Research & Policy

DERIVATIVES MARKET TRANSACTION SURVEY 2013/14

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Hong Kong Exchanges and Clearing Limited
香港交易及結算所有限公司

CONTENTS

EXECUTIVE SUMMARY

The Derivatives Market Transaction Survey (DMTS) has been conducted annually since 1994 (by Hong Kong Futures Exchange on its market prior to 2001). The objectives are to track the trading composition by investor type and by trading purpose, as well as the market share of retail online trading, in HKEx's derivatives market which comprises predominantly financial futures and options contracts (excluding the commodity derivatives market operated by the London Metal Exchange, part of the HKEx Group). The 2013/14 survey covers Hang Seng Index (HSI) futures, HSI options, Mini-HSI futures, Mini-HSI options, H-shares Index (HHI) futures, HHI options, Mini-HHI futures and stock options. These products together accounted for 99% of the total turnover of the HKEx derivatives market during the study period July 2013 to June 2014 (referred to as 2013/14). The overall response rate was 93% and the respondents contributed 98% of the total turnover in products under study during the study period.

The market turnover volume (ie the total turnover of products under study) in 2013/14 increased by 1% over the previous year. The increases of 24% in the aggregate turnover volume of HHI products and 2% in stock options turnover volume were largely offset by a decrease of 15% in the aggregate volume of HSI products. The contribution of stock options was 48% of the total market volume, albeit only 3% in notional value terms. Notably, the contribution from HHI futures to market turnover volume (17%) surpassed that of HSI futures (14%) for the first time since 2003/04 when the product was newly included in the survey.

The key findings of the trading composition of the overall market and by product segment are summarised below.

Trading by transaction purpose (See section 2)

(1) ***Hedging*** was the main transaction purpose of derivatives trading in 2013/14 (48%) while the proportion of turnover for ***pure trading*** was also high (41%). ***Arbitrage*** turnover accounted for 11% of the overall market turnover in 2013/14.

(2) Hedging accounted for the majority of trading in HHI futures and options and also a considerable share for HSI futures and stock options. Pure trading was the key transaction purposes for mini-contracts and HSI options.

Trading by investor type (See section 3)

(3) In 2013/14, HKEx's derivatives market turnover was almost equally shared by EP principal trading (mainly market maker trading) and agency (investor) trading, a pattern maintained since 2009/10. Among investors, overseas institutional investors had the biggest market share (24%), followed by local retail investors (16%). Local institutional investors and overseas retail investors had relatively small contributions (7% and 3% respectively).

(4) ***Overseas investors (predominantly institutional)*** were significant contributors to trading in regular index futures. ***Local retail investors*** were significant contributors to trading in mini-futures. However, their contribution to Mini-HSI futures decreased for three consecutive years. ***EP principal trading*** remained dominant in the trading of options products.

(5) Over the past decade, ***overall derivatives market trading*** recorded a compound annual growth rate (CAGR) of 23% — driven mainly by the growth in ***EP principal trading volume*** (CAGR of 28%) and in ***overseas investor trading volume*** (CAGR of 21%).

Trading by overseas investors by origin (See section 4)

(6) Among overseas investors, ***Continental European investors*** were the largest contributor group (28% of total overseas investor trading and 8% of total market volume in 2013/14). ***UK investors*** came second (25% and 7%). ***US investors*** ranked third (21% and 6%). Almost all trading from these Western origins came from institutional investors (at least 94%). Over the past decade, overseas investor trading volume from UK and Continental European grew at similar CAGRs of 22%, high than that from the US (19%).

(7) ***Mainland China investors*** and ***Singaporean investors*** were the two largest contributor groups from Asia — 9% and 7% respectively of overseas investor trading, or about 2% of total market volume for each. Trading from Singapore was predominantly institutional (at least 76%) while the majority of trading from the Mainland was from retail investors (at least 64%). Over the past decade, the CAGRs of overseas investor trading volume from Singapore and Mainland were similarly high (25% and 24% respectively), compared to 22% of total overseas investor trading volume.

(8) For ***stock options***, the major overseas contributors were UK investors and Mainland China investors (28% and 24% respectively of the product's overseas investor trading) while the largest overseas contributors for ***index futures and options*** were Continental European investors (31% of the index product's overseas investor trading).

(9) Compared to other origins, ***Mainland investors*** had the largest proportion of their total trading volume devoted to stock options (42%) while ***US investors*** had the largest proportion of their total trading volume devoted to index futures and options (99%).

Product performance (See sections 2-4)

(10) Investor interest, as reflected by trading volume, was observed to have shifted from ***HSI products*** to ***HHI products*** in 2013/14.

(11) For ***HSI futures***, the contribution of overseas institutional investor trading continued to grow (from 39% in 2009/10 to 51% in 2013/14) while a downward trend in the contribution of local retail investor trading (from 30% in 2009/10 to 19% in 2013/14) was observed in the past five years. ***Mini-HSI futures***, designed for small retail investors, also suffered a decline in local retail investor trading to a record low of 41% in 2013/14. Associated with the changes was the increase in the proportion of trading for hedging purposes over the years, with a corresponding decrease in pure trading, for both products.

(12) ***HHI Futures*** contributed more trading volume to the total derivatives market than HSI futures in 2013/14 for the first time. The contribution of overseas institutional investor trading was dominant (58%) while that of local retail investor trading stood at the lowest level of 7% in the recent years. Associated with this pattern was an upward trend in the proportion of trading for hedging purposes and a downward trend in that of pure trading.

(13) For ***Mini-HHI futures***, local retail investors remained the major contributor (41%, down from 49% in 2012/13) but Exchange Participants' contribution was also significant (35%). Overseas institutional investor trading had significant increase in contract volume, contributing 14% of the product's volume and surpassing overseas retail investors' contribution for the first time. Along with this was the increase in the proportion of turnover for hedging and arbitrage and a decrease in that for pure trading.

(14) For ***HSI options*** and ***Mini-HSI options***, market maker trading dominated (51% and 55% respectively) while investor trading came mainly from local retail investors (26% and 38% of product volume respectively). Alongside, the proportion of pure trading in the products was high (53% and 71% respectively).

(15) For ***HHI options***, EP proprietary trading had a major share (25% vs 23% for marker making). The proportion of trading in HHI options for hedging purpose stood at about 60% or more over the years, the highest among the products under study.

(16) For ***stock options***, market maker trading remained at around two-thirds of the product's volume in the past five years while local retail investor trading remained the major contributor group among investor types. The proportions of trading for hedging purposes and pure trading were similarly significant (49% and 44% respectively).

Retail online trading (See section 5)

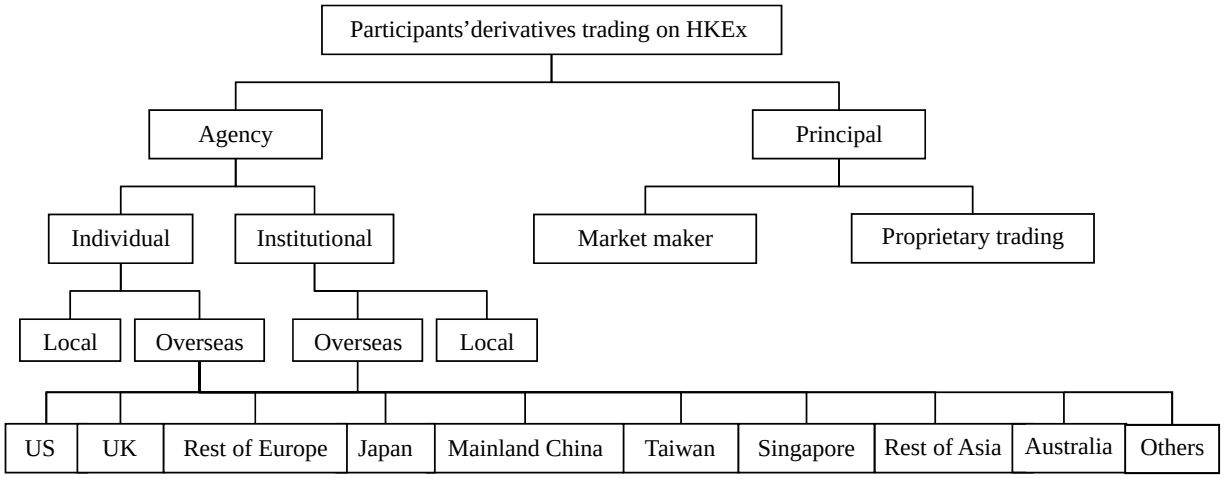
(17) ***Retail online trading*** as a proportion of total retail investor trading saw a decrease for the first time since 2005/06, standing at 67% in 2013/14 (down from 70% in 2012/13). Its contribution to total market turnover also decreased from 15% in 2012/13 to 13% in 2013/14.

1. INTRODUCTION

The Derivatives Market Transaction Survey (DMTS) has been conducted annually since 1994 (by Hong Kong Futures Exchange on its market prior to 2001). The main objective of the survey is to track trading composition by investor type and by trading purpose in HKEx's derivatives market which predominantly comprises financial futures and options contracts (excluding the commodity derivatives market operated by the London Metal Exchange, part of the HKEx Group).

The survey provides key information on the relative contribution to the overall market turnover and to each major product by the main investor types — local and overseas, retail and institutional, and Exchange Participants' (EPs') own trading (see classification chart below). Retail online trading statistics in the overall derivatives market have been obtained since the 2001/02 survey. The findings are compared with those of the past surveys to reveal any changes in trading pattern.

Classification of Exchange Participants' derivatives trading on HKEx



The survey questionnaires were mailed to all Futures EPs (FEPs) and Stock Options EPs (SOEPs) in the target population[1]. Out of the 247 questionnaires sent out, 229 completed questionnaires were returned, representing an overall response rate of 93%. The responded sample represented 98% by total contract volume of the target population in the products under study. (*See Appendix 1.*)

The survey covers transactions during July 2013 to June 2014[2] in the major HKEx futures and options products, namely Hang Seng Index (HSI) futures, HSI options, Mini-HSI futures, Mini-HSI options, H-shares Index (HHI) futures, HHI options, Mini-HHI futures and stock options. These together contributed 99% of the total turnover volume of the HKEx derivatives market during the study period. "Market turnover" (or "market volume") in this report refers to the total contract volume of the products under study.

[1] The target population consists of all the EPs which conducted trading business during the study period excluding those that ceased their operations before the start of the fieldwork. (See Appendix 4 for survey methodology.)

[2] Referred to as the year 2013/14 throughout the report; the same convention is used for the past surveys.

Other derivative products which individually contributed less than 0.5% of HKEx's total derivatives turnover during the same period were excluded. These products were CES China 120 Index futures (launched on 12 August 2013), dividend futures, HSI Volatility Index futures, BRICS futures[3], HIBOR futures, Three-year Exchange Fund Note futures, stock futures, gold futures, RMB currency futures and flexible index (HSI and HHI) options.

In 2013/14, market turnover (products under study only) was 126 million contracts, up 1% from 125 million contracts in 2012/13. In the period, an increase of 24% in the aggregate turnover volume of HHI products (HHI futures: +19%, HHI options: +27% and Mini-HHI futures: +55%) and an increase of 2% in stock options turnover volume were recorded. However, the increases were largely offset by a decrease of 15% in the aggregate volume of HSI products (HSI futures: -13%, HSI options: -22%, Mini-HSI futures: -12% and Mini-HSI options: -25%). Stock options remained the dominant contributor to derivatives market turnover (48%, the same as in 2012/13). Notably, the contribution from HHI futures to market turnover in 2013/14 (17%) surpassed that of HSI futures (14%) for the first time since 2003/04 when the product was newly included in the survey. *(See Figure 1.)*

Due to the dominance of the stock options market segment by contract volume, the overall trading composition of the HKEx derivatives market would be largely influenced by that of stock options, which is very different from that of index futures and options (see Section 3). It should be noted that the products under study differ greatly in size. Compared to index futures and options, stock options have much smaller size and notional value per contract. Although turnover of stock options by contract volume was large, stock options contracts in total had only a 3% share of notional trading value during the study period (see Appendix 3).

In view of this, detailed breakdowns by stock options/index futures and options are provided to assist in more detailed interpretation.

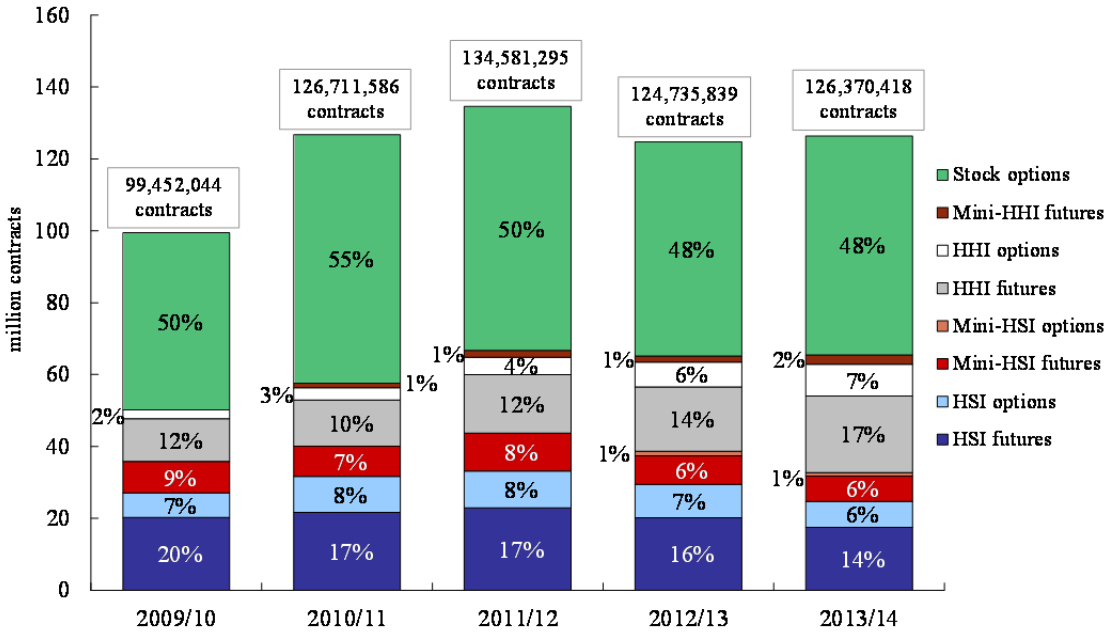
For analysis purposes, the contract volume for each type of trade in the survey was estimated (referred to as the "implied contract volume[4]") based on the actual contract volume for each product and computed from the percentage share of the contract volume for that trade type as obtained from the survey. The relative contribution of each trade type to market volume was computed taking into account of the relative contribution by product type in the actual market turnover (see Appendix 4 for the methodology).

Sections 2 to 5 describe the findings in detail. The findings are subject to the limitations set out in Appendix 4.

[3] These are Brazil's IBOVESPA futures, Russia's MICEX index futures, India's S&P BSE SENSEX Index futures and South Africa's FTSE/JSE Top 40 futures launched under the BRICS Exchange Alliance.

[4] See glossary for the definition of implied contract volume.

Figure 1. Contract volume and percentage of total by product under study (2009/10 – 2013/14)



Note: Numbers may not add up to 100% due to rounding.

Product under study	Year-on-year % change (in contract volume)				
	2009/10	**2010/11**	**2011/12**	**2012/13**	**2013/14**
HSI futures	-9%	7%	6%	-12%	-13%
HSI options	53%	48%	2%	-9%	-22%
Mini-HSI futures	-3%	-4%	25%	-25%	-12%
Mini-HSI options*	n.a.	n.a.	n.a.	n.a.	-25%
HHI futures	-17%	8%	27%	10%	19%
HHI options	27%	43%	42%	43%	27%
Mini-HHI futures*	n.a.	n.a.	47%	-12%	55%
Stock options	-3%	40%	-2%	-12%	2%
Total product under study	**-3%**	**27%**	**6%**	**-7%**	**1%**

n.a.: Not applicable in the study

* Mini-HSI options (launched on 18 November 2002) and Mini-HHI futures (launched on 31 March 2008) were included in the survey for the first time in 2012/13 and 2010/11 respectively. These products were omitted in the previous surveys due to their negligible contribution to the total market contract volume.

2. TRANSACTION PURPOSES

Overall, ***hedging*** was the main transaction purpose of derivatives trading. It accounted for 48% of the total derivatives market turnover in 2013/14, up from 45% in 2012/13. The proportion of turnover for ***pure trading***[5] was also high but it dropped from 45% in 2012/13 to 41% in 2013/14. ***Arbitrage*** turnover accounted for 11% of the overall market turnover in 2013/14, similar to the 10% in 2012/13.

In 2013/14, ***hedging*** accounted for the majority of trading in the regular HHI products — HHI futures (53% in 2013/14, the same as in 2012/13) and HHI options (60%, similar to the 61% in 2012/13). It also accounted for a major proportion of trading in stock options (49%) and HSI futures (44%). Notably, the proportion of hedging continued to increase (since 2010/11) for regular HSI futures and Mini-HSI futures.

Pure trading was the main transaction purpose of trading in mini-contracts — Mini-HSI options (71%), Mini-HSI futures (49%) and Mini-HHI futures (47%) — and also in HSI options (53%). It also accounted for a considerable proportion of trading in stock options (44%). In 2013/14, a notable decrease in the proportion of pure trading was observed for HSI futures (from 46% to 40%), Mini-HSI futures (from 56% to 49%) and Mini-HHI futures (from 55% to 47%).

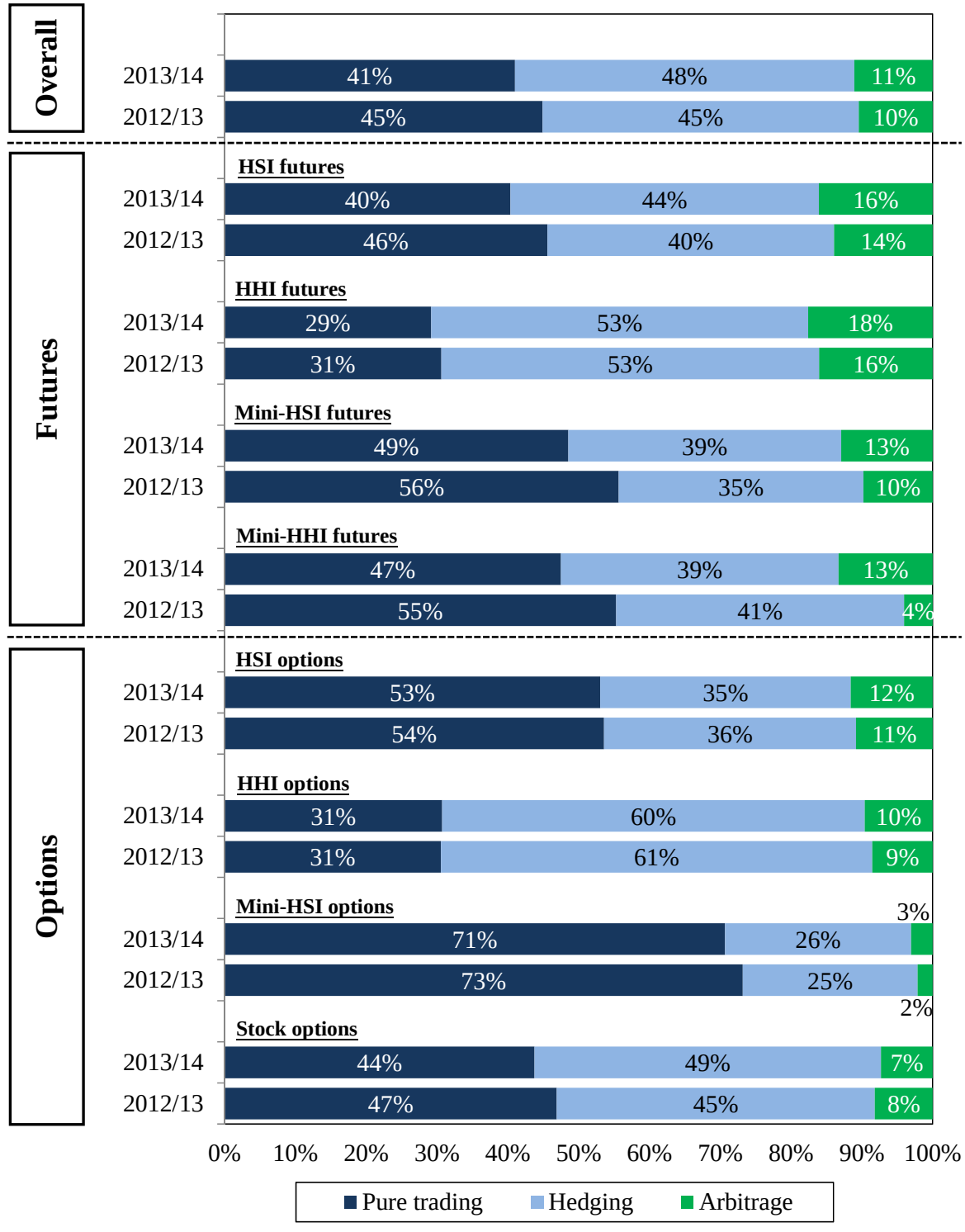
The proportion of ***arbitrage*** in each of the products under study remained relatively low (ranging from 3% to 18%) in 2013/14. The proportion was the highest for trading in HHI futures (18%, compared to 16% in 2012/13) and the lowest for trading in Mini-HSI options (3%, compared to 2% in 2012/13). In 2013/14, an increase in the proportion of arbitrage was observed across all index futures and options.

In ***number of contracts***, there was a drop in total market turnover for pure trading (-7%) in 2013/14, compared to the increase of 1% in overall derivatives trading. The decrease in total market turnover for pure trading mainly reflected a decrease of 5% in stock options' pure trading (compared to the 2% increase in the product's volume) as well as a decrease of 23% in HSI products' pure trading (compared to the 15% decrease in the aggregate product volume). A 9% increase in total market trading volume for hedging was recorded in 2013/14, reflecting mainly an increase in contract volume for hedging for stock options (+11%) and HHI products — HHI futures (+19%), HHI options (+25%) and Mini-HHI futures (+50% from a small base). Total market trading for arbitrage increased by 7% in 2013/14. In fact, an increase in the contract volume for arbitrage was observed for each of the products under study except HSI options (-17%, vs -22% for the product's volume) and stock options (-9%, vs +2% for the product's volume).

(See Figure 2 and Table 1.)

[5] EPs may not know their clients' transaction purposes and would incline to consider their client transactions as pure trading. As a result, the percentage share of pure trading as a transaction purpose may be over-estimated.

Figure 2. Distribution of derivatives market trading volume by transaction purpose for overall market and each product (2013/14 vs 2012/13)



Note: Numbers may not add up to 100% due to rounding.

Table 1. Distribution of derivatives market trading volume by transaction purpose for overall market and each product (2009/10 – 2013/14)

Product	Purpose	Percentage contribution [1]					Implied contract volume[2] 2013/14	
		2009/10	2010/11	2011/12	2012/13	2013/14	No. of contracts	Y-o-Y change
HSI futures	Pure trading	55.5	60.4	44.2	45.6	**40.4**	**7,065,986**	-23.1%
	Hedging	32.6	26.8	38.4	40.5	**43.6**	**7,625,563**	-6.5%
	Arbitrage	11.9	12.8	17.5	13.9	**16.1**	**2,810,742**	0.3%
	Total	100.0	100.0	100.0	100.0	**100.0**	**17,502,291**	-13.1%
HHI futures	Pure trading	37.8	50.8	32.3	30.6	**29.2**	**6,233,702**	13.8%
	Hedging	43.9	37.1	48.5	53.3	**53.2**	**11,377,300**	19.1%
	Arbitrage	18.3	12.2	19.2	16.0	**17.6**	**3,755,438**	30.8%
	Total	100.0	100.0	100.0	100.0	**100.0**	**21,366,440**	19.4%
Mini-HSI futures	Pure trading	63.9	71.6	57.8	55.7	**48.5**	**3,395,123**	-23.4%
	Hedging	25.6	20.5	27.5	34.5	**38.5**	**2,696,453**	-1.9%
	Arbitrage	10.4	7.8	14.7	9.8	**12.9**	**903,576**	15.9%
	Total	100.0	100.0	100.0	100.0	**100.0**	**6,995,151**	-12.1%
Mini-HHI futures [3]	Pure trading	n.a.	63.6	46.9	55.3	**47.5**	**1,249,215**	33.4%
	Hedging	n.a.	31.2	38.5	40.6	**39.2**	**1,031,441**	49.9%
	Arbitrage	n.a.	5.2	14.6	4.0	**13.3**	**349,339**	409.8%
	Total	n.a.	100.0	100.0	100.0	**100.0**	**2,629,995**	55.3%
HSI options	Pure trading	38.1	39.6	41.1	53.6	**53.1**	**3,831,634**	-22.9%
	Hedging	44.6	38.6	46.9	35.6	**35.4**	**2,554,709**	-22.6%
	Arbitrage	17.3	21.8	12.0	10.8	**11.6**	**835,515**	-16.7%
	Total	100.0	100.0	100.0	100.0	**100.0**	**7,221,858**	-22.1%
HHI options	Pure trading	30.3	23.6	23.7	30.5	**30.7**	**2,704,940**	28.3%
	Hedging	56.1	60.1	68.4	60.9	**59.7**	**5,250,412**	24.8%
	Arbitrage	13.6	16.3	7.9	8.5	**9.6**	**844,180**	43.5%
	Total	100.0	100.0	100.0	100.0	**100.0**	**8,799,532**	27.5%
Mini-HSI options [3]	Pure trading	n.a.	n.a.	n.a.	73.2	**70.7**	**680,569**	-27.8%
	Hedging	n.a.	n.a.	n.a.	24.7	**26.3**	**253,100**	-20.4%
	Arbitrage	n.a.	n.a.	n.a.	2.1	**3.1**	**29,373**	7.2%
	Total	n.a.	n.a.	n.a.	100.0	**100.0**	**963,042**	-25.2%
Index futures & options	**Pure trading**	49.2	54.2	41.6	43.1	**38.4**	**25,161,170**	-10.3%
	Hedging	36.8	32.3	42.6	44.5	**47.0**	**30,788,977**	6.3%
	Arbitrage	14.0	13.5	15.8	12.5	**14.6**	**9,528,162**	17.0%
	Total	100.0	100.0	100.0	100.0	**100.0**	**65,478,309**	0.5%
Stock options	Pure trading	29.2	35.0	42.4	46.9	**43.8**	**26,664,326**	-4.6%
	Hedging	53.6	50.0	49.1	44.9	**48.9**	**29,772,540**	11.3%
	Arbitrage	17.2	15.0	8.6	8.2	**7.3**	**4,455,243**	-8.6%
	Total	100.0	100.0	100.0	100.0	**100.0**	**60,892,109**	2.2%
Overall market	**Pure trading**	39.3	43.7	42.0	44.9	**41.0**	**51,825,496**	-7.5%
	Hedging	45.1	42.0	45.9	44.7	**47.9**	**60,561,518**	8.7%
	Arbitrage	15.6	14.3	12.2	10.4	**11.1**	**13,983,404**	7.4%
	Total	100.0	100.0	100.0	100.0	**100.0**	**126,370,418**	1.3%
Total contract volume [4]		99,452,044	126,711,586	134,581,295	124,735,839	**126,370,418**		

n.a.: Not available

Notes:

(1) Numbers may not add up to 100% due to rounding.

(2) See glossary for the definition of implied contract volume. The total figure of each product used is the actual contract volume for that product, based on which the implied contract volume by trading purpose is computed.

(3) Mini-HHI futures (launched on 31 March 2008) and Mini-HSI options (launched on 18 November 2002) were included in the survey for the first time in 2010/11 and 2012/13 respectively. These products were omitted in the previous surveys due to their negligible contribution to the total market contract volume.

(4) Actual total contract volume of all products under study during the study period.

3. DISTRIBUTION OF TRADING BY INVESTOR TYPE

3.1 Overall pattern

(See Figures 3 – 7.)

In 2013/14, turnover in HKEx's derivatives market was shared almost equally by ***EP principal trading*** and ***agency (investor) trading***, similar to the pattern since 2009/10. The distribution of agency trading by overseas and by local investors was similar to that in 2012/13 — 27% for overseas investors and 23% for local investors. Nonetheless among local investors the decrease (of 2 percentage points) in the contribution of retail trading was offset by the corresponding increase in the contribution of institutional trading.

EP principal trading accounted for 50% of total derivatives market contract volume (compared to 49% in 2012/13) — 36% from market maker trading (37% in 2012/13) and 14% from EP proprietary trading (13% in 2012/13). Over the past decade, EP principal trading contributed 51% of cumulative market turnover.

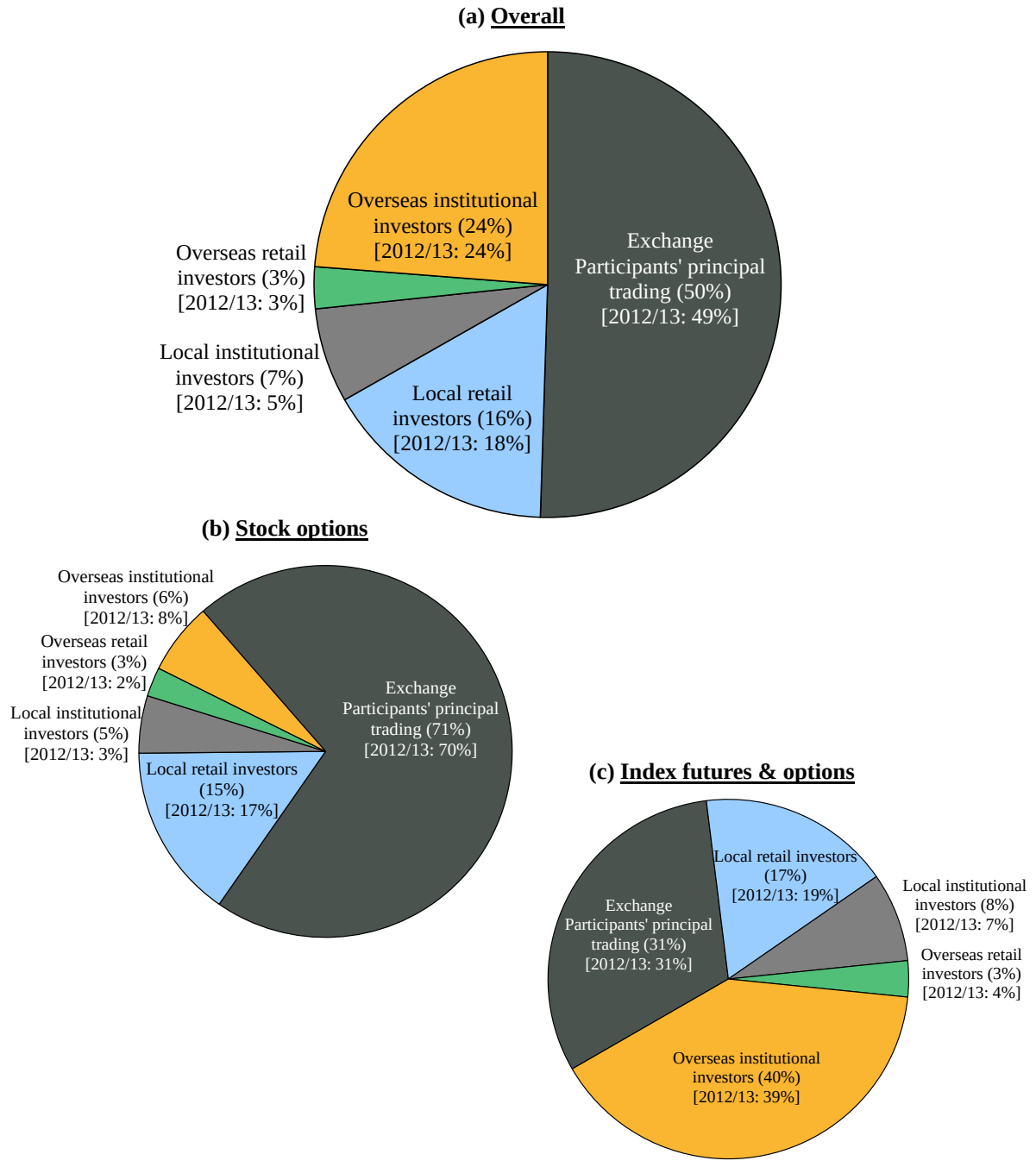
EP principal trading remained dominant in stock option trading (71%, compared to 70% in 2012/13) but contributed only 31% (the same as in 2012/13) in index futures and options. As in the past few years, ***the majority of EP principal trading came from stock options*** — stock options contributed 48% of the total market turnover but its EP principal trading contributed 68% of total EP principal trading (67% in 2012/13) and 86% of total market making (the same as in 2012/13).

The contribution from ***overseas investors*** was 27% (24% from institutions) in 2013/14. Their cumulative market share in the past decade was 24% (21% from institutions). The contribution from ***local investors*** was 23% — 16% from retail and 7% from institutions (compared to 18% and 5% respectively in 2012/13). Over the past decade, local investors contributed about a quarter of cumulative market turnover.

The contribution from ***institutional investors*** (local and overseas) to total market turnover was 30% in 2013/14, a similar level since 2011/12. Their cumulative market share in the past decade was 27%. ***Retail investors***' contribution (local and overseas) was 19% in 2013/14, compared to 21% in the previous two years, and was the lowest level since 2007/08. Their cumulative market share in the past decade was 21%.

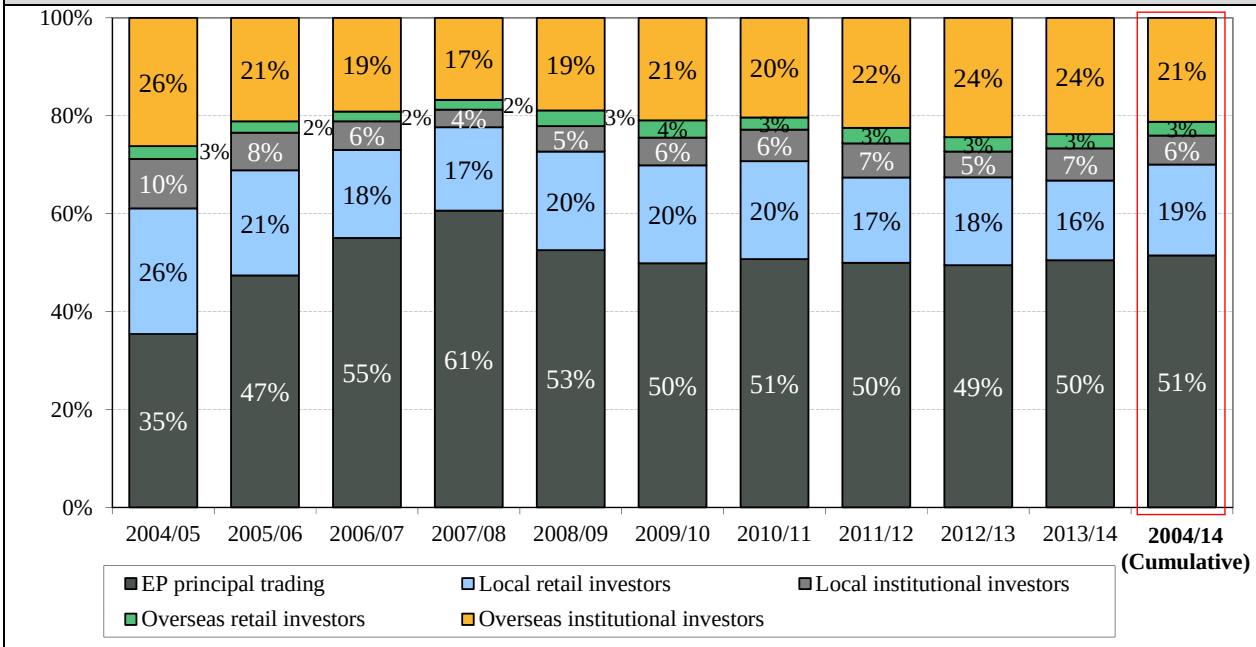
In ***number of contracts***, EP principal trading increased by 3% from 2012/13, reflecting mainly a 13% increase in proprietary trading. Local investor trading volume almost remained unchanged in 2013/14. However, a decrease in local retail investor trading volume (-8%) was recorded but it was offset by the increase in local institutional investor trading volume (+26%). Overseas investor trading volume recorded a slight decrease of 1%, reflecting mainly the same degree of decrease in overseas institutional investor trading volume (the first decline in the past decade). Over the past decade, the overall derivatives market trading recorded a compound annual growth rate (CAGR) of 23% — driven mainly by the growth in EP principal trading volume (CAGR of 28%) and in overseas investor trading volume (CAGR of 21%).

Figure 3. Distribution of derivatives market trading volume by investor type (Jul 2013 – Jun 2014)



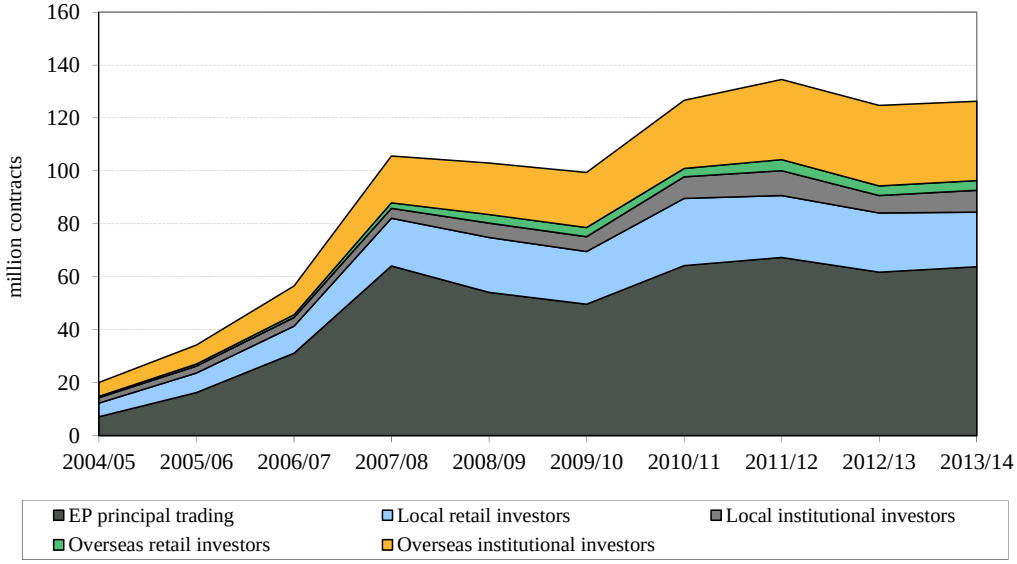
Notes: (1) Exchange Participants' principal trading comprises market maker trading and EP proprietary trading.
(2) Numbers may not add up to 100% due to rounding.

Figure 4. Distribution of derivatives market trading volume by investor type (2004/05 – 2013/14)



Notes: (1) Exchange Participants' principal trading comprises market maker trading and EP proprietary trading.
(2) Numbers may not add up to 100% due to rounding.

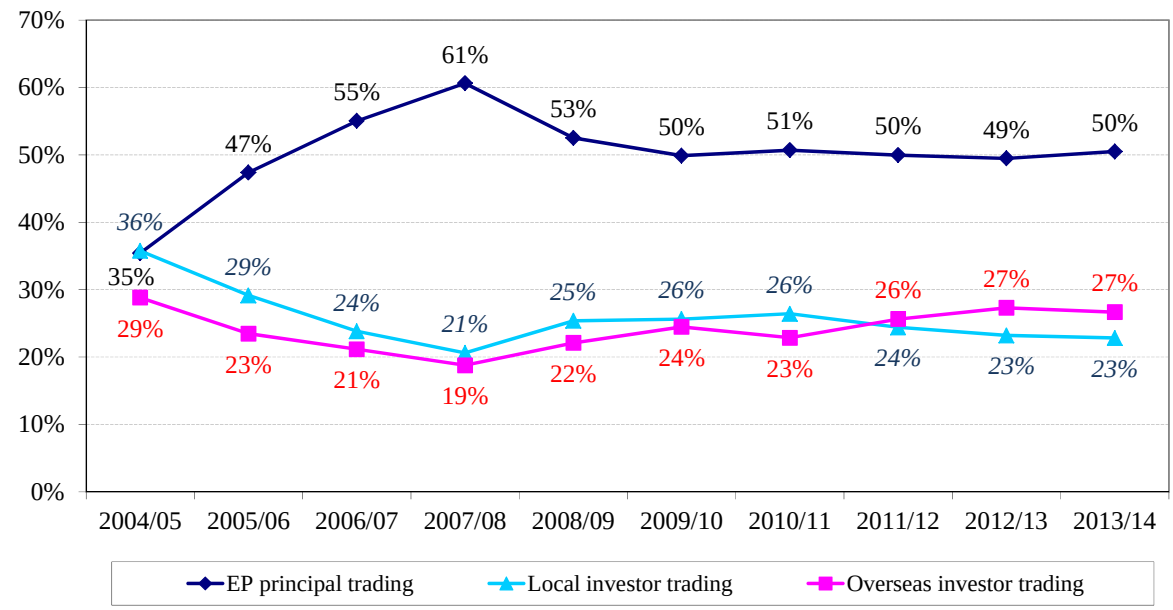
Figure 5. Implied contract volume of derivatives by investor type (2004/05 – 2013/14)



Type of trade	Year-on-year % change										2004/14 CAGR
	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	
EP principal trading	6.19%	128.14%	91.57%	105.85%	-15.57%	-8.30%	29.52%	4.66%	-8.22%	3.40%	27.59%
Market maker	5.64%	141.11%	95.95%	128.95%	-20.73%	-12.30%	36.80%	4.96%	-10.98%	-0.002%	28.59%
Proprietary trading	7.34%	101.51%	80.79%	44.34%	6.24%	4.31%	10.22%	3.68%	0.99%	13.39%	25.32%
Local investor trading	4.10%	39.07%	34.75%	61.63%	20.05%	-2.47%	31.36%	-1.96%	-11.81%	-0.36%	16.70%
Retail	-0.29%	42.66%	38.21%	76.70%	15.52%	-4.12%	27.35%	-7.63%	-4.37%	-8.22%	16.60%
Institutional	17.25%	29.95%	25.07%	15.11%	41.53%	3.91%	45.67%	15.73%	-30.33%	26.50%	16.93%
Overseas investor trading	39.27%	38.84%	48.65%	65.84%	14.77%	6.96%	18.98%	19.09%	-1.28%	-1.06%	21.61%
Retail	28.55%	52.10%	39.87%	88.65%	56.14%	6.22%	-8.93%	32.26%	-14.67%	1.32%	24.00%
Institutional	40.45%	37.51%	49.63%	63.47%	9.81%	7.08%	23.70%	17.45%	0.60%	-1.34%	21.34%
Retail investor trading	*1.83%*	*43.54%*	*38.38%*	*77.89%*	*19.82%*	*-2.69%*	*21.89%*	*-3.14%*	*-5.95%*	*-6.89%*	*14.47%*
Institutional investor trading	*33.12%*	*35.41%*	*43.08%*	*52.19%*	*15.40%*	*6.40%*	*28.35%*	*17.04%*	*-6.74%*	*3.59%*	*20.24%*
Total	**13.12%**	**70.56%**	**64.93%**	**86.86%**	**-2.54%**	**-3.45%**	**27.41%**	**6.21%**	**-7.32%**	**1.31%**	**22.66%**

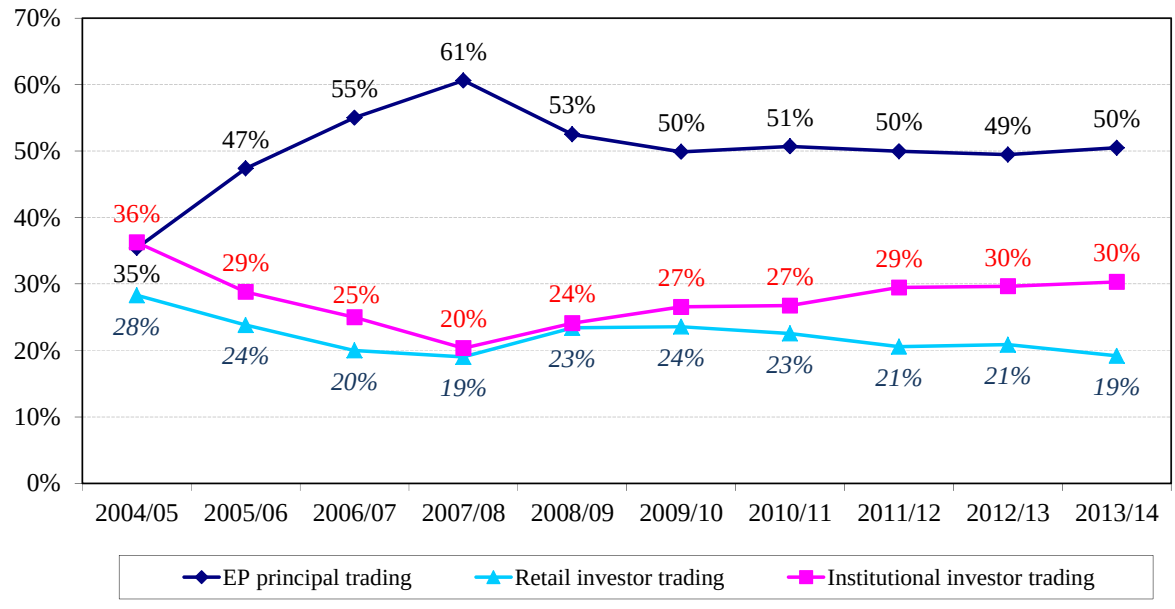
Note: Exchange Participants' principal trading comprises market maker trading and EP proprietary trading.

Figure 6. Distribution of derivatives market trading volume by investor type (local vs overseas) (2004/05 – 2013/14)



Note: Numbers may not add up to 100% due to rounding.

Figure 7. Distribution of derivatives market trading volume by investor type (retail vs institutional) (2004/05 – 2013/14)



Note: Numbers may not add up to 100% due to rounding.

3.2 Trading by product

(See Figure 8 and Tables 2 and 3.)

The trading distribution by investor type differed by product type. Key observations are summarised below:

- ***Overseas investors (predominantly institutional)*** were significant contributors to trading in the regular index futures, especially in HHI futures (61%). Their contribution to HSI futures trading volume reached its highest level in 2013/14 (54%), albeit falling in contract volume terms. Notably, overseas investor trading volume in HHI products increased in 2013/14 while that in other products decreased.
- ***Local retail investors*** were significant contributors to trading in mini-futures. However, their contribution to Mini-HSI futures decreased for three consecutive years.
- ***EP principal trading (mainly market making)*** maintained its dominance in the trading of option products. Notably, strong growth was observed in EP proprietary trading volume in HHI options for the second year.
- ***Investor interest***, reflected by trading volume, was observed to have shifted from HSI futures and options (including mini-contracts) to HHI futures and options in 2013/14.

The pattern for specific products is described below.

For ***HSI futures***, the contribution from overseas institutional investors was the most significant, reaching a record 51% in 2013/14 (up from the previous record 49% in 2012/13). EP proprietary trading and local retail investor trading also had a considerable share — respectively 20% and 19% of the product's turnover. In particular, local retail investors' contribution continued its downtrend over the past few years. In ***number of contracts***, all types of investor trading volume experienced year-on-year decreases, with a significant drop for both the key investor contributor groups — overseas institutional investors (-9%) and local retail investors (-19%), resulting in a 13% decrease in the product's volume.

For ***HHI futures***, overseas investors remained the major participant type. Their contribution reached a record 61% in 2013/14, mainly from overseas institutional investors (58%). The contribution from EP proprietary trading was also significant (25%, compared to 26% in 2012/13). Local investors' contribution was 15% (almost equally split by retail and institutional investors), compared to 14% in 2012/13. In terms of contract volume, all types of investor trading experienced year-on-year increases, in contrast to the drop in volume across all types of investor trading for HSI futures. Local and overseas investor trading volumes increased by 23% and 22% respectively, compared to a 19% increase in the product's volume.

For ***Mini-HSI futures***, local retail investors remained the major participant type, contributing 41% of the product's turnover in 2013/14 (down from 44% in 2012/13). The contribution from EP proprietary trading was also significant (29%, up from 25% in 2012/13). Overseas investors contributed 27%, mainly from institutions (21%), compared to 29% in 2012/13. In terms of contract volume, EP proprietary trading experienced a year-on-year increase of 2% while local and overseas investor trading volumes recorded decreases of 16% and 18% respectively, compared to a 12% decrease in product's volume.

For ***Mini-HHI futures***, local retail investors were the major participant type, contributing 41% of the product's turnover (down from 49% in 2012/13). The contribution from EP proprietary trading was also significant (35%, compared to 37% in 2012/13). Overseas investors contributed 22% of the product's turnover in 2013/14 (up from 13% in 2012/13), mainly from institutions — 14% in 2013/14 (up from 5% in 2012/13), which surpassed the contribution from overseas retail investors for the first time. In contract volume terms, all types of investor trading experienced year-on-year increases as in the case of regular HHI futures. Local and overseas investor trading volumes recorded an increase of 34% and 159% respectively, compared to an increase of 55% in the product's volume.

For ***HSI options***, EP principal trading remained the major participant type, contributing 56% of the product's turnover in 2013/14 (compared to 50% in 2012/13) — 51% from market maker trading (up from 42% in 2012/13) and 6% from proprietary trading (compared to 8% in 2012/13). Local investors' contribution was 32%, compared to 30% in 2012/13. Overseas investors contributed 11% of the product's turnover, down from 20% in 2012/13. The decrease mainly reflected the decrease of overseas institutions' contribution from 18% in 2012/13 to 9% in 2013/14. As in the case of HSI futures, all types of investor trading in contract volume recorded year-on-year decreases.

For ***HHI options***, EP principal trading was the major contributor with 49% of the product's turnover in 2013/14 (compared to 51% in 2012/13) — 25% from proprietary trading (up from 22% in 2012/13) and 23% from market maker trading (down from 29% in 2012/13). The contribution from institutional investors was also significant — both overseas institutions (28%, as in 2012/13) and local institutions (19%, up from 16% in 2012/13). In terms of contract volume, all types of investor trading experienced year-on-year increases.

For ***Mini-HSI options***, EP principal trading remained the dominant contributor with 56% of the product's turnover in 2013/14 (compared to 55% in 2012/13) — 55% from market maker trading (compared to 54% in 2012/13) and 1% from proprietary trading (less than 1% in 2012/13). The contribution from local retail investors was also significant — 38% in 2013/14 (up from 34% in 2012/13). In contract volume terms, all types of investor trading experienced year-on-year decreases

For ***stock options***, EP principal trading remained the major contributor with 71% of the product's turnover in 2013/14 (compared to 70% in 2012/13) — 65% from market maker trading (compared to 66% in 2012/13) and 6% from proprietary trading (4% in 2012/13). Local investors' contribution was 20% (as in 2012/13) — 15% from retail (17% in 2012/13) and 5% from institutions (3% in 2012/13). Overseas investors contributed 9% of the product's turnover, mainly from institutions (6%). Notable percentage increases in contract volume were observed for EP proprietary trading (+66%), local institutional investor trading (+51%) and overseas retail investor trading (+39%) (especially from the Mainland, see section 4.2 below) while local retail investor trading volume decreased (-7%), compared to the 2% increase in the product's volume.

While overseas institutional investors were dominant contributors to trading in ***index futures***, EP principal trading (mainly market making) dominated in ***options trading***, whether index or stock options. Continuous growth in overseas institutional investor contribution to index futures trading was observed in the past three years (from 41% in 2011/12 to 48% in 2013/14) while local retail investor contribution to index futures had a declining trend from 28% in 2009/10 to 18% in 2013/14.

Table 2. Distribution of derivatives trading by investor type (2009/10 – 2013/14)

Type of investor	Percentage contribution [1]					Implied contract volume [2] 2013/14	
	2009/10	2010/11	2011/12	2012/13	2013/14	No. of contracts	Y-o-Y change
HSI Futures							
EP Proprietary trading	18.9	21.0	22.3	19.7	**19.6**	**3,437,589**	**-13.5%**
Local investors	36.2	32.0	29.8	26.9	**26.0**	**4,554,944**	**-15.9%**
Retail	30.3	25.0	21.8	20.5	**19.2**	**3,364,237**	**-18.6%**
Institutional	6.0	7.0	8.0	6.4	**6.8**	**1,190,707**	**-7.3%**
Overseas investors	44.9	47.1	47.9	53.4	**54.3**	**9,509,757**	**-11.6%**
Retail	6.1	3.7	3.8	4.8	**3.7**	**648,455**	**-33.5%**
Institutional	38.8	43.4	44.1	48.5	**50.6**	**8,861,303**	**-9.4%**
Total	100.0	100.0	100.0	100.0	**100.0**	**17,502,291**	**-13.1%**
HHI Futures							
EP Proprietary trading	26.4	23.2	25.9	26.3	**24.7**	**5,278,753**	**12.0%**
Local investors	15.7	17.2	15.7	14.1	**14.6**	**3,126,429**	**23.5%**
Retail	11.2	9.9	7.3	6.9	**6.8**	**1,457,107**	**17.3%**
Institutional	4.5	7.3	8.3	7.2	**7.8**	**1,669,323**	**29.3%**
Overseas investors	58.0	59.6	58.5	59.5	**60.7**	**12,961,257**	**21.7%**
Retail	2.4	2.2	2.1	1.7	**2.5**	**534,687**	**72.1%**
Institutional	55.5	57.4	56.4	57.8	**58.2**	**12,426,571**	**20.2%**
Total	100.0	100.0	100.0	100.0	**100.0**	**21,366,440**	**19.4%**
Mini-HSI Futures							
EP Proprietary trading	19.7	21.6	24.8	25.0	**29.1**	**2,036,914**	**2.3%**
Local investors	52.1	53.3	52.3	45.5	**43.4**	**3,037,039**	**-16.2%**
Retail	46.5	49.0	46.8	43.7	**40.6**	**2,838,477**	**-18.4%**
Institutional	5.6	4.2	5.5	1.8	**2.8**	**198,562**	**37.0%**
Overseas investors	28.1	25.1	22.9	29.5	**27.5**	**1,921,198**	**-18.1%**
Retail	9.3	7.5	7.5	8.7	**6.2**	**433,605**	**-37.2%**
Institutional	18.9	17.6	15.4	20.8	**21.3**	**1,487,593**	**-10.2%**
Total	100.0	100.0	100.0	100.0	**100.0**	**6,995,151**	**-12.1%**
Mini-HHI Futures [3]							
EP Proprietary trading	n.a.	31.4	41.8	37.2	**35.3**	**928,838**	**47.6%**
Local investors	n.a.	54.5	43.8	49.7	**42.9**	**1,127,523**	**33.9%**
Retail	n.a.	53.1	40.2	48.8	**40.6**	**1,068,828**	**29.3%**
Institutional	n.a.	1.4	3.6	0.9	**2.2**	**58,695**	**274.4%**
Overseas investors	n.a.	14.2	14.5	13.1	**21.8**	**573,633**	**158.9%**
Retail	n.a.	8.1	7.7	8.3	**7.1**	**185,468**	**31.4%**
Institutional	n.a.	6.1	6.8	4.7	**14.8**	**388,166**	**382.7%**
Total	n.a.	100.0	100.0	100.0	**100.0**	**2,629,995**	**55.3%**
Index futures							
EP Proprietary trading	21.2	22.0	24.6	23.7	**24.1**	**11,682,095**	**3.3%**
Local investors	33.7	32.4	30.5	26.0	**24.4**	**11,845,936**	**-4.6%**
Retail	28.2	26.0	23.0	20.3	**18.0**	**8,728,649**	**-9.8%**
Institutional	5.5	6.4	7.4	5.7	**6.4**	**3,117,287**	**14.0%**
Overseas investors	45.1	45.5	44.9	50.3	**51.5**	**24,965,846**	**4.1%**
Retail	5.7	4.1	4.2	4.4	**3.7**	**1,802,214**	**-14.9%**
Institutional	39.4	41.4	40.7	45.8	**47.8**	**23,163,632**	**6.0%**
Total	100.0	100.0	100.0	100.0	**100.0**	**48,493,877**	**1.7%**
HSI Options							
Principal trading [4]	47.0	51.8	51.4	49.5	**56.1**	**4,052,507**	**-11.8%**
Market makers	39.0	43.6	46.1	41.6	**50.6**	**3,651,416**	**-5.4%**
Proprietary trading	8.0	8.3	5.3	7.9	**5.6**	**401,091**	**-45.2%**
Local investors	34.6	35.0	28.3	30.1	**32.5**	**2,344,410**	**-15.9%**
Retail	22.5	22.7	18.7	22.7	**26.3**	**1,900,156**	**-9.7%**
Institutional	12.1	12.3	9.7	7.4	**6.2**	**444,254**	**-35.0%**
Overseas investors	18.4	13.2	20.3	20.4	**11.4**	**824,941**	**-56.4%**
Retail	3.0	2.7	2.4	2.7	**2.7**	**196,724**	**-22.0%**
Institutional	15.4	10.5	17.8	17.7	**8.7**	**628,217**	**-61.7%**
Total	100.0	100.0	100.0	100.0	**100.0**	**7,221,858**	**-22.1%**
HHI Options							
Principal trading [4]	37.8	44.8	47.2	51.2	**48.6**	**4,273,216**	**20.8%**
Market makers	22.8	28.5	33.4	29.0	**23.5**	**2,067,623**	**3.3%**
Proprietary trading	15.0	16.3	13.8	22.2	**25.1**	**2,205,594**	**43.7%**
Local investors	30.6	30.9	21.9	19.8	**22.7**	**2,001,741**	**46.3%**
Retail	10.3	4.7	2.7	3.7	**3.7**	**323,772**	**26.8%**
Institutional	20.3	26.2	19.2	16.1	**19.1**	**1,677,970**	**50.8%**
Overseas investors	31.6	24.3	30.9	28.9	**28.7**	**2,524,574**	**26.4%**
Retail	2.3	1.0	0.4	0.7	**1.0**	**85,656**	**72.0%**
Institutional	29.2	23.3	30.5	28.2	**27.7**	**2,438,918**	**25.2%**
Total	100.0	100.0	100.0	100.0	**100.0**	**8,799,532**	**27.5%**

(to be continued on next page)

Table 2. Distribution of derivatives trading by investor type (2009/10 – 2013/14) (cont'd)

Type of investor	Percentage contribution [1]					Implied contract volume [2] 2013/14	
	2009/10	2010/11	2011/12	2012/13	2013/14	No. of contracts	Y-o-Y change
Mini-HSI Options [3]							
Principal trading [4]	n.a.	n.a.	n.a.	54.5	**56.4**	**543,170**	**-22.6%**
Market makers	n.a.	n.a.	n.a.	54.3	**55.2**	**531,887**	**-23.9%**
Proprietary trading	n.a.	n.a.	n.a.	0.3	**1.2**	**11,283**	**233.6%**
Local investors	n.a.	n.a.	n.a.	34.7	**38.7**	**372,990**	**-16.6%**
Retail	n.a.	n.a.	n.a.	33.8	**37.8**	**363,662**	**-16.5%**
Institutional	n.a.	n.a.	n.a.	0.9	**1.0**	**9,329**	**-20.6%**
Overseas investors	n.a.	n.a.	n.a.	10.7	**4.9**	**46,882**	**-66.1%**
Retail	n.a.	n.a.	n.a.	7.1	**4.4**	**42,644**	**-53.3%**
Institutional	n.a.	n.a.	n.a.	3.7	**0.4**	**4,238**	**-91.0%**
Total	n.a.	n.a.	n.a.	100.0	**100.0**	**963,042**	**-25.2%**
Index options							
Principal trading [4]	44.6	50.0	50.1	50.6	**52.2**	**8,868,894**	**0.4%**
Market makers	34.8	39.7	42.1	37.6	**36.8**	**6,250,926**	**-4.7%**
Proprietary trading	9.8	10.3	8.0	13.0	**15.4**	**2,617,968**	**15.3%**
Local investors	33.6	33.9	26.2	26.4	**27.8**	**4,719,142**	**2.5%**
Retail	19.4	18.1	13.5	16.0	**15.2**	**2,587,589**	**-7.4%**
Institutional	14.2	15.8	12.7	10.4	**12.6**	**2,131,553**	**17.9%**
Overseas investors	21.8	16.0	23.7	23.1	**20.0**	**3,396,396**	**-15.7%**
Retail	2.8	2.3	1.8	2.3	**1.9**	**325,023**	**-17.4%**
Institutional	19.0	13.7	21.9	20.8	**18.1**	**3,071,373**	**-15.5%**
Total	100.0	100.0	100.0	100.0	**100.0**	**16,984,432**	**-2.7%**
Index futures & options							
Principal trading [4]	25.5	28.6	30.4	30.9	**31.4**	**20,550,989**	**2.0%**
Market makers	6.4	9.3	9.5	10.1	**9.5**	**6,250,926**	**-4.7%**
Proprietary trading	19.2	19.3	20.9	20.8	**21.8**	**14,300,063**	**5.3%**
Local investors	33.6	32.8	29.5	26.1	**25.3**	**16,565,078**	**-2.7%**
Retail	26.6	24.2	20.9	19.1	**17.3**	**11,316,239**	**-9.3%**
Institutional	7.1	8.6	8.6	7.0	**8.0**	**5,248,840**	**15.5%**
Overseas investors	40.8	38.7	40.1	43.0	**43.3**	**28,362,242**	**1.3%**
Retail	5.2	3.7	3.6	3.9	**3.2**	**2,127,237**	**-15.3%**
Institutional	35.6	35.0	36.4	39.1	**40.1**	**26,235,005**	**2.9%**
Total	100.0	100.0	100.0	100.0	**100.0**	**65,478,309**	**0.5%**
Stock options							
Principal trading [4]	74.7	69.2	69.2	69.8	**71.1**	**43,265,202**	**4.1%**
Market makers	66.6	63.6	66.9	66.3	**65.3**	**39,782,485**	**0.8%**
Proprietary trading	8.1	5.6	2.3	3.5	**5.7**	**3,482,717**	**65.7%**
Local investors	17.5	21.1	19.4	20.0	**20.2**	**12,287,655**	**2.9%**
Retail	13.4	16.5	14.0	16.7	**15.2**	**9,245,425**	**-6.9%**
Institutional	4.1	4.6	5.4	3.4	**5.0**	**3,042,230**	**51.3%**
Overseas investors	7.8	9.7	11.4	10.2	**8.8**	**5,339,252**	**-11.9%**
Retail investors	1.9	1.6	2.7	1.9	**2.5**	**1,545,008**	**38.8%**
Institutional investors	6.0	8.1	8.7	8.3	**6.2**	**3,794,244**	**-23.3%**
Total	100.0	100.0	100.0	100.0	**100.0**	**60,892,109**	**2.2%**
Overall market							
Principal trading [4]	49.9	50.7	50.0	49.5	**50.5**	**63,816,190**	**3.4%**
Market makers	36.2	38.9	38.4	36.9	**36.4**	**46,033,411**	**0.0%**
Proprietary trading	13.7	11.8	11.5	12.6	**14.1**	**17,782,779**	**13.4%**
Local investors	25.6	26.4	24.4	23.2	**22.8**	**28,852,733**	**-0.4%**
Retail investors	20.0	20.0	17.4	18.0	**16.3**	**20,561,664**	**-8.2%**
Institutional investors	5.6	6.4	7.0	5.3	**6.6**	**8,291,070**	**26.5%**
Overseas investors	24.5	22.9	25.6	27.3	**26.7**	**33,701,494**	**-1.1%**
Retail investors	3.5	2.5	3.2	2.9	**2.9**	**3,672,245**	**1.3%**
Institutional investors	20.9	20.3	22.5	24.4	**23.8**	**30,029,249**	**-1.3%**
Total	100.0	100.0	100.0	100.0	**100.0**	**126,370,418**	**1.3%**

n.a.: Not available

Notes:

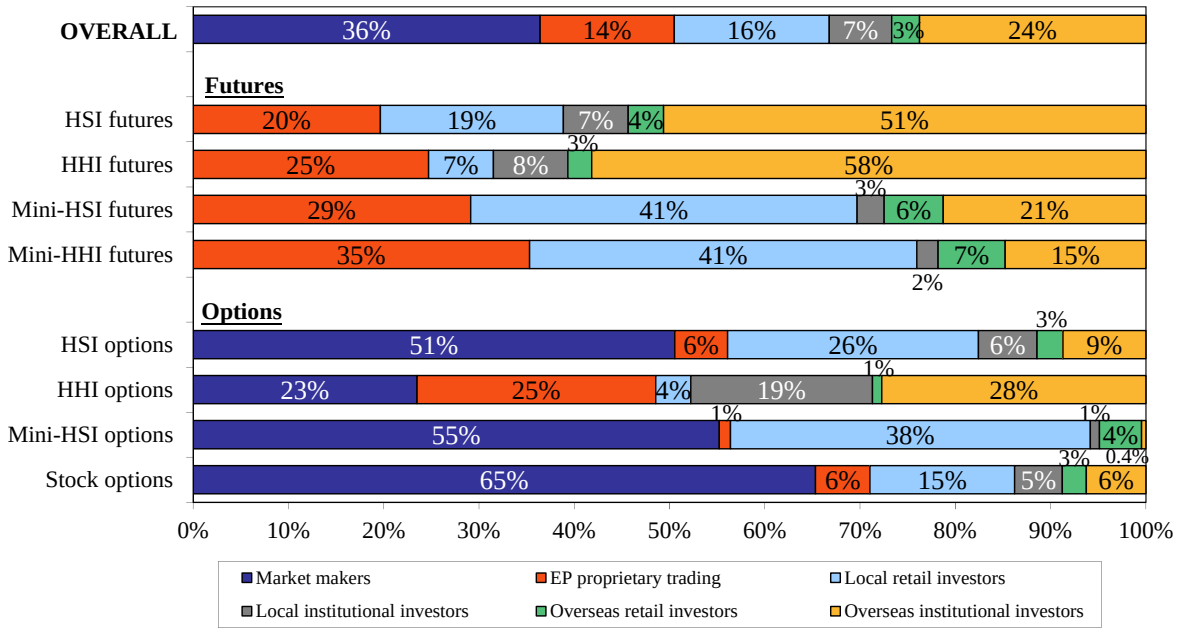
(1) Numbers may not add up to 100% due to rounding.

(2) See glossary for the definition of implied contract volume. The total figure of each product used is the actual contract volume for that product, based on which the implied contract volume by investor type is computed.

(3) Mini-HHI futures (launched on 31 March 2008) and Mini-HSI options (launched on 18 November 2002) were included in the survey for the first time in 2010/11 and 2012/13 respectively. These products were omitted in the previous surveys due to their negligible contribution to the total market contract volume.

(4) Principal trading comprises market maker trading and EP proprietary trading.

Figure 8. Distribution of derivatives market trading volume by investor type for overall market and each product (Jul 2013 – Jun 2014)



Notes:
(1) Market maker trading and EP proprietary trading are components of EP principal trading.
(2) Numbers may not add up to 100% due to rounding.

Table 3. Business composition of Exchange Participants in derivatives by trade type (in volume terms) (%)

						2013/14							
	2009/10 Overall	2010/11 Overall	2011/12 Overall	2012/13 Overall	2013/14 Overall	HSI futures	HSI options	Mini-HSI futures	Mini-HSI options	HHI futures	HHI options	Mini-HHI futures	Stock options
All trading													
Principal[#]	49.9	50.7	50.0	49.5	**50.5**	19.6	56.1	29.1	56.4	24.7	48.6	35.3	71.1
Agency	50.1	49.3	50.0	50.5	**49.5**	80.4	43.9	70.9	43.6	75.3	51.4	64.7	28.9
	100.0	100.0	100.0	100.0	**100.0**	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Agency trading													
Local	51.1	53.6	48.8	46.0	**46.1**	32.4	74.0	61.3	88.8	19.4	44.2	66.3	69.7
Overseas	48.9	46.4	51.2	54.0	**53.9**	67.6	26.0	38.7	11.2	80.6	55.8	33.7	30.3
	100.0	100.0	100.0	100.0	**100.0**	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Agency trading													
Retail	47.0	45.7	41.1	41.3	**38.7**	28.5	66.2	66.0	96.8	12.4	9.0	73.7	61.2
Institutional	53.0	54.3	58.9	58.7	**61.3**	71.5	33.8	34.0	3.2	87.6	91.0	26.3	38.8
	100.0	100.0	100.0	100.0	**100.0**	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Retail investor trading													
Local	85.0	88.8	84.7	86.1	**84.8**	83.8	90.6	86.7	89.5	73.2	79.1	85.2	85.7
Overseas	15.0	11.2	15.3	13.9	**15.2**	16.2	9.4	13.3	10.5	26.8	20.9	14.8	14.3
	100.0	100.0	100.0	100.0	**100.0**	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Institutional investor trading													
Local	21.1	24.0	23.7	17.7	**21.6**	11.8	41.4	11.8	68.8	11.8	40.8	13.1	44.5
Overseas	78.9	76.0	76.3	82.3	**78.4**	88.2	58.6	88.2	31.2	88.2	59.2	86.9	55.5
	100.0	100.0	100.0	100.0	**100.0**	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Local investor trading													
Retail	78.1	75.7	71.3	77.4	**71.3**	73.9	81.1	93.5	97.5	46.6	16.2	94.8	75.2
Institutional	21.9	24.3	28.7	22.6	**28.7**	26.1	18.9	6.5	2.5	53.4	83.8	5.2	24.8
	100.0	100.0	100.0	100.0	**100.0**	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Overseas investor trading													
Retail	14.5	11.1	12.3	10.6	**10.9**	6.8	23.8	22.6	91.0	4.1	3.4	32.3	28.9
Institutional	85.5	88.9	87.7	89.4	**89.1**	93.2	76.2	77.4	9.0	95.9	96.6	67.7	71.1
	100.0	100.0	100.0	100.0	**100.0**	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

[#] Comprises market maker trading and EP proprietary trading.
Note: Numbers may not add up to 100% due to rounding.

4. DISTRIBUTION OF OVERSEAS INVESTOR TRADING BY ORIGIN

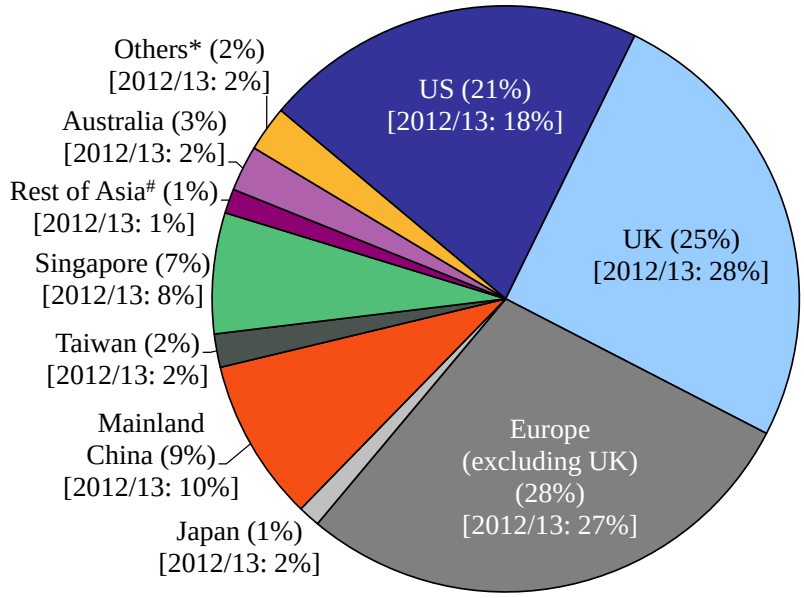
4.1 Overall pattern

Overseas investors in aggregate contributed 27% of total market turnover in 2013/14 (the same as in 2012/13) and experienced a year-on-year decrease of 1% in contract volume. ***Continental European investors*** were the largest contributor group — 28% of overseas investor trading in 2013/14 (27% in 2012/13) or 8% of total market turnover (7% in 2012/13). ***UK investors*** were the second major overseas contributor group — 25% of overseas investor trading in 2013/14 (down from 28% in 2012/13) or 7% of total market turnover (8% in 2012/13). ***US investors*** ranked third — 21% (up from 18% in 2012/13) or 6% of total market turnover (5% in 2012/13). In terms of contract volume, both US investor trading and Continental European investor trading recorded a year-on-year volume growth — 14% and 3% respectively in 2013/14 — while UK investor trading volume decreased by 10%. Over the past decade, overseas investor trading from UK and Continental Europe grew at similar CAGRs of 22%, higher than the CAGR of investor trading from the US (19%).

The aggregate contribution in 2013/14 from ***Asian investors*** (Mainland China, Singapore, Japan, Taiwan and the Rest of Asia) was 20% of overseas investor trading (the lowest level in the past five years) or 5% of total market volume (6% in 2012/13). Their aggregate contract volume decreased by 13% in 2013/14. The majority of the Asian contribution came from Mainland China and Singaporean investors — 9% and 7% respectively of overseas investor trading in 2013/14, or about 2% of total market volume for each. Mainland investor trading volume decreased by 9% in 2013/14 but attained a CAGR of 24% over the decade. The contract volume of Singaporean investors, another key contributor to Asian investor trading, decreased by 15% in 2013/14 and recorded a CAGR of 25% in the past decade.

(See Figures 9 – 12.)

Figure 9. Distribution of overseas investor trading volume in derivatives by origin (Jul 2013 – Jun 2014)

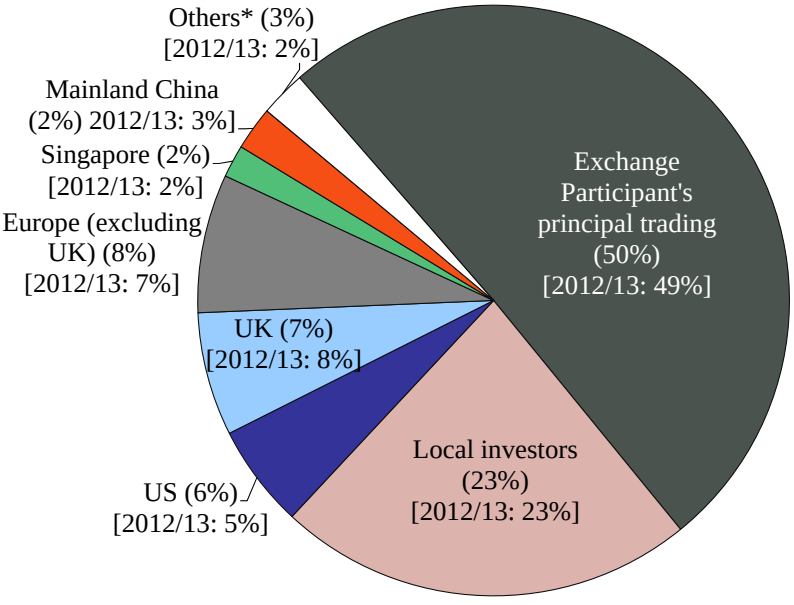


Reported origins in "Rest of Asia" in 2013/14 are India, Indonesia, Macau, Malaysia, Philippines, South Korea and Thailand.

* Reported origins in "Others" in 2013/14 are Africa, Bermuda, British Virgin Islands, Canada, Cayman Islands, Cook Islands, Middle East and Samoa.

Note: Numbers may not add up to 100% due to rounding.

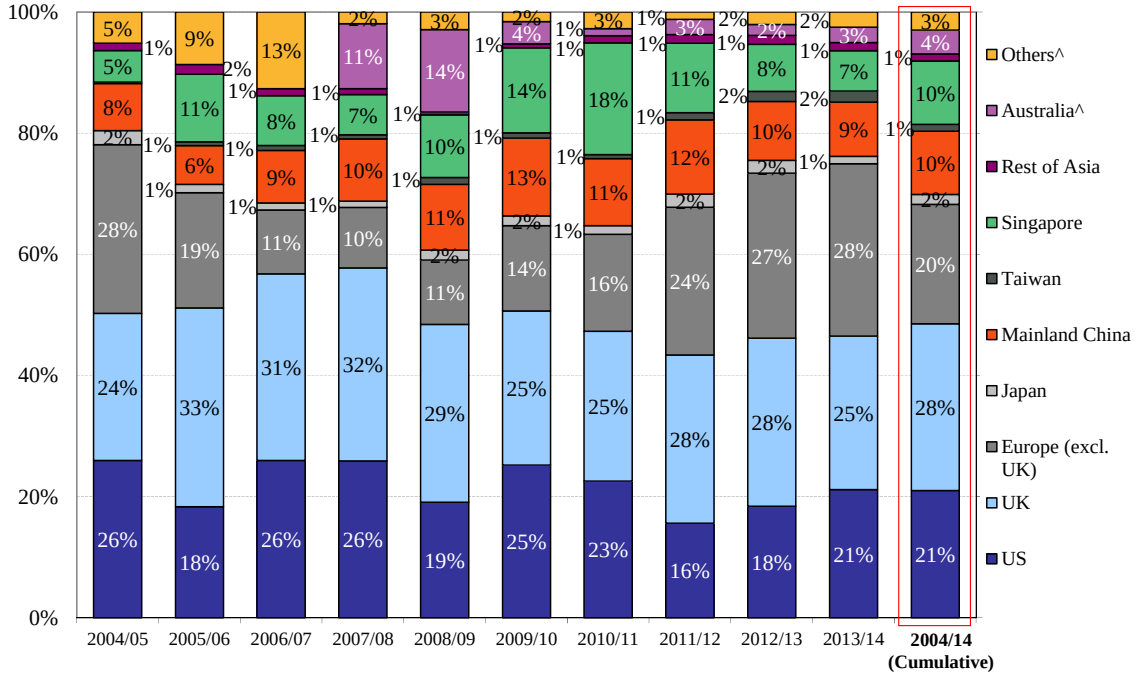
Figure 10. Distribution of derivatives market trading volume by local and overseas origins (Jul 2013 – Jun 2014)



* Others comprise investors from Australia, Japan, Taiwan, Rest of Asia and Rest of the World.

Note: Numbers may not add up to 100% due to rounding.

Figure 11. Distribution of overseas investor trading volume in derivatives by origin (2004/05 – 2013/14)

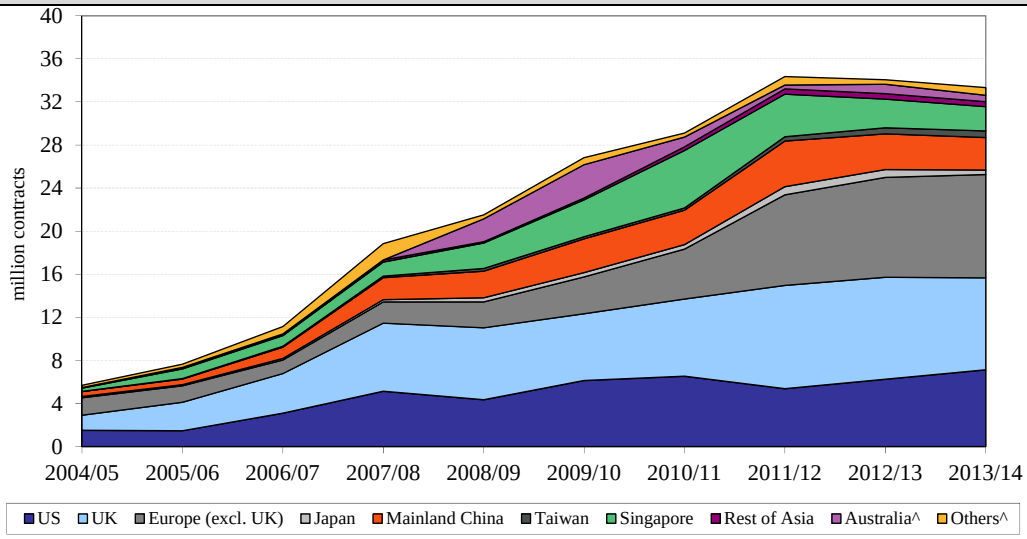


^ For surveys before 2007/08, Australia was included in "Others".

Notes: (1) Origins with contribution of less than 0.5% are not labelled in the chart.

(2) Numbers may not add up to 100% due to rounding.

Figure 12. Implied contract volume of overseas investor trading in derivatives by origin (2004/05 – 2013/14)



Overseas origin	Year-on-year % change										2004/14 CAGR
	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	
US	39.59%	-1.90%	110.60%	65.43%	-15.50%	41.19%	6.61%	-17.74%	16.49%	13.73%	18.87%
UK & Europe	102.25%	37.97%	18.51%	67.89%	9.63%	5.85%	22.53%	52.55%	4.07%	-3.18%	22.03%
UK	30.41%	87.33%	39.52%	71.41%	5.88%	-7.22%	15.46%	33.86%	-1.40%	-9.65%	22.16%
Europe (excl. the UK)	289.83%	-5.14%	-17.75%	57.59%	21.58%	42.07%	35.31%	81.42%	10.31%	3.42%	21.91%
Asia	-30.29%	75.63%	41.01%	62.07%	43.19%	31.25%	29.93%	3.51%	-21.17%	-12.97%	24.06%
Japan	55.52%	-19.06%	29.61%	43.49%	83.44%	7.39%	4.70%	80.18%	-3.46%	-43.54%	13.19%
Mainland China	5.85%	15.33%	100.38%	96.75%	21.18%	26.16%	2.51%	32.45%	-21.90%	-8.85%	23.57%
Taiwan	-70.04%	230.00%	109.66%	36.92%	88.74%	-20.30%	-1.99%	97.67%	41.06%	10.00%	51.81%
Singapore	-60.61%	196.62%	9.19%	34.00%	78.66%	45.59%	56.02%	-25.84%	-33.03%	-15.35%	24.92%
Rest of Asia	10.37%	88.40%	8.39%	38.24%	-39.84%	40.38%	109.41%	41.95%	3.52%	-9.25%	23.45%
Australia^	-	-	-	-	45.21%	-71.05%	-61.50%	155.83%	-31.42%	40.20%	-
Others^	50.24%	133.24%	116.73%	-75.08%	75.32%	-42.30%	107.40%	-48.36%	72.80%	19.52%	12.21%
Total	**39.27%**	**38.84%**	**48.65%**	**65.84%**	**14.77%**	**6.96%**	**18.98%**	**19.09%**	**-1.28%**	**-1.06%**	**21.61%**

- : Not applicable ^ For surveys before 2007/08, Australia was included in "Others".

Although the survey did not ask for a breakdown by retail/institutional investors for each overseas origin, a minimum proportion of retail/institutional investor trading from each origin could be deduced from EPs' responses. Almost all trading from the US (at least 99%) came from institutional investors and for the UK (at least 97%) and Continental Europe (at least 93%) as well. Investor trading from Japan, Australia and Singapore was also predominantly from institutional investors (at least 76%). In contrast, ***at least 64% of Mainland investor trading came from retail investors***. *(See Table 4.)*

Table 4. Minimum proportion of retail/institutional investor trading from each overseas origin (2013/14)

Origin	Minimum proportion of the trading coming from	
	Retail investors	Institutional investors
US	~0.0%	99.1%
UK	~0.0%	97.3%
Europe (excl. UK)	1.2%	93.9%
Japan	0.3%	77.8%
Mainland China	64.5%	15.8%
Taiwan	19.1%	48.9%
Singapore	4.3%	76.8%
Australia	3.0%	77.4%

Note: The minimum proportions are deduced figures from the responses. The difference between 100% and the summation of the two figures for an origin represents the proportion of trading from that origin which could come from either retail or institutional investors.

4.2 Trading by market segment

The stock options market segment is served by SOEPs while the market segment in index futures and options is served by FEPs. Overseas investor trading constituted only 9% of stock options trading but 43% of index futures and options trading. The distribution of overseas investor trading by origin for stock options also differed from that of index futures and options.

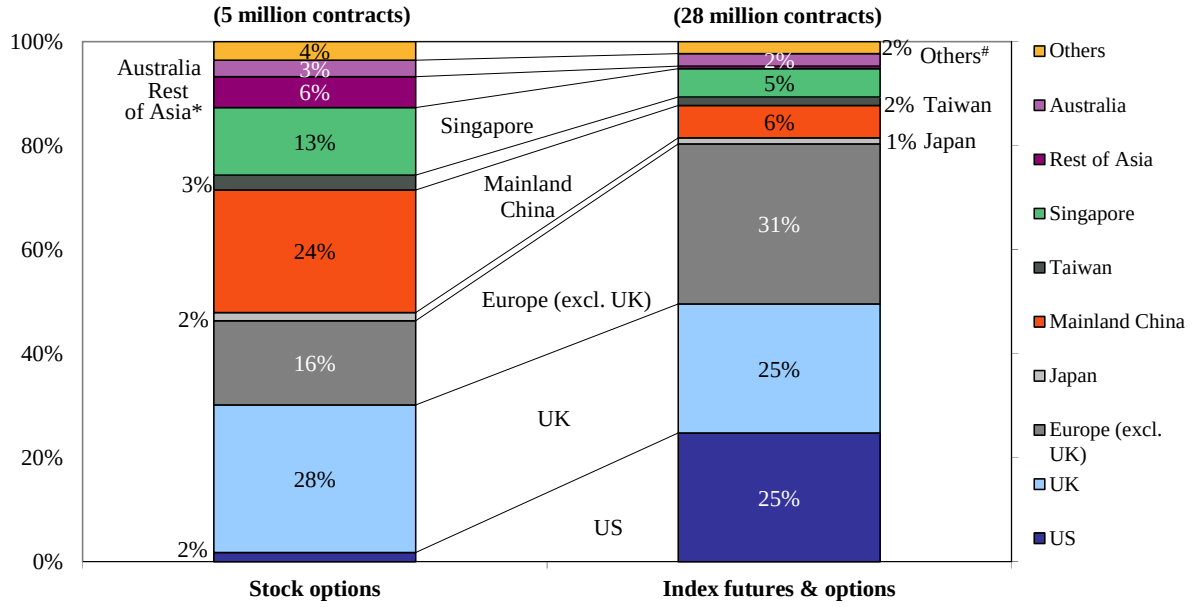
For ***stock options***, the major overseas contributors were investors from the ***UK*** (28% of the segment's overseas investor trading, down from 44% in 2012/13) and ***Mainland China*** (24%, up from 16% in 2012/13). They were followed by investors from Continental Europe (16%, compared to 14% in 2012/13) and Singapore (13%, up from 8% in 2012/13). In number of contracts, investor trading volume from UK suffered a year-on-year decrease of 44% while Mainland investor trading volume increased by 27%. This compared to the 12% decrease in stock options' total overseas investor trading volume.

For ***index futures and options***, the major overseas contributors were ***Continental European, UK and US investors*** — together contributing 80% of the segment's overseas investor trading (31%, 25% and 25% respectively, a similar pattern since 2011/12). In number of contracts, investor trading volume from Continental Europe and the UK increased by 4% for each, compared to an overall overseas investor trading volume growth of 1% in index products. In comparison, US investor trading volume achieved a higher growth of 14%.

Notably, investor trading volume in number of contracts from each of the Asian origins in 2013/14 recorded year-on-year growth for stock options but year-on-year decline for index futures and options. Investor trading volume from the Western origins showed a year-on-year decline for stock options but year-on-year growth for index futures and options. Only the investor trading volume from Australia experienced year-on-year growths in both market segments.

(See Figure 13, Table 5.)

Figure 13. Distribution of overseas investor trading volume in derivatives by origin by market segment (Jul 2013 – Jun 2014)



( ): Implied contract volume of overseas investor trading in the market segment.

* Reported origins in "Rest of Asia" are Macau, Malaysia Philippines and Thailand for both segments; plus India and South Korea for index derivatives; plus Indonesia for stock options.

\# Reported origins in "Others" are Africa, Bermuda, British Virgin Islands, Canada and Cayman Islands for both segments; plus Middle East for index derivatives; plus Cook Islands and Samoa for stock options.

Notes:

(1) Numbers may not add up to 100% due to rounding.

(2) Origins with contribution of less than 0.5% are not labelled in the chart.

Table 5. Distribution of overseas investor trading in derivatives by origin (2009/10 – 2013/14)

Overall market (All futures and options)

Origin	Percentage contribution [2]					Implied contract volume[1] (2013/14)	
	2009/10	2010/11	2011/12	2012/13	2013/14	No. of contracts	Y-o-Y change
US	25.2	22.6	15.6	18.4	**21.1**	**7,122,762**	**13.7%**
Europe	39.6	40.7	52.2	55.0	**53.8**	**18,141,980**	**-3.2%**
UK	25.5	24.7	27.8	27.8	**25.3**	**8,542,786**	**-9.7%**
Europe (excl. UK)	14.1	16.0	24.4	27.3	**28.5**	**9,599,194**	**3.4%**
Asia	30.0	32.8	28.5	22.8	**20.0**	**6,745,908**	**-13.0%**
Japan	1.6	1.4	2.2	2.1	**1.2**	**408,413**	**-43.5%**
Mainland China	12.8	11.0	12.3	9.7	**9.0**	**3,018,245**	**-8.9%**
Taiwan	0.8	0.7	1.2	1.7	**1.8**	**619,465**	**10.0%**
Singapore	14.1	18.4	11.5	7.8	**6.7**	**2,244,226**	**-15.3%**
Rest of Asia	0.7	1.2	1.4	1.5	**1.4**	**455,559**	**-9.3%**
Australia	3.7	1.2	2.6	1.8	**2.5**	**848,318**	**40.2%**
Others	1.6	2.7	1.2	2.1	**2.5**	**842,527**	**19.5%**
Total[1]	100.0	100.0	100.0	100.0	**100.0**	**33,701,494**	**-1.1%**

Index futures and options

Origin	Percentage contribution [2]					Implied contract volume[1] (2013/14)	
	2009/10	2010/11	2011/12	2012/13	2013/14	No. of contracts	Y-o-Y change
US	29.2	28.7	18.8	21.9	**24.8**	**7,027,638**	**14.7%**
Europe	36.1	38.2	52.9	54.2	**55.6**	**15,762,864**	**4.0%**
UK	20.4	19.1	23.9	24.1	**24.8**	**7,029,157**	**4.0%**
Europe (excl. UK)	15.8	19.1	29.1	30.0	**30.8**	**8,733,707**	**3.9%**
Asia	30.8	29.8	25.5	21.4	**15.0**	**4,241,016**	**-29.2%**
Japan	1.8	1.6	2.4	2.4	**1.1**	**323,766**	**-52.0%**
Mainland China	12.4	9.2	7.9	8.3	**6.2**	**1,760,643**	**-24.2%**
Taiwan	0.9	0.7	1.1	1.9	**1.6**	**467,690**	**-10.2%**
Singapore	15.3	18.0	13.1	7.7	**5.5**	**1,549,689**	**-28.5%**
Rest of Asia	0.3	0.4	1.0	1.1	**0.5**	**139,229**	**-54.6%**
Australia	3.2	1.1	2.2	1.6	**2.4**	**680,189**	**53.9%**
Others	0.7	2.2	0.6	1.0	**2.3**	**650,535**	**136.2%**
Total	100.0	100.0	100.0	100.0	**100.0**	**28,362,242**	**1.3%**

Stock options

Origin	Percentage contribution [2]					Implied contract volume[1] (2013/14)	
	2009/10	2010/11	2011/12	2012/13	2013/14	No. of contracts	Y-o-Y change
US	4.1	2.0	4.4	2.2	**1.8**	**95,124**	**-29.8%**
Europe	57.7	49.3	49.7	59.0	**44.6**	**2,379,116**	**-33.4%**
UK	52.6	43.4	41.4	44.5	**28.3**	**1,513,629**	**-43.9%**
Europe (excl. UK)	5.1	5.9	8.3	14.5	**16.2**	**865,487**	**-1.3%**
Asia	25.9	42.6	39.0	29.0	**46.9**	**2,504,892**	**42.3%**
Japan	0.5	1.0	1.4	0.8	**1.6**	**84,647**	**71.4%**
Mainland China	15.0	17.3	27.5	16.3	**23.6**	**1,257,602**	**27.0%**
Taiwan	0.8	0.8	1.4	0.7	**2.8**	**151,775**	**259.4%**
Singapore	7.2	19.8	5.9	8.0	**13.0**	**694,538**	**43.9%**
Rest of Asia	2.4	3.7	2.7	3.2	**5.9**	**316,330**	**61.7%**
Australia	6.2	1.5	3.6	2.7	**3.1**	**168,128**	**3.1%**
Others	6.0	4.6	3.3	7.1	**3.6**	**191,991**	**-55.3%**
Total	100.0	100.0	100.0	100.0	**100.0**	**5,339,252**	**-11.9%**

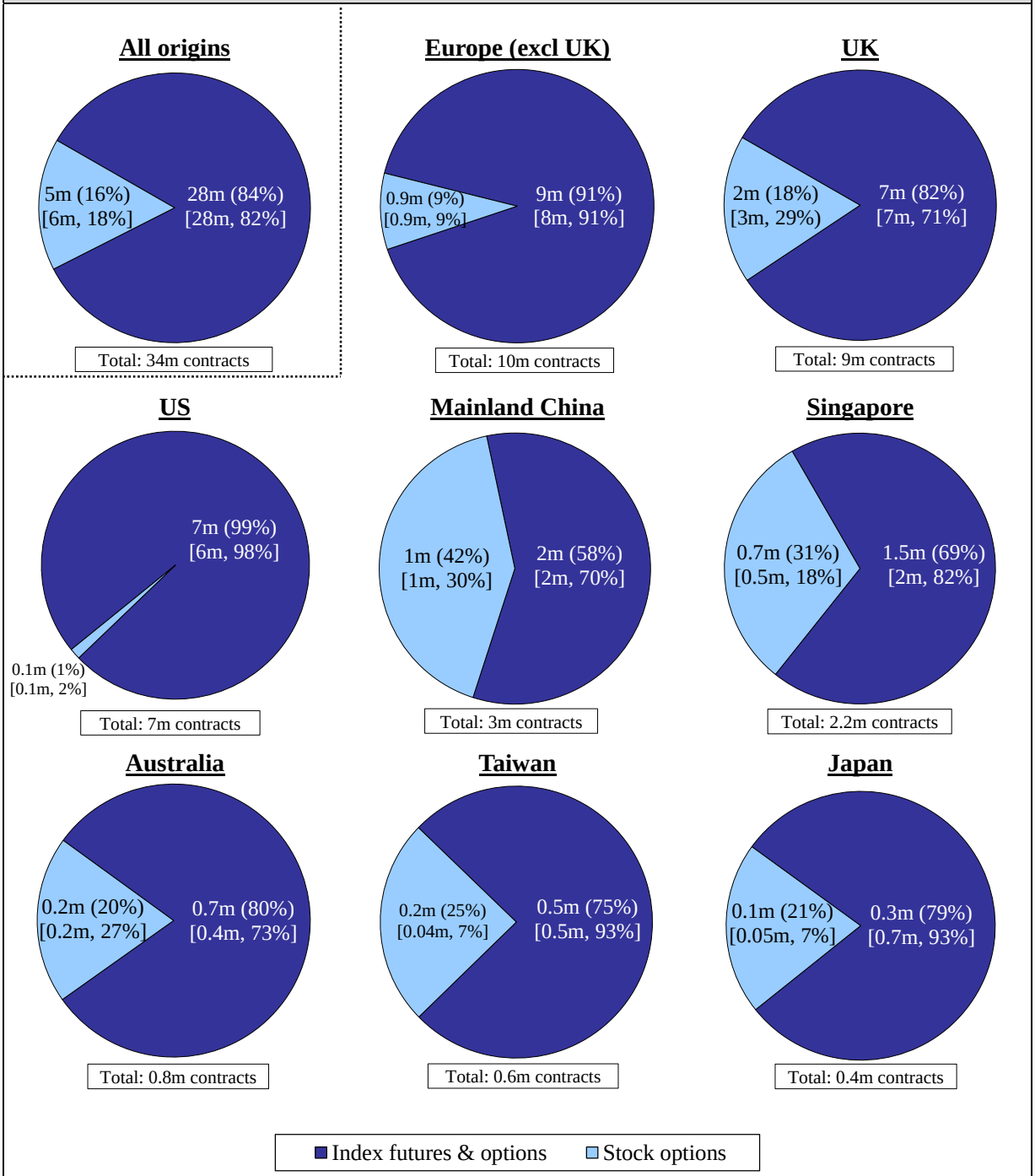
Notes:

(1) See glossary for the definition of implied contract volume. The total figure is the actual total contract volume, multiplied by the percentage contribution of overseas investor trading by origin.

(2) Numbers may not add up to 100% due to rounding.

As shown in Figure 14, ***overseas investor trading volume*** (in number of contracts) concentrated in index products (84%, compared to 82% in 2012/13) and much less in stock options (16%, compared to 18% in 2012/13). US investors had little trading in stock options (1%) only. Compared to other origins, Mainland investors had the largest proportion of their total trading in the HKEx derivatives market devoted to stock options (42%, up from 30% in 2012/13). Singaporean investors also had a significant proportion of their trading devoted to stock options (31%).

Figure 14. Composition of overseas investor trading volume from each origin by market segment (Jul 2013 – Jun 2014)



[ ]: Implied contract volume and market share by market segment for each origin in 2012/13.

Note: Numbers may not add up to total due to rounding.

5. RETAIL ONLINE TRADING

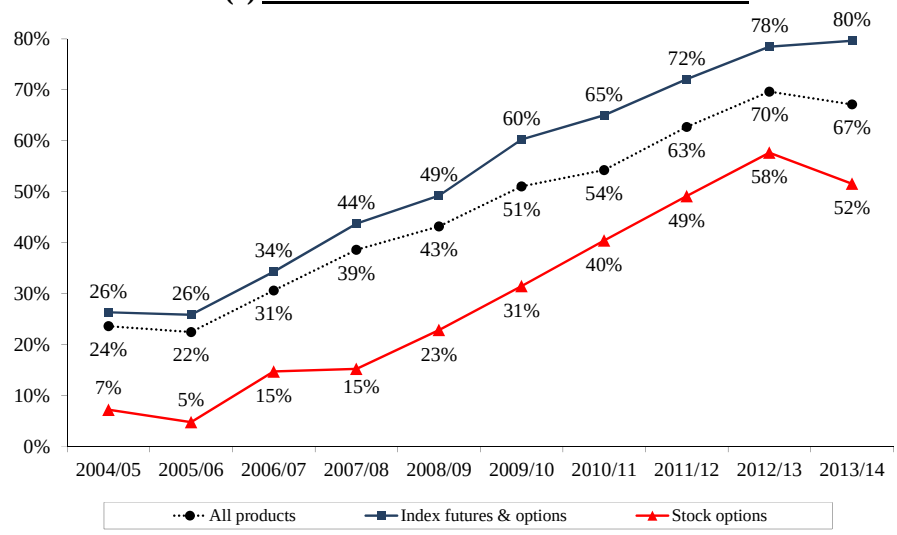
Retail online trading as a proportion of total retail investor trading experienced a decrease for the first time since 2005/06, standing at 67% in 2013/14 (down from 70% in 2012/13 but higher than the 63% in 2011/12). Its contribution to total market turnover also decreased from 15% in 2012/13 to 13% in 2013/14 (the same level as in 2011/12).

For stock options, the contribution of retail online trading to total retail investor trading also decreased for the first time since 2005/06 from 58% in 2012/13 to 52% in 2013/14 (from 11% of total product volume in 2012/13 to 9% in 2013/14). For index derivatives, the ***use of online trading*** by retail investors continued to grow and remained much more prominent than in stock options — 80% of total retail investor trading in 2013/14 (compared to 78% in 2012/13), albeit that it declined somewhat as percentage share of total product turnover (16% compared to 18% in 2012/13).

A total of 122 (up from 112 in 2012/13) or 53% of responding EPs (vs 49% in 2012/13) offered online trading services to retail derivatives investors (referred to as "***online brokers***"). Retail online trading accounted for 47% of online brokers' total turnover in 2013/14 (30% for stock options brokers and 68% for index derivatives brokers), down from 51% in 2012/13.

Figure 15. Market share of retail online trading in derivatives trading (2004/05 – 2013/14)

(a) As % of retail derivatives turnover volume



(b) As % of total derivatives turnover volume

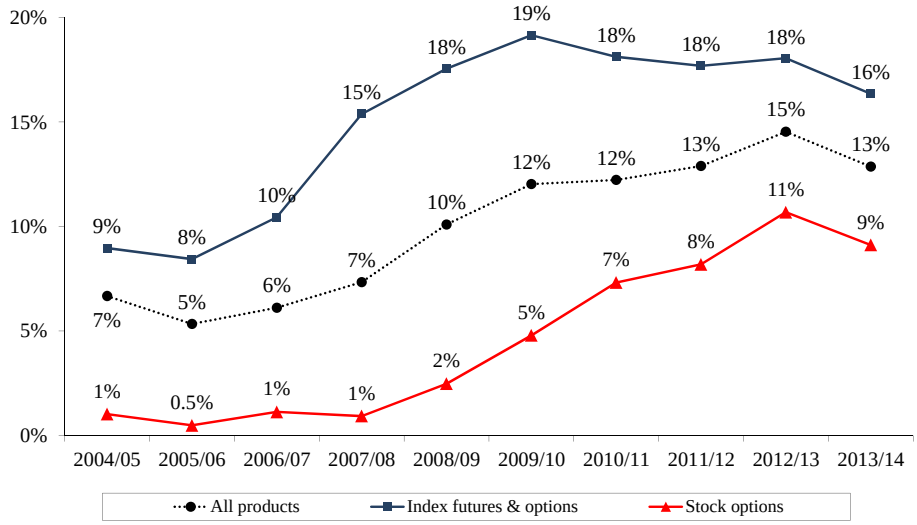


Table 6. Statistics on retail online trading in derivatives (2009/10 – 2013/14)					
Overall market (All futures and options)	**2009/10**	**2010/11**	**2011/12**	**2012/13**	**2013/14**
Online brokers[1]					
Total number of online brokers	78	91	105	112	**122**
- As % of all responding EPs (%)	39%	44%	48%	49%	**53%**
Online trading					
Total implied contract volume (1-sided)[5]	11,963,260	15,494,200	17,354,525	18,125,661	**16,266,956**
- As % of total market turnover[3] (%)	12.0%	12.2%	12.9%	14.5%	**12.9%**
- As % of total agency (investor) trading (%)	24.0%	24.8%	25.8%	28.8%	**26.0%**
- As % of total retail investor trading (%)	51.0%	54.2%	62.7%	69.6%	**67.1%**
- As % of total turnover of online brokers (%)	54.4%	57.6%	46.3%	50.9%	**46.9%**
Index futures and options	**2009/10**	**2010/11**	**2011/12**	**2012/13**	**2013/14**
Online brokers[1]					
Total number of online brokers	69	77	88	90	**95**
- As % of all responding EPs (%)	50%	53%	59%	59%	**63%**
Online trading					
Total implied contract volume (1-sided)[2]	9,602,615	10,438,395	11,798,691	11,761,364	**10,705,055**
- As % of total product turnover[4] (%)	19.1%	18.1%	17.7%	18.0%	**16.3%**
- As % of total product agency (investor) trading (%)	25.7%	25.4%	25.4%	26.1%	**23.8%**
- As % of total product retail investor trading (%)	60.3%	65.0%	72.1%	78.5%	**79.6%**
- As % of total product turnover of online brokers (%)	55.9%	62.3%	65.6%	72.1%	**67.9%**
Stock options	**2009/10**	**2010/11**	**2011/12**	**2012/13**	**2013/14**
Online brokers[1]					
Total number of online brokers	9	14	17	22	**27**
- As % of all responding EPs (%)	15%	22%	25%	29%	**35%**
Online trading					
Total implied contract volume (1-sided)[2]	2,360,644	5,055,805	5,555,833	6,364,296	**5,561,901**
- As % of total product turnover[4] (%)	4.8%	7.3%	8.2%	10.7%	**9.1%**
- As % of total product agency (investor) trading (%)	18.9%	23.7%	26.6%	35.4%	**31.6%**
- As % of total product retail investor trading (%)	31.4%	40.4%	49.1%	57.6%	**51.5%**
- As % of total product turnover of online brokers (%)	48.8%	49.9%	28.7%	33.2%	**29.5%**

Notes:

(1) "Online brokers" refers to EPs offering online trading service to retail clients.

(2) The implied contract volume of online trading is calculated by multiplying the percentage share of online trading in the responded sample for that product segment by the total product turnover volume in the market.

(3) Market turnover refers to the total turnover in number of contracts of products under study in the respective year's survey, which contributed in aggregate 99% or more of the total turnover of all products in the respective survey periods.

(4) Product turnover refers to the total turnover in number of contracts of the products under study for the product segment in the table.

(5) The implied contract volume of online trading in the overall market is calculated by adding the implied contract volume of online trading for index futures and options and that for stock options.

GLOSSARY

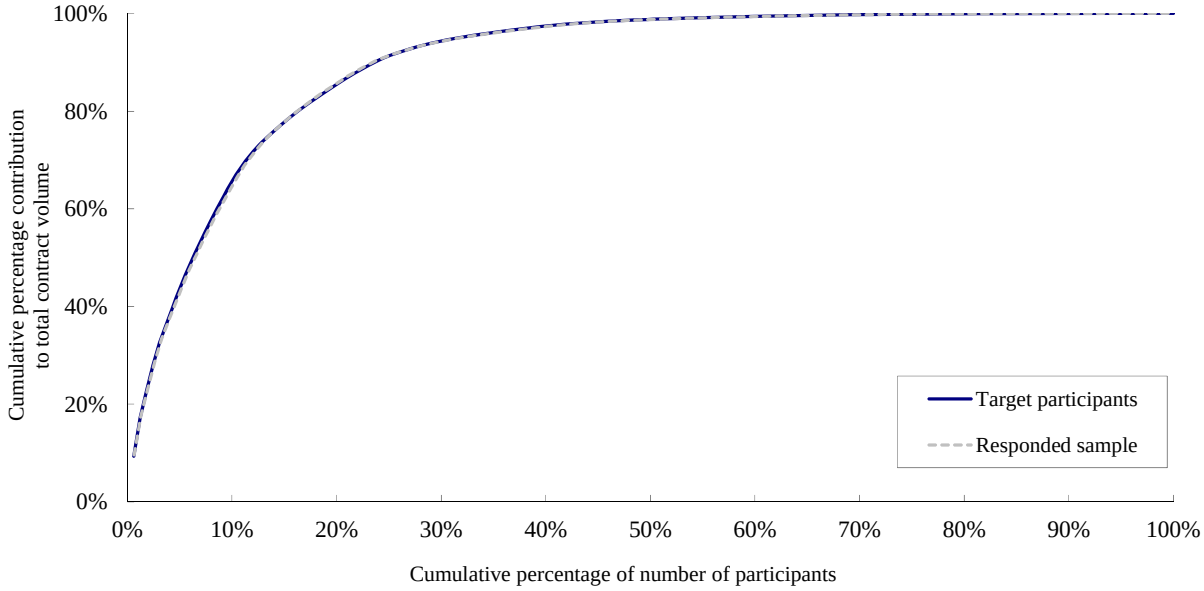
Hedging	Utilisation of futures/options to reduce or eliminate the market risk of a portfolio by compensating for the effect of price fluctuations of an underlying asset.
Pure trading	Trading for potential profit in anticipation of a price movement in either the short or long term, but not for hedging or arbitrage purpose.
Arbitrage	Trading to take riskless or near riskless profit from price differentials in related markets.
Principal trading	Trading on the participant firm's own account, whether as a market maker or not, i.e. comprising EP market maker trading and proprietary trading.
Agency trading	Trading on behalf of the participant firm's clients, including client trading channelled from the firm's parent or sister companies.
Market maker trading	Trading as a market maker serving for that product only, including trading by client Registered Traders (RTs) (before 1 February 2007) or corporate entities which have market making arrangement with the EP that has been granted market maker permit in the product (on and after 1 February 2007). Trading in that product using the EP's RT accounts or market making accounts for other products is excluded.
EP proprietary trading	Trading on the participant firm's own account but not as a market maker.
Individual/Retail investors	Investors who trade on their personal account.
Institutional investors	Investors who are not individual/retail investors.
Local investors	Individual/Retail investors residing in Hong Kong or institutional investors operating in Hong Kong — Hong Kong as the source of funds.
Online brokers	EPs who offer online trading service to individual/retail investors.
Overseas investors	Individual/Retail investors residing outside Hong Kong or institutional investors operating outside Hong Kong — overseas as the source of funds.
Retail online trading	Trading originating from orders entered directly by individual/retail investors and channelled to the brokers via electronic media (e.g. the Internet).
Implied contract volume	The number of contracts traded by a particular investor type in a particular product type (or the overall market) is calculated by multiplying the percentage contribution of that type of trade to the product turnover (or the market turnover) as obtained from the survey by the actual turnover (number of contracts traded) of that product (or the aggregate turnover of all products under study) during the study period.
Notional value	The notional value of a derivatives contract is calculated by multiplying the market price of the underlying asset with the contract multiplier (i.e. the dollar amount per index point for index futures and options) or contract size (the number of underlying shares per contract for stock options). The notional value of the turnover in derivatives is the aggregated notional value of the contracts traded.

APPENDIX 1. RESPONSE RATE

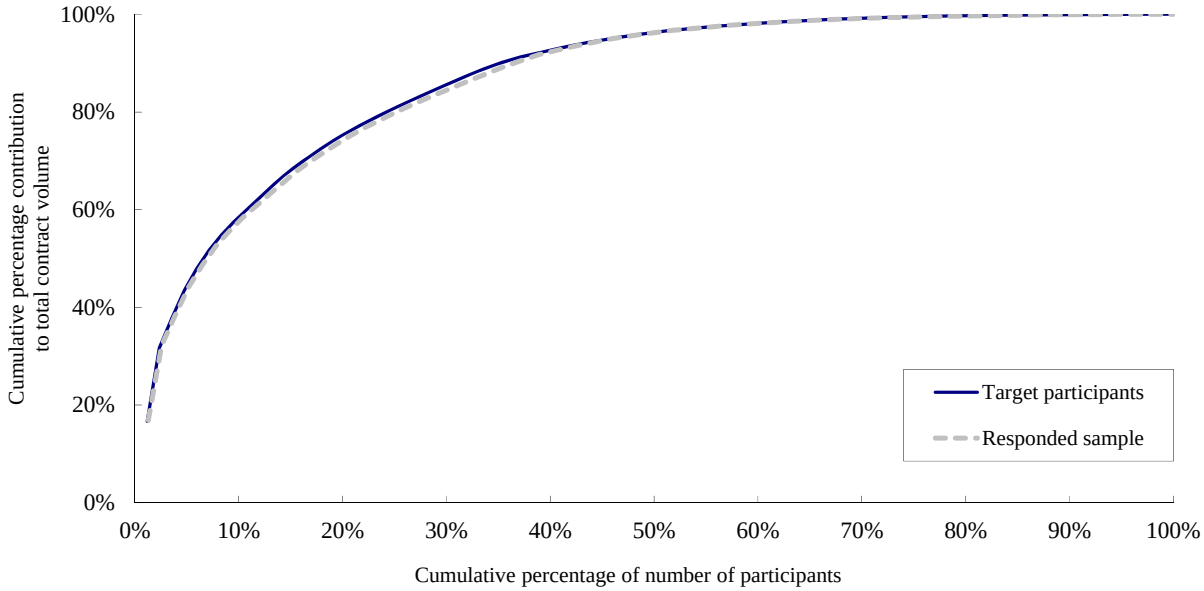
Exchange Participants	Target population	Responded participants	Response rate	% share of turnover in target population
Futures EPs	163	152	93%	98%
Stock Options EPs	84	77	92%	99%
All Participants	247	229	93%	98%

APPENDIX 2. REPRESENTATIVENESS OF THE RESPONDED SAMPLE RELATIVE TO TARGET RESPONDENTS

(a) Futures Exchange Participants (Jul 2013 – Jun 2014)



(b) Stock Options Exchange Participants (Jul 2013 – Jun 2014)



APPENDIX 3. CONTRACT SIZE AND NOTIONAL VALUE OF PRODUCTS UNDER STUDY

Product	Contract multiplier (HK$ per index point)	Notional value per contract[(1)] (HK$) (as at 30 June 2014)	Turnover in notional value during the study period	
			(HK$m)	% of total
HSI futures	50	1,159,536	20,955,694	42.6%
HSI options	50	1,159,536	9,644,522	17.6%
Mini-HSI futures	10	231,907	1,656,228	3.4%
Mini-HSI options	10	231,907	267,891	0.5%
HHI futures	50	516,752	8,333,334	23.2%
HHI options	50	516,752	3,213,452	9.5%
Mini-HHI futures	10	103,350	157,653	0.6%
Stock options	—[(2)]	23,030[(3)]	1,204,302	2.7%
Overall market			45,433,075	100.0%

Notes:

(1) See glossary for the definition of notional value.

(2) The contract size for a stock options class is usually one board lot of the underlying stock except for seven option classes with contract size more than one board lot; different stocks may have different board lot sizes.

(3) The figure is the simple average of the per-contract notional values of all the stock option classes traded during the study period (ranging from HK$1,100 to HK$137,500), based on the stock closing prices as at 30 June 2014 or, if a stock options class was delisted prior to the end of the study period, the stock closing price on the last trading day of the stock options class.

Remark: Notional values are difficult to compile in practice as a calculation of notional values involves the market price of the underlying assets. As the market price of the underlying asset varies, a contract traded at one time may differ in notional value from the same contract traded at another time. For simplicity, the closing price of the underlying asset at a particular period end is used to calculate the notional value during the period.

APPENDIX 4. SURVEY METHODOLOGY

(1) Target population

Exchange participantship in the HKEx derivatives market consists of Futures Exchange Participants (FEPs) and Stock Options Exchange Participants (SOEPs). The target population of the survey included all FEPs and SOEPs who had trading during the study period, excluding those who had ceased to be trading participants before the start of fieldwork in July 2014. The target respondents were all corporations.

(2) Methodology

- The survey consisted of two sub-surveys with two separate questionnaires, targeting the FEPs and the SOEPs respectively. The questionnaire addressed to SOEPs covered stock options only and that to FEPs covered major derivative products other than stock options (ie key index futures and options).
- The study period or survey period is from July 2013 to June 2014.
- Products under study were Hang Seng Index (HSI) futures, HSI options, Mini-HSI futures, Mini-HSI options, H-shares Index (HHI) futures, HHI options, mini-HHI futures and stock options. These products together contributed 99.3% of the total volume of the HKEx derivatives market during the study period.
- The survey was conducted by mailed questionnaire. The target respondents were requested to provide an estimated percentage breakdown of their contract volume for each of the product under study during the study period in accordance with the prescribed classification. Respondents were reminded that their answers should be based on their execution turnover.
- Close telephone follow-up was done to ensure a high response rate, especially for Participants which were top-ranked in the target population by contract volume.
- The methodology to arrive at the relative contribution of each type of trade to the total market volume has been improved since 2008/09 by applying a weighting factor by product under study to align the responded sample with the actual market turnover composition by product. Each Participant's answers in percentage terms were first multiplied by its actual contract volume by product during the study period obtained internally to arrive at its volume in each respective trade type for each product, based on which the relative contribution of each trade type (aggregate of all responding Participants) for each product was calculated. The weighting factors by product were then applied to the aggregate trading volume of all responding Participants by trade type in the respective product under study before calculating the relative contribution of each trade type to the total market.

- For statistics on online trading, the total reported online trading volume of each product segment — index futures & options and stock options — was first calculated. This was done by aggregating all responding Participants' figures — each was calculated by multiplying the reported online trading percentage with that Participant's actual contract volume in the product segment. The proportion of the total reported online trading volume in the product segment to the responded sample's total trading volume in the product segment was computed (this approach was adopted since the 2008/09 survey rather than using the proportion to the target population's total as in prior surveys). The implied online trading volume was then calculated by multiplying this proportion by the actual market turnover in each of the product segments during the study period. The total implied online trading volume for the market was calculated by summing up the respective figures for the two product segments (which had different response rates from FEPs and SOEPs respectively; in surveys prior to 2009/10, no such weighting was adopted). The corresponding figures for the overall market in previous surveys were revised accordingly. The proportion of online trading volume to a specific trade type (agency or retail agency) was calculated as the ratio of the implied online trading volume to the implied contract volume of that trade type.

(3) Limitations

- In providing the breakdown of total contract volume by the type of trade, EPs might only provide their best estimates instead of hard data. Reliability of results is subject to the closeness of their estimates to the actual figures.

- For agency trading, EPs usually would not know the purpose of trading and would tend to regard such transactions as "pure trading". Four FEPs and two SOEPs in the 2013/14 survey could not answer the question on trading purposes. They were excluded in the analysis of turnover by trading purpose.

- EPs might not know the true origins of all their client orders. For instance, an EP might classify transactions for a local institution as such when in fact the orders originated from overseas and were placed through that local institution, or vice versa. As a result, the findings may deviate from the true picture.

- The number of derivatives EPs was relatively small, especially SOEPs. Their degree of participation in the various derivative products varied greatly. The trading pattern of the various derivative products was also very diverse. Therefore, the non-response of particular EPs would reduce the reliability of the survey findings, especially for a particular trade type or a particular product type or Participant type with a small base. Nevertheless, the error due to non-response should be small because of the high response rate by turnover volume and the responded sample's high representativeness of the target population (see Appendix 1 and 2).

- The estimate of online trading volume in the market is subject to limitations. Firstly, online trading through banks may or may not be reflected in the responses depending on the system connection between the responding EP and the bank through which client orders are routed and the EP's own judgement. Secondly, the offer of online trading by EPs may not have an even distribution within the two target groups of FEPs and SOEPs so that non-responses would generate sampling error even though weighting by target group has been applied. Nevertheless, the second limitation is considered minimal given the high response rate in volume terms.

- There are two sets of statistics on FEPs' contract volume — execution statistics, which record volume when the trades are executed, and registration statistics, which are adjusted for post-trades[6]. The total contract volume for a FEP and the proportion as market making under execution statistics may differ from that under registration statistics. Execution statistics were used for the survey.

— END —

[6] Post-trades are trades being transferred from one broker account to another broker account or from market maker's account to non-market maker's account before clearing, no matter whether the accounts are under the same FEP firm.