market Environment

- The market has growing interest in option linked products versus caution about counterparty risk (even between banks / corporates)
- More stringent regulatory environment has led to increased demand for higher product and price transparency
- Sales procedures for investment products are getting more complicated

Key Objectives of the Revamp



1. Reduce Trading Fee

- Tier Structure: 2 to 3
- 26 classes with fee reduction ranging from 50% to 83%

2. Increase Price Visibility

- Primary Market Maker Programme
- Price Dissemination Promotion
- Stock Options Corner

3. Enhance Tradability > Improve Micro-infrastructure

- Introduction of 4th Contract Month
- Reduce Minimum Trading Spread

Introduction of Primary Market Maker Programme (PMM)



- Expand coverage of stock options price quotation
- PMM scheme
 - 5 PMM permits in each eligible classes maximum
 - Applicable to 10 selected classes

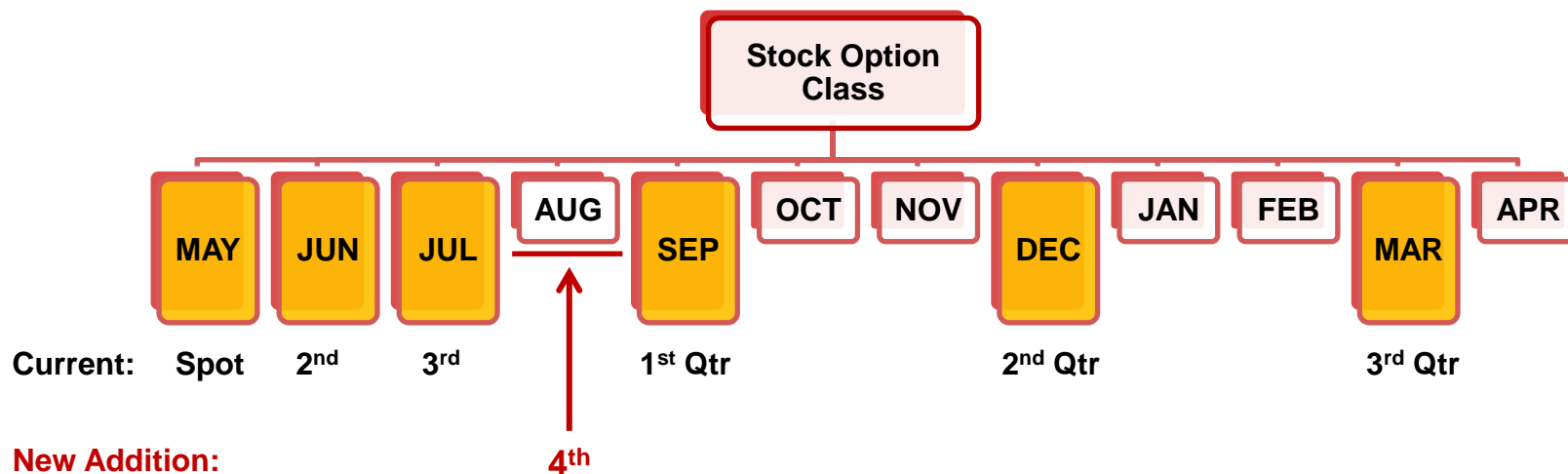
<u>Obligations</u>	<u>CQMM</u>	<u>QRMM</u>	<u>PMM</u>	<u>Enhancement</u>
➤ Series Covered	24		120	5 Times
➤ Provision Time	50%		> 80%	Up 60%
➤ Response Rate		50%	> 80%	Up 60%

Introduction of 4th Expiry Month



➤ Introduction of 4th Expiry Month

- Expanding contract selection to 7 expiry months
- To ensure availability of at least 3-month maturity for trading (which is common in OTC market)



Reduce Minimum Trading Spread



➤ Reduce Minimum Trading Spread

- To improve trading efficiency in terms of spread cost
- Reduce minimum trading spreads to 1/1000 dollar (\$0.001) for selected options with low-priced underlying stocks

	Underlying Price	Option Price (5% premium)	Spread	Spread %
HSBC	\$80	\$4.00	\$0.01	0.25%
Bank of China	\$4	\$0.20	\$0.01	5.00%
Bank of China (After Reduction)	\$4	\$0.20	\$0.001	0.50%

Price Dissemination Promotion



Promotion Scheme

HKEx waived subscriber fee of top price level for real time stock option prices* for one year

Benefit

- Brokers: Ability to expand customer base by freely disseminating stock option prices on corporate websites through HKEx licensed information vendor
- Investors: To view market data for free and more easily on broker or information vendor website

*top price level provided on a snapshot basis (including bid/ask price and volume, high/low, traded price and volume)

Relaxing Position Limit in Stock Options Market



Maintain financial market stability

- OTC trades will be captured by exchange-traded market that would increase market transparency
- Listed products can be monitored by regulatory bodies more easily
- Reduce the OTC counterparty risk through central clearing
- Facilitate institutional risk management need

Improve HK competitiveness as a financial center

- Compete with US market for HK listed stock options business
- Cater for growing institutional demand

Assist growth of HK economy

- Attract overseas institutions to use HK services for trading and clearing
- More job opportunities will be provided

Stock Options Revamp - HKEx Stock Options Corner



The screenshot shows the HKEx website's 'Stock Options' page. At the top, there is a navigation bar with the HKEx logo and '香港交易所' on the left, and search boxes for 'Website Search' and 'Stock Quote Search' on the right. Below the navigation bar is a menu with categories like 'Investment Service Centre', 'Listing Matters', 'Products & Services', 'Market Operations', 'Rules & Regulations', 'Statistics & Research', 'News & Consultations', and 'About HKEx'. The main content area is titled 'Stock Options' and includes a sub-menu on the left with options like 'Securities Products', 'Derivatives Products', 'Clearing Services', 'Data Products', 'Issuer Services', and 'Hosting Services'. The main text describes the platform's purpose for investors and lists various resources such as 'Stock Options Search', 'Top 10 Traded Stock Option Series', 'Publications', 'Options Tools', 'Options Education', 'Trading Information', 'Market Maker Information', 'Statistics', 'Stock Options Circulars', 'Frequently Asked Questions', 'Setting up a Stock Options Business (Coming soon)', 'Stock Options Information Dissemination (Coming soon)', and 'Site Map'. On the right side, there are three promotional banners: 'Introductory Video', 'Investment Forecast' (投資預報) with 'Increase investment power' (倍增投資力量) and 'Winning question and answer game' (有獎問答遊戲) starting on March 25th, and 'Introductory Guide to the Stock Options Corner'.

www.hkex.com.hk/stockoptions

Stock Options Revamp - HKEx Stock Options Corner



Highlights:

Beginners Learning Tools	Current Investors Analytical Tools	Brokers Practical trading tools
<ul style="list-style-type: none"> • Provide education materials • Provide product information 	<ul style="list-style-type: none"> • Provide analytical and risk management tools 	<ul style="list-style-type: none"> • Provide trading information • Provide information on setting up stock options business
<ul style="list-style-type: none"> • Options ABC • Educational video 	<ul style="list-style-type: none"> • Options/Warrants Calculator • Volatility comparison charts 	<ul style="list-style-type: none"> • Stock Options Search • Stock Option Details
		<ul style="list-style-type: none"> • Gross margin estimator • Margin data search

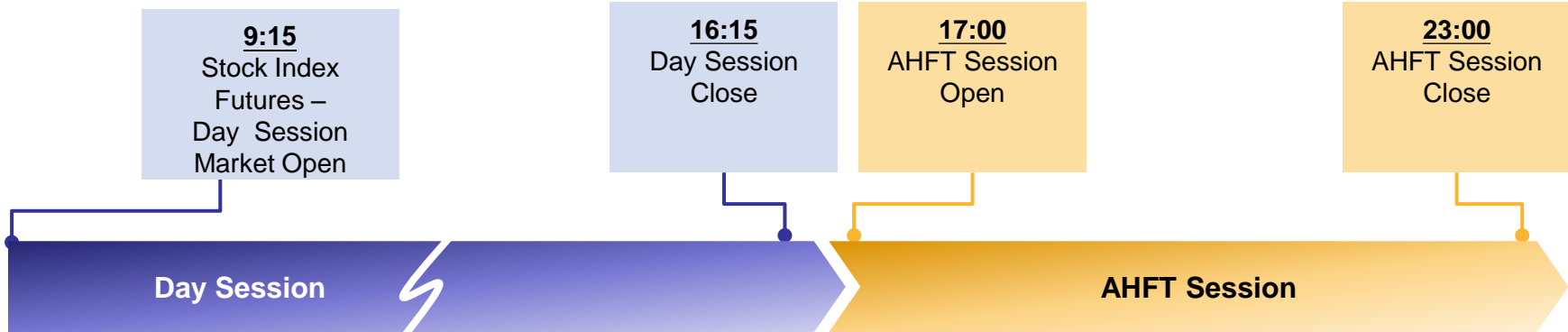
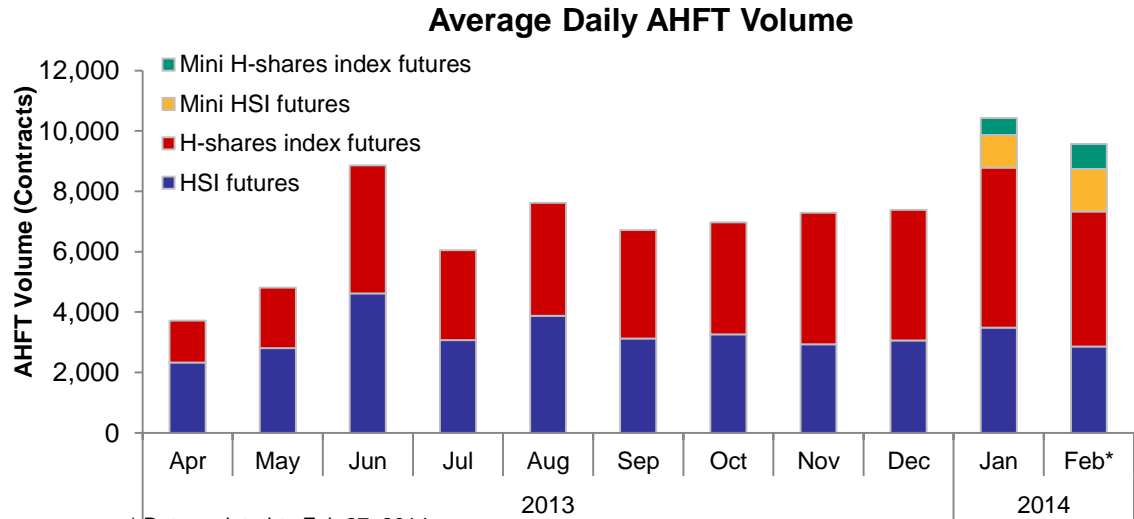
Aims to cover all kinds of users and investors

After Hours Futures Trading (AHFT)



Why

- Meet current trading and hedging needs from global investors
- Business growth driver for Hong Kong futures industry
- Vitally important when HKEx launches RMB derivatives



Average Daily Volume in AHFT Session was 10,000 contracts in 2014 YTD (or 5.0% of Day Session)

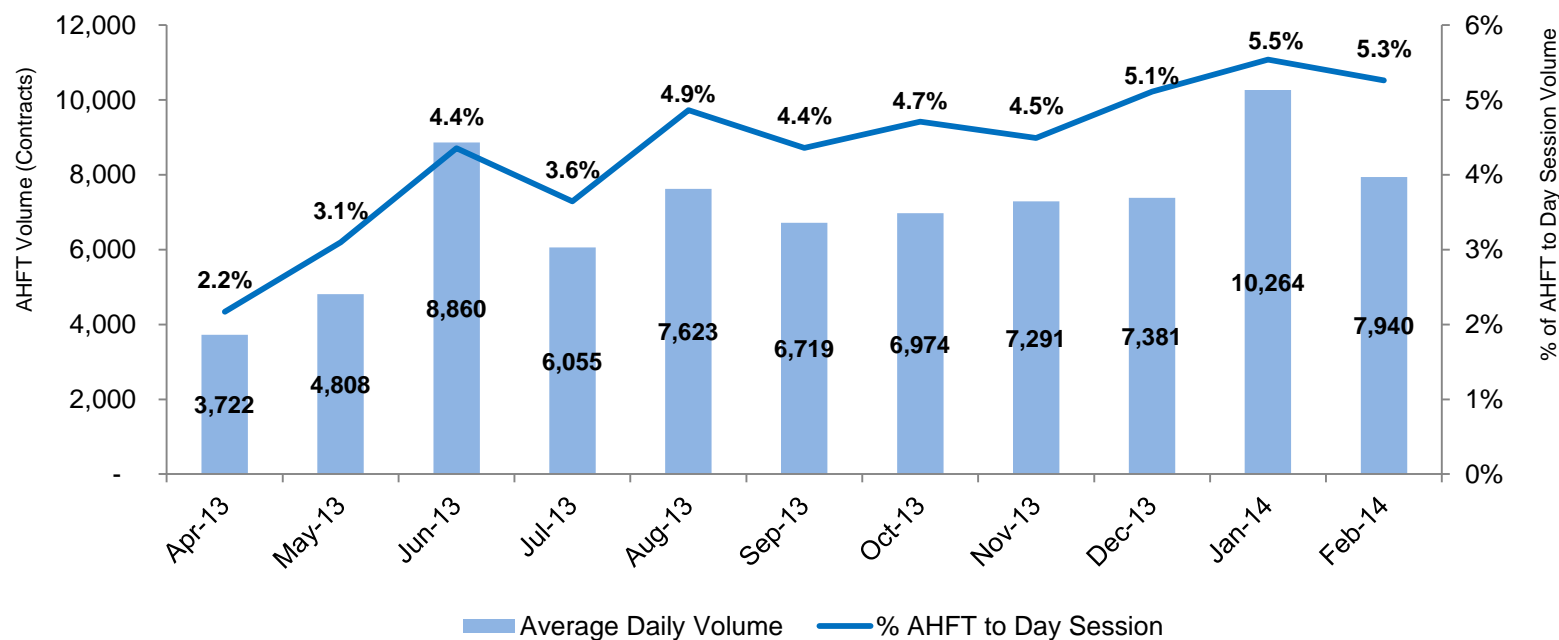
AHFT Trading Activities

- Trading Volume



- AHFT volume vs. day session volume increased from 2.2% in Apr 2013 to 5.3% in Feb 2014
- Record % of AHFT volume vs. day session volume at 12.1% on 6 Dec 2013
- Record AHFT volume of 27,126 contracts on 27 Jan 2014

Combined AHFT ADV and Ratio of AHFT to Day Session Volume



Note: up to 21 Feb 2014 data

Growing Importance of AHFT Session

International Exchanges AHFT Volume



AHFT Exchange	Product	AHFT Launch	Day Session (local time)	AHFT Session (local time)	Oct 2012 Statistics		
					Avg. Daily Day Session Volume	Avg. Daily AHFT Volume	AHFT to Day Session Ratio
SGX	Nikkei 225 futures	Mar 1996	07:45 - 14:25	15:15 - 02:00 ^{Note 1}	63,734	25,327	40%
OSE	Nikkei 225 futures	Sep 2007	09:00 - 15:15	16:30 - 03:00 ^{Note 2}	33,120	10,261	31%
ASX	SPI 200 futures	May 2000	09:50 - 16:30	17:10 - 07:00	18,584	6,712	36%
CME	KOSPI 200 futures	Nov 2009	09:00 - 15:15 (trading at KRX)	18:00 - 05:00 ^{Note 3}	202,358	26,806	13%

Note 1: SGX extended AHFT by phase: 10:55 pm (Dec 2006) → 1 am (Jan 2010) → 2 am (Sep 2010)

Note 2: OSE extended AHFT by phase: 7 pm (Sep 2007) → 8 pm (Oct 2008) → 11:30 pm (Jul 2010) → 3 am (Jul 2011)

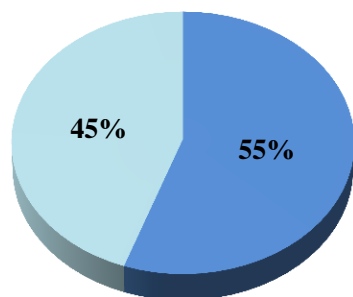
Note 3: CME KOSPI 200 trading hours: 04:00 - 15:00 CDT

Note 4: Eurex KOSPI 200 trading hours: 09:00 - 21:00 CET

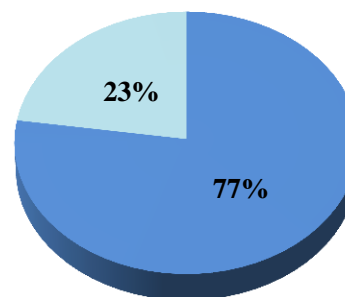
Market Participation in AHFT

- Number of registered EPs for AHFT increased from 115 to 143, out of 179 total HKFE EPs
- Total of 132 EPs participated AHFT
- 83 EPs participated on average each day

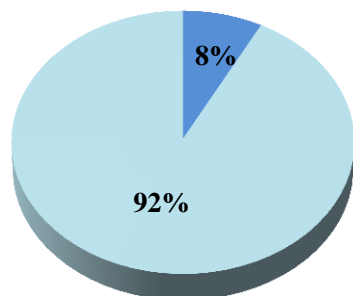
HSI Futures AHFT ADV Distribution



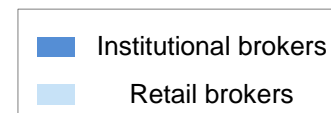
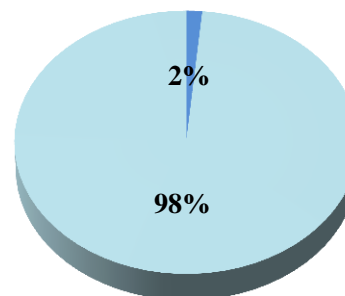
HSI Futures AHFT ADV Distribution



MHI Futures AHFT ADV Distribution



MCH Futures AHFT ADV Distribution



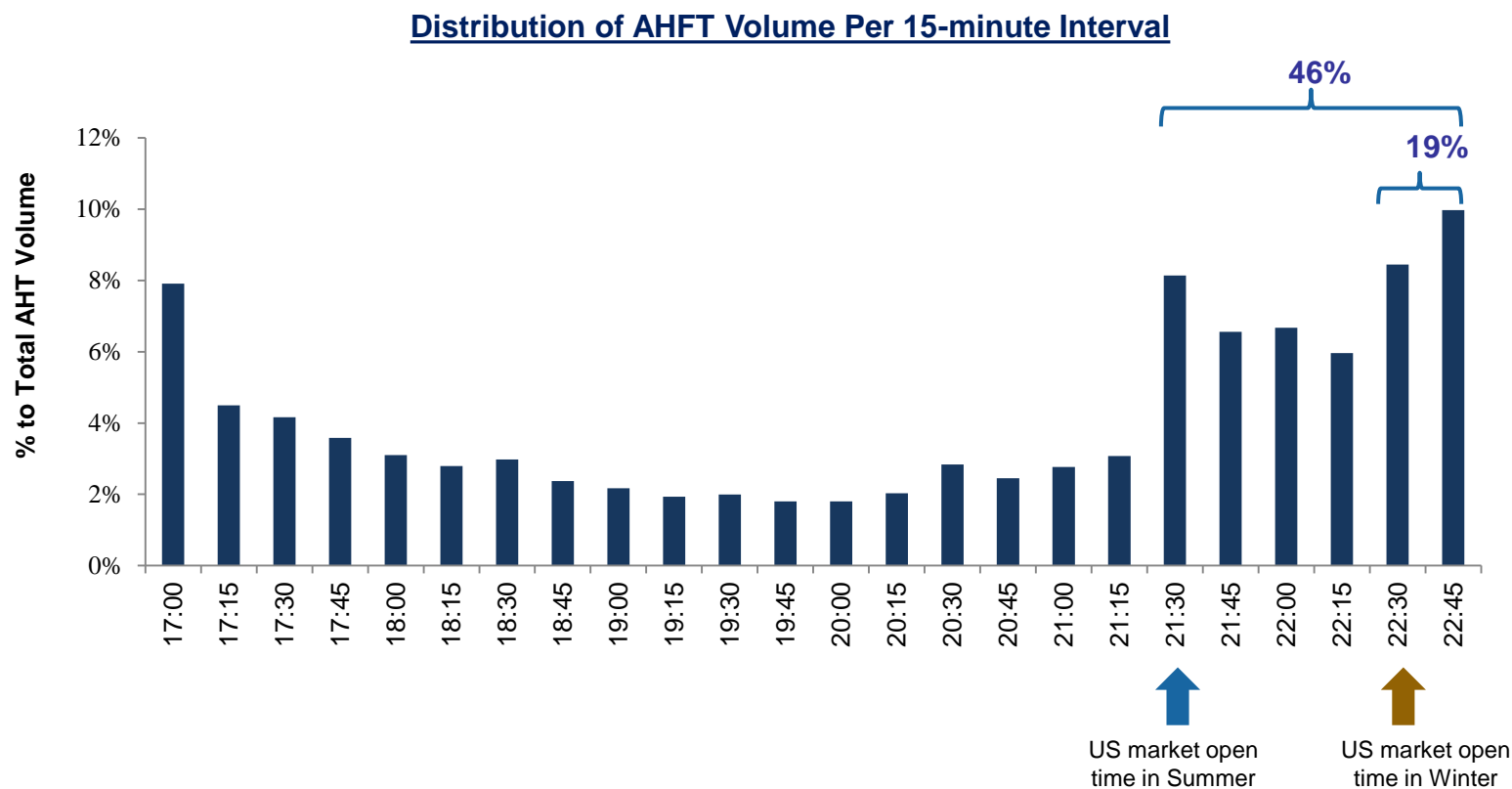
- Increasing EP participation covering most active EPs
- Institutional participation dominates in HSI/HHI Futures while active retail participation in Mini-Index Futures

AHFT Activities

- Intra-day Volume Distribution



- 46% AHFT volume executed between 9:30 pm and 11 pm (after US market open in Summer time)



Note: up to 21 Feb 2014 data

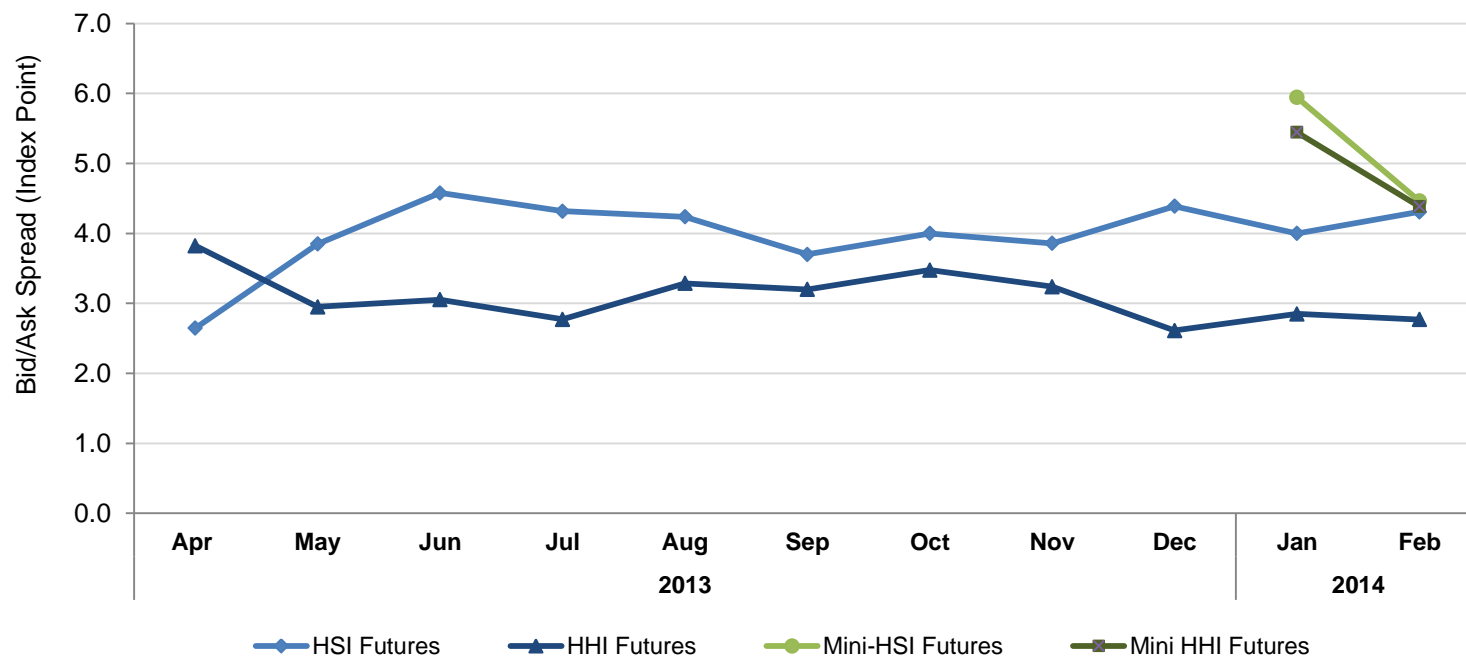
AHFT Activities

- Bid / Ask Spread



- The most frequently observed bid / ask spreads were 4 index points for HSI Futures, 3 index points for HHI Futures, and 5 index points for both Mini-HSI Futures and Mini-HHI Futures

Most Frequent Bid / Ask Spread in AHFT Session



Tight bid / ask spreads resulted from diversified participation

Note: up to 21 Feb 2014 data

China Exchanges Services

-Joint Venture of HKEx, SHSE and SZSE



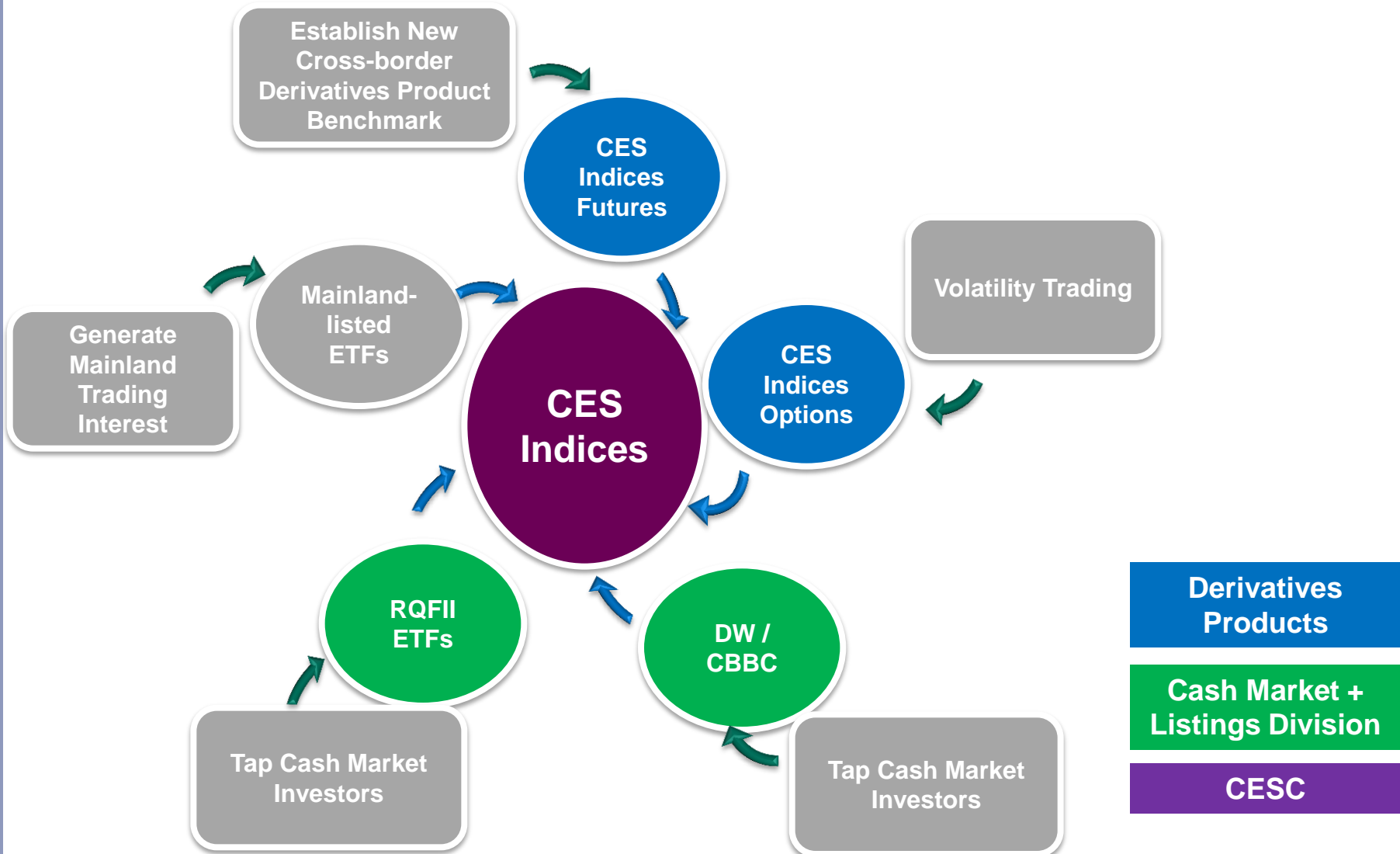
Develop new financial products and connect Mainland and HK trading markets to the world

Develop new products including ETF, index futures and index options

Develop index series based on listed stocks in the three exchanges

Develop industry classification standard, information platform and information products

CES Index Product Ecosystem



The World's First All China Stock Index Futures



Product	Market Coverage			
	A-shares listed in Mainland	H-shares listed in HK	Red chips listed in HK	Other mainland companies listed in HK
CES 120 Index Futures	✓	✓	✓	✓
CSI 300 Index Futures	✓			
FTSE A50 Index Futures	✓			
Hang Seng Index Futures		✓	✓	✓
H-shares Index Futures		✓		

CES 120 Index Futures is the only futures capturing HK-mainland cross border stocks

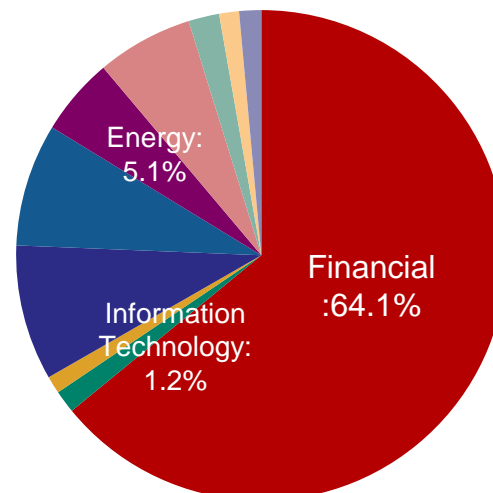
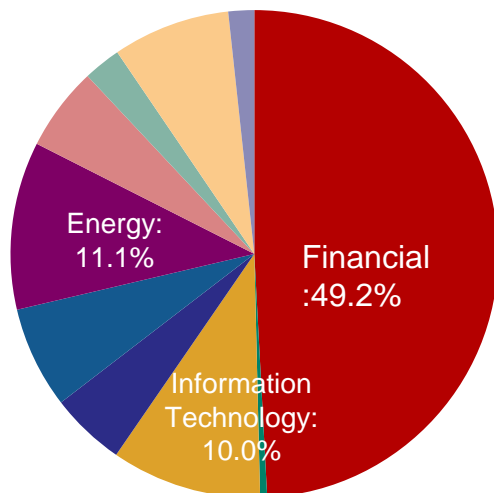
Comparison of CES 120 Index vs. FTSE China A 50 Index



Industrial Composition

CES 120 Index

FTSE A50 Index



- Financials
- Health Care
- Information Technology
- Consumer Discretionary
- Consumer Staples
- Energy
- Industrials
- Materials
- Telecommunication Services
- Utilities

*Underweight in IT and Telecom industries

CES 120 is more balanced in terms of industrial composition: less weighted in financial sector and more weighted in IT and Energy sectors

Comparison of Index Performance



Index Performance*	3 Months	6 Months	1 Year
CES120	-9%	-1%	-18%
CSI300	-8%	-2%	-18%
FTSE A50	-10%	-3%	-25%

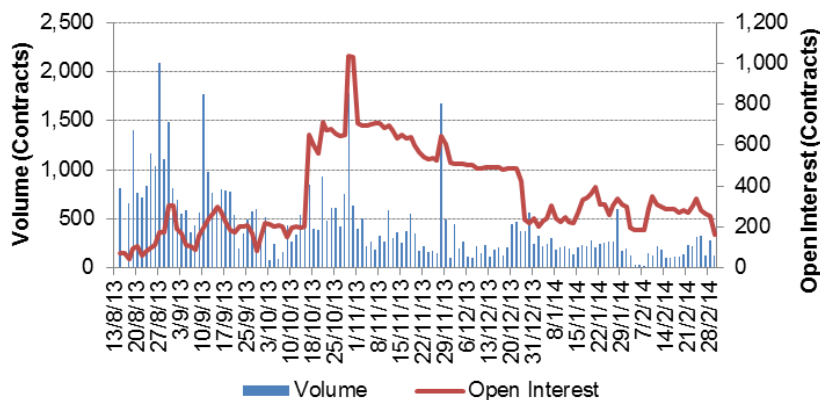
CES 120 with relatively better performance

*Source: Bloomberg as of 30 Jan 2014

Statistical Analysis of CES120 Futures



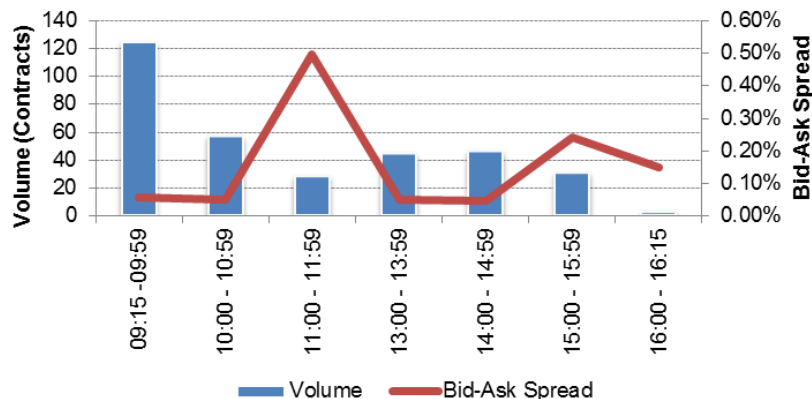
Volume vs Open Interest



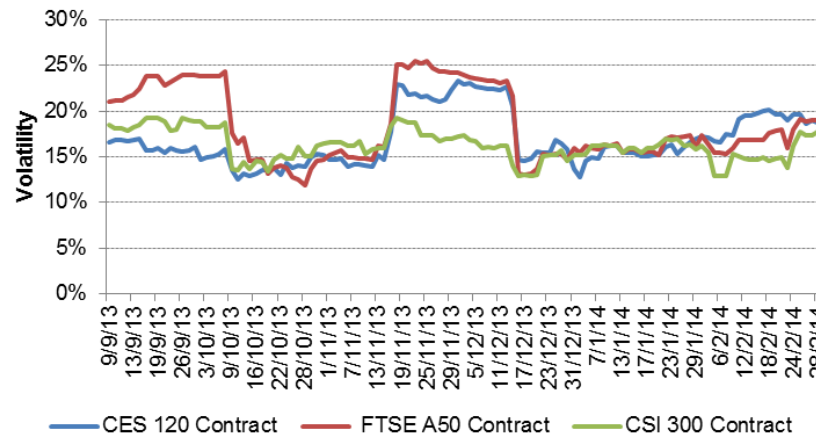
Correlation Analysis

	CES 120	HSI	HSCEI	CSI 300
CES 120	1.00			
HSI	0.83	1.00		
HSCEI	0.90	0.92	1.00	
CSI 300	0.82	0.44	0.57	1.00

Hourly Distribution of Volume & Bid-Ask Spread (Day Session)



Historical Volatility (20d Rolling)



BRICS Exchanges Alliance



Brazil

Russia

India

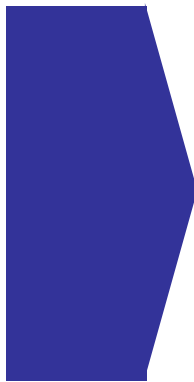
China

South Africa



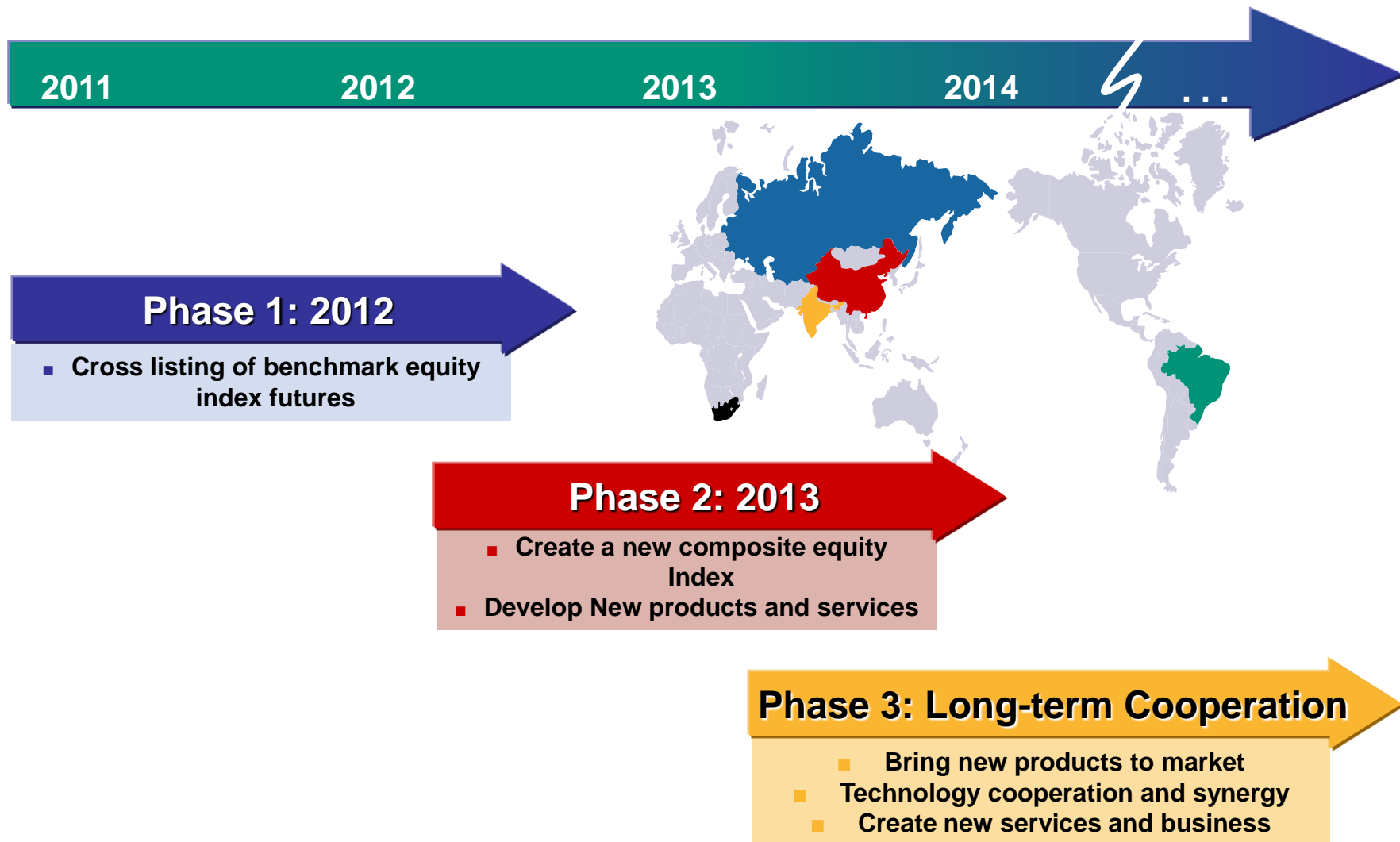
BRICS Exchanges Alliance

- Most dynamic economies in the world
- Demand for developing markets exposure
- Enable easier access to BRICS products
- Continued relevance of the BRICS markets
- Development of market cooperation between BRICS

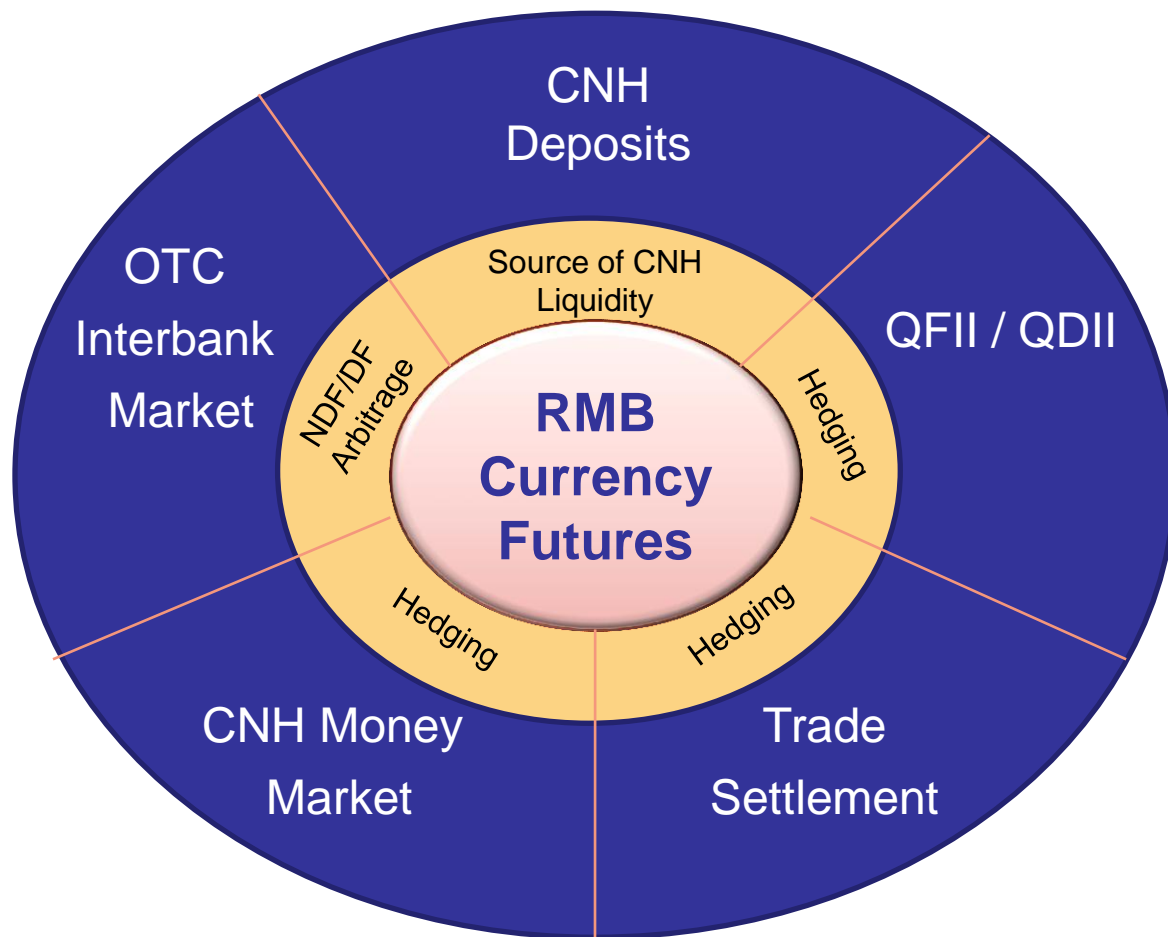


- Cross-listing Products
- New Index Products
- FICC Product Development
- Platform, connectivity and service cooperation

Development of BRICS Exchanges Alliance



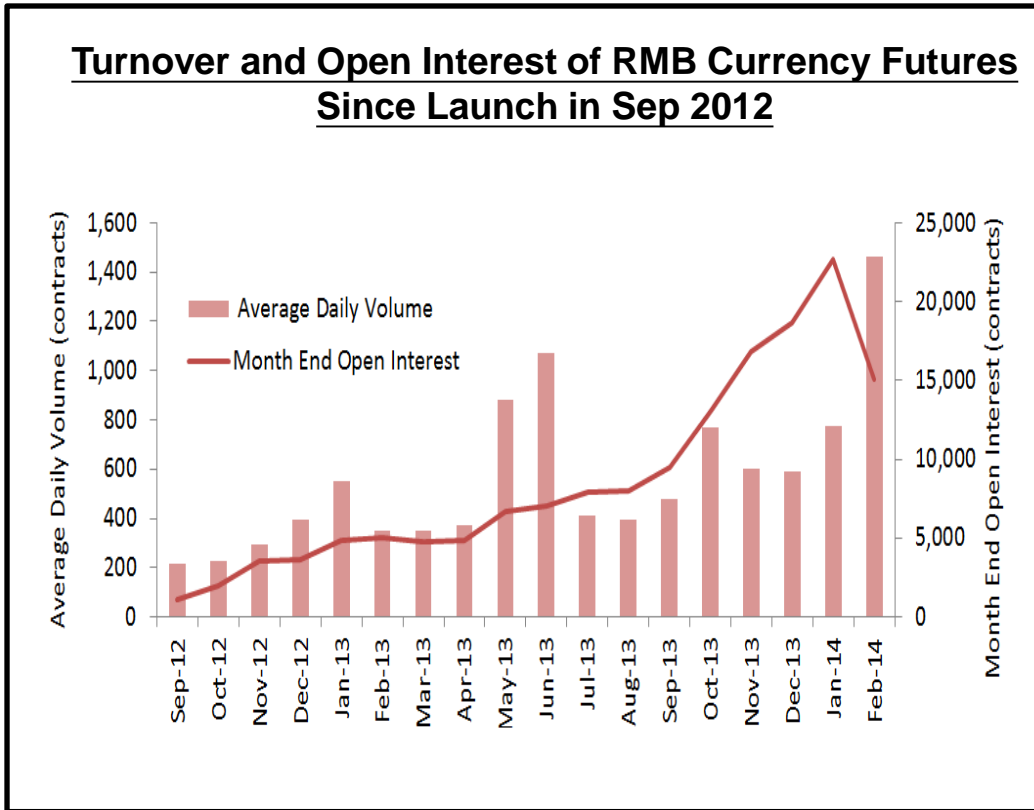
HKEx RMB Product Development: The CNH Ecosystem



RMB Currency Futures is important for advancing CNH product development in Hong Kong

RMB Futures

Laying Foundation for Future Product Development



CNH Futures



- RMB Denominated Commodity Products
- RMB Denominated Stock Futures and Options
- RMB Denominated Equity Index Futures & Options
- RMB Denominated Interest Rate Products
- RMB Denominated Fixed Income Products

CNH Futures is a key product initiative to enhance our RMB product expansion

RMB Futures

- Maturing with tight trading spreads

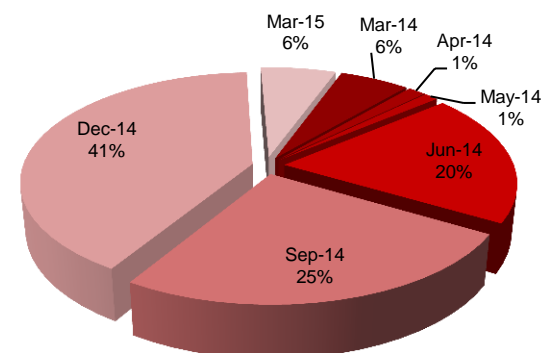


Futures Prices and Average Bid-Ask Spread

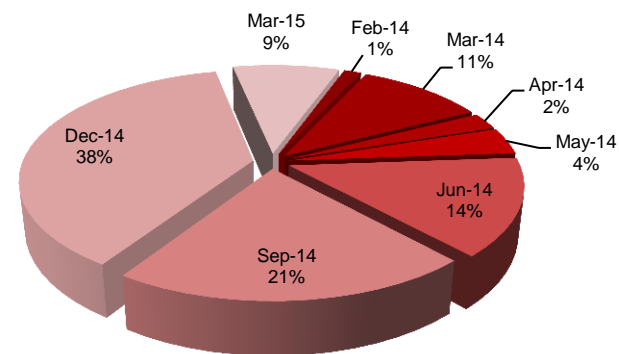
*Avg Bid/Ask Spread between 9:30 am and 4:15 pm during the month

Contract Month	28 Feb Closing	Average Bid/Ask Spread*
Feb-14	-	0.0020
Mar-14	6.1235	0.0024
Apr-14	6.1296	0.0036
May-14	6.1360	0.0036
Jun-14	6.1402	0.0028
Sep-14	6.1507	0.0016
Dec-14	6.1612	0.0014
Mar-15	6.1706	0.0048

Breakdown of Volume by Contract Months (February)



Breakdown of Open Interest by Contract Months (as of 28 Feb 2014)



RMB Futures

Contract Design



Contract	USD/CNH Futures (USD = US dollar/CNH = RMB traded in HK)
Contract Months	Spot month, the next three calendar months and the next three calendar quarter months
Contract Size	USD100,000
Minimum Fluctuation	RMB0.0001 (4 decimal places)
Trading Hours	9:00 am - 4:15 pm (Adding AHFT Session 5:00 pm – 11:00 pm starting from 7 Apr 2014)
Final Settlement Day	The third Wednesday of the Contract Month
Last Trading Day (LTD)	Two Hong Kong Business Days prior to the Final Settlement Day
Final Settlement Price	Spot USD/CNY (HK) fixing published at 11:15 am on the LTD by Hong Kong Treasury Markets Association (TMA)
Settlement Method	Delivery of USD by the Seller and payment of the Final Settlement Value in RMB by the Buyer
Exchange Fee	RMB8.00 per contract per side
Block Trade Threshold	50 contracts
Info Vendor Code	Bloomberg: UCAA CRNCY CT <GO> ; Reuters: 0#HCUS:

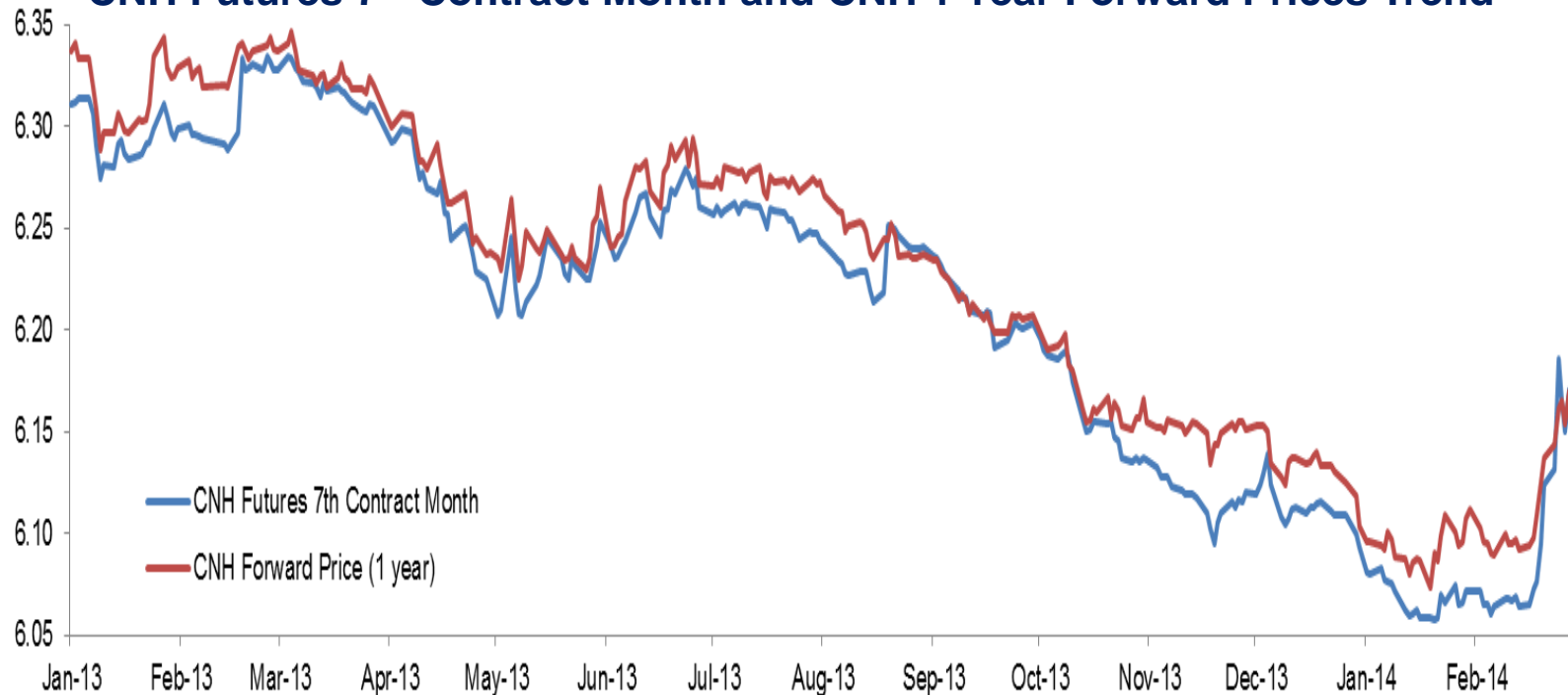
RMB Futures

- More active in the liberalization process



- PBOC announced to widen the RMB daily trading range to +/-2%
- CNH market becomes more volatile and higher FX hedging need is expected

CNH Futures 7th Contract Month and CNH 1 Year Forward Prices Trend



THANK YOU!

Risks of Trading Futures and Options

Futures and options involve a high degree of risk. Losses from futures trading can exceed your initial margin funds and you may be required to pay additional margin funds on short notice. Failure to do so may result in your position being liquidated and you being liable for any resulting deficit. You must therefore understand the risks of trading in futures and options and should assess whether they are right for you. You are encouraged to consult a broker or financial advisers on your suitability for futures and /or options trading in light of your financial positions and investment objectives before trading.

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