Research & Corporate Development

DERIVATIVES MARKET TRANSACTION SURVEY 2009/10

November 2010

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

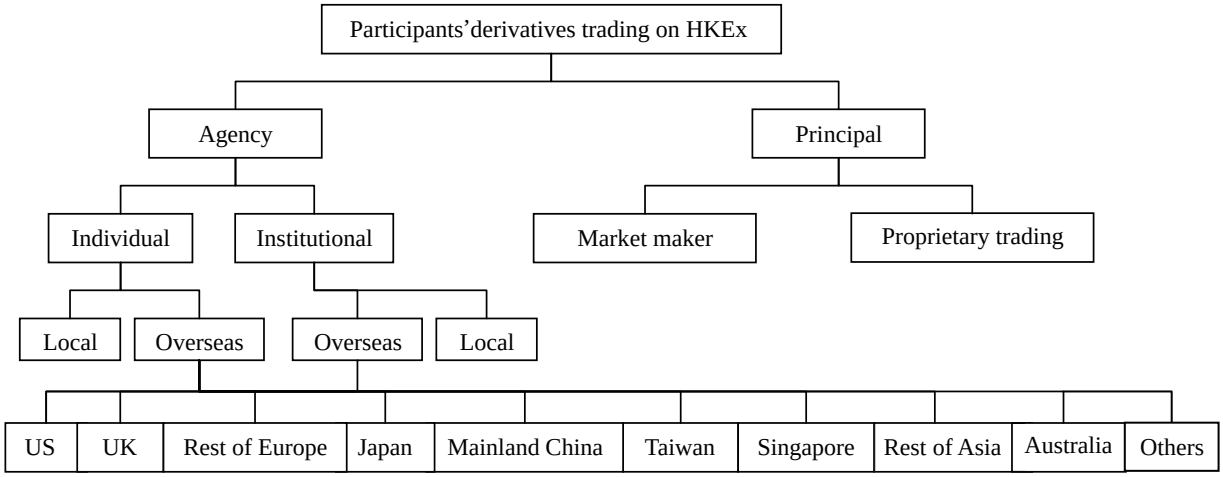
CONTENTS

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 comprises futures and options contracts.

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. Comparison of the findings with those of the past surveys is performed 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 220 questionnaires sent out, 199 completed questionnaires were returned, representing an overall response rate of 90%. The responded sample represented 99% in total contract volume of the target population in the products under study. (*See Appendix 1.*)

The survey covers transactions during July 2009 to June 2010[2] in the major HKEx futures and options products, namely Hang Seng Index (HSI) futures, HSI options, Mini-HSI futures, H-shares Index (HHI) futures, HHI options and stock options. These together contributed about 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 turnover volume of the products under study.

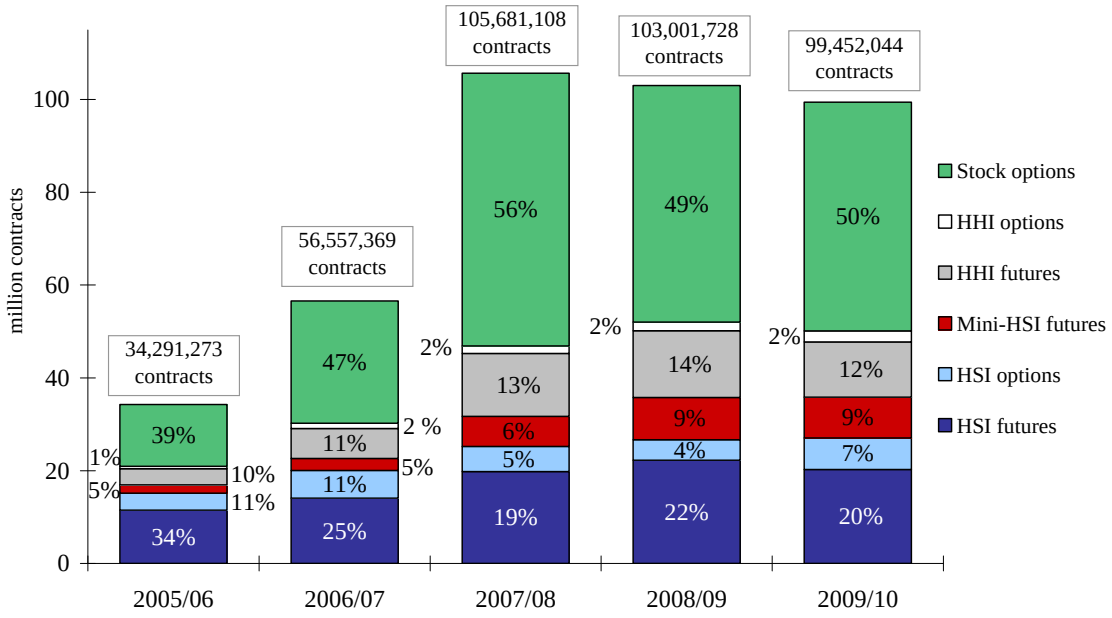
Other derivative products which individually contributed less than 1% of HKEx's total derivatives turnover during the same period were excluded. These products were Mini-HHI futures, HIBOR futures, Three-year Exchange Fund Note futures, stock futures, gold futures, Mini-HSI options, and flexible index (HSI and HHI) options (launched on 8 February 2010).

[1] The target population consists of all the EPs with trading 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 2009/10 throughout the report; the same convention is used for the past surveys.

In 2009/10, market turnover (products under study only) was 99 million contracts, down 4% from 103 million contracts in 2008/09. The decrease in market turnover mainly reflected a decrease of 10% in the aggregate turnover volume of index futures (HSI futures: -9%, Mini-HSI futures: -3%, HHI futures: -17%) from 46 million contracts in 2008/09 to 41 million contracts in 2009/10 and a decrease of 3% in stock options turnover volume (from 51 million contracts to 49 million contracts). Nevertheless, the trend was partly offset by a volume increase of 53% in HSI options (from 4 million contracts to 7 million contracts). Stock options remained the dominant contributor to derivatives market turnover (50%, compared to 49% in 2008/09). *(See Figure 1.)*

Figure 1. Contract volume and percentage of total by product under study (2005/06 – 2009/10)



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

Due to the dominance of the stock options market segment by contract volume, the overall trading pattern of the HKEx derivatives market would be largely influenced by that of stock options, which is very different from that of other derivative products (see key findings in section 2). 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/other derivative products are provided to assist in more detailed interpretation.

For analysis purposes, the contract volume for each transaction type in the survey was estimated (referred to as the "implied contract volume[3]") based on the actual contract volume for each product and computed from the percentage share of the contract volume for that transaction type as obtained from the survey. The methodology for analysis has been improved compared with surveys before 2008/09 to better reflect the relative contribution by product type in the actual market turnover (see Appendix 4).

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

2. KEY FINDINGS

Trading by transaction purpose (See section 3.1)

(1) Overall, ***hedging*** was the main transaction purpose of derivatives trading. It accounted for 45% of the total derivatives market turnover in 2009/10, up from 41% in 2008/09. The proportion of turnover for ***pure trading*** was also high but it dropped from 42% in 2008/09 to 39% in 2009/10. ***Arbitrage*** turnover accounted for 16% of the overall market turnover in 2009/10, compared to 17% in 2008/09.

(2) The proportion of **hedging** increased across all products under study in 2009/10 and was the most significant for trading in HHI options and stock options (56% and 54% respectively). The most significant increase was observed for trading in HHI options (from 34% in 2008/09 to 56% in 2009/10), Mini-HSI futures (from 17% in 2008/09 to 26% in 2009/10) and HSI options (from 39% in 2008/09 to 45% in 2009/10). It became the dominant trading purpose for all products under study except HSI futures and Mini-HSI futures.

(3) The proportion of ***pure trading*** was the dominant trading purpose for Mini-HSI futures (64%) and HSI futures (56%). The proportion of ***arbitrage*** ranged from 10%-18% for each of the products under study.

(4) In ***number of contracts***, stock option trading and HSI futures trading for arbitrage decreased significantly by 22% and 20% respectively from 2008/09. As a result, the total market trading for arbitrage purpose dropped 11%. The contract volume for pure trading purpose dropped 9% in the year, mainly reflecting the decrease in the proportion of pure trading in index futures turnover (HSI futures: -7%, HHI futures: -28%, Mini-HSI futures: -20%). Growth in the contract volume for hedging was observed for each of the products under study except HSI futures and HHI futures. As a result, trading for hedging purpose increased by 5% from 2008/09.

Trading by investor type (See section 3.2)

(5) In 2009/10, the contribution of ***EP principal trading*** (comprising market maker trading and EP proprietary trading) declined for the second consecutive year, though remaining the largest contributor to market turnover in HKEx's derivatives market — 50% of total market volume (compared to 53% in 2008/09 and 61% in 2007/08). This was mainly attributed to the continuing decrease in the contribution of market maker trading (from 49% in 2007/08 to 40% in 2008/09 and down to 36% in 2009/10). The contribution from EP proprietary trading crept slowly upward to 14% in 2009/10 (from 13% in 2008/09 and 12% in 2007/08). Over the past decade, EP principal trading contributed 51% of the cumulative market turnover.

(6) EP principal trading contributed a vast majority (75%) for stock options trading but much less for trading in other derivatives (26%). In fact, the ***majority of EP principal trading came from stock options*** (mostly as market making) — stock options contributed half of the total market turnover but 74% of total EP principal trading and 91% of market making in derivatives.

(7) The contribution from ***institutional investors*** (local and overseas) to total market turnover increased for the second consecutive year — from 20% in 2007/08 to 24% in 2008/09 and to 27% in 2009/10. Their cumulative market share in the past decade was 25%. ***Retail investors***' contribution (local and overseas) was 24% in 2009/10, compared to 23% in 2008/09 and 19% in 2007/08. Their cumulative market share in the past decade was 23%.

(8) The contribution from ***overseas investors*** was 24% (21% from institutions) in 2009/10, up from 22% in 2008/09 and was the highest since 2004/05. Their cumulative market share in the past decade was 22%. The contribution from ***local investors*** was 26% in 2009/10 — 20% from retail and 6% from institutions, similar to that in 2008/09. Over the past decade, local investors contributed 26% of the cumulative market turnover.

(9) The trading distribution by investor type differed ***by product***:

- For ***HSI futures***, the contribution from overseas institutional investors was the most significant — 39%, up from 34% in 2008/09. Local retail investors were also significant, contributing 30% of product turnover (down from 32% in 2008/09). The contribution from overseas retail investors continued to grow in the past few years from 3% in 2005/06 to 6% in 2009/10.

- For ***Mini-HSI futures***, local retail investors remained the major participant type. However, their contribution dropped below 50% for the first time to 47% in 2009/10 (58% in 2008/09). The contribution from overseas investors increased significantly over the past few years from 7% in 2005/06 to 28% in 2009/10, especially from overseas institutions (up from 1% in 2005/06 to 19% in 2009/10).

- For ***HHI futures***, overseas investors contributed the majority of the product's trading. Their contribution increased continuously in the past few years from 44% in 2005/06 to 58% in 2009/10, mainly from overseas institutional investors (56% in 2009/10).

- For ***HHI options***, EP principal trading and overseas institutional investors were the two major contributors — 38% and 29% respectively, up somewhat from 34% and 28% in 2008/09 respectively. The contribution from local institutional investors was also significant in 2009/10 (20%), similar to the level in 2008/09.

- EP principal trading dominated the turnover of ***stock options*** (75%) and was also the most significant contributor to ***HSI options*** (47%), similar to the case in 2008/09.

(10) In ***number of contracts***, EP principal trading further decreased by 8% in 2009/10, mainly reflecting the decrease in market making which was mainly in stock options. Retail investor trading decreased by 3%, the first decrease since 2001/02, mainly reflecting the decrease in local retail investor trading (-4%). Institutional investor trading continued its year-on-year growth for the past nine years and increased by 6% from 2008/09, mostly reflecting the increase in overseas institutional trading (+7%). As overseas investor trading was mainly contributed by institutions, year-on-year growth in overseas investor trading was also observed for the past nine years.

Trading by overseas investors by origin (See section 3.3)

(11) Among overseas investors, ***UK investors*** and ***US investors*** were the two largest groups in 2009/10, both contributing 25% of total overseas investor trading. However, UK investors' contribution dropped from 29% in 2008/09 while US investors' contribution grew from 19% in 2008/09. The contributions from European (excluding UK), Singaporean and Mainland China investors were also significant (13%-14% in 2009/10, compared to 10%-11% in 2008/09).

(12) The aggregate contribution to overseas investor trading from ***Asian investors*** (Mainland China, Singapore, Japan, Taiwan and the Rest of Asia) was 30% in 2009/10, up from 24% in 2008/09 and 20% in 2007/08. The majority of the Asian contribution came from ***Singaporean*** and ***Mainland China*** investors (14% and 13% respectively).

(13) Overseas investor trading from the US, the UK, Continental Europe, Japan, Singapore and Australia came predominantly (around 90% or more) from institutional investors, while at least ***three-quarters of Mainland investor trading came from retail investors***.[4]

(14) The distribution of ***overseas investor trading by origin for stock options*** was different from that of other derivative product types. US investors contributed only 4% of overseas investor trading for stock options but 29% for other derivatives. UK investors contributed 53% for stock options but 20% for other derivatives. Nevertheless, overseas investor trading contributed only 8% to total stock options trading but 41% to other derivatives trading; in terms of contracts, overseas investor trading in stock options was less than one-fifth that in other derivatives.

(15) ***In terms of contracts***, trading from all the origins under study recorded year-on-year growth, except the UK (a decrease of 7%), Taiwan (-20%) and Australia (-71%)[5]. In particular, trading from Mainland China investors continued its year-on-year growth for the ninth consecutive year.

[4] Although the survey did not ask for a breakdown by retail/institutional investors for each overseas origin, a minimum proportion of retail/institutional investors trading from each origin could be deduced from EPs' responses.

[5] The decrease resulted mainly from the case of a single FEP with a significant turnover contribution which reported a client base change from Australia to the US.

Retail online trading (See section 3.4)

(16) ***Retail online trading*** as a proportion of total retail investor trading continued to grow and for the first time contributing the majority (51%) in 2009/10, up from 43% in 2008/09. Its contribution to total market turnover was 12% in 2009/10, up from 10% in 2008/09.

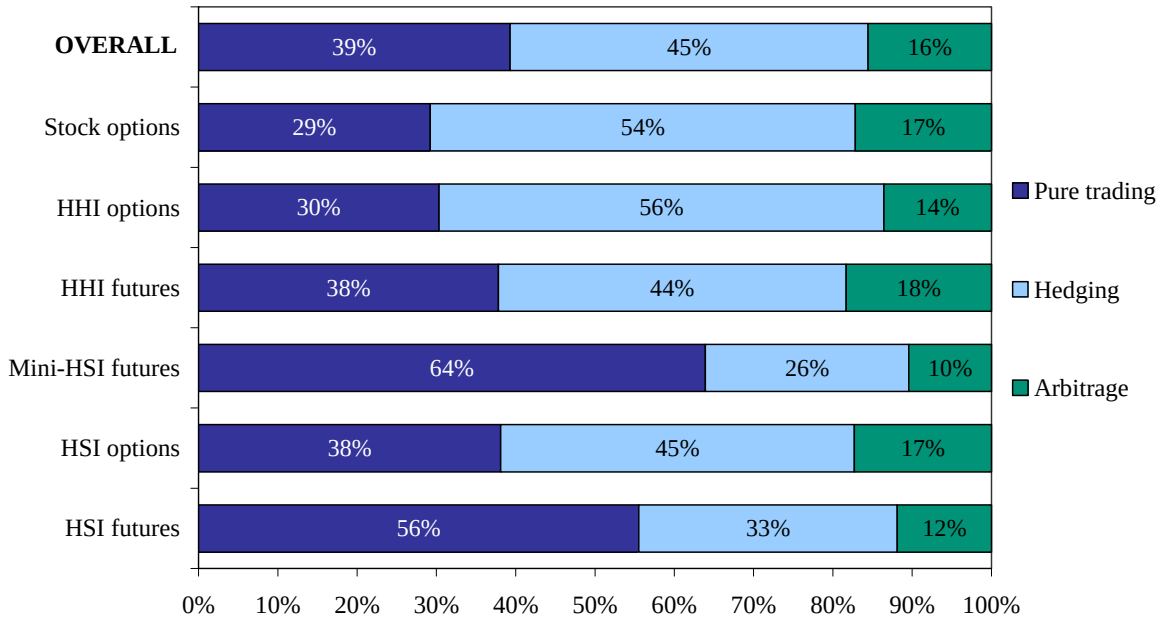
(17) For stock options, the contribution of retail online trading to total retail investor trading increased significantly from 23% in 2008/09 to 31% in 2009/10 (from 2% of total product turnover in 2008/09 to 5% in 2009/10). The ***use of online trading*** by retail investors was even more prominent for other derivatives — 60% of total retail investor trading in 2009/10 (up significantly from 49% in 2008/09) and 19% of total product turnover in 2009/10 (18% in 2008/09). Moreover, retail investor trading contributed only 15% to total stock options trading but 32% to other derivatives trading.

(18) A total of 78 (up from 57 in 2008/09) or 39% of responding EPs (vs 33% in 2008/09) offered online trading services to retail derivatives investors (referred to as "***online brokers***"). Retail online trading accounted for the majority (54%) of online brokers' total turnover in 2009/10 (49% for stock options brokers and 56% for other derivatives brokers), up from 43% in 2008/09.

3. FIGURES AND TABLES

3.1 Distribution of trading by transaction purpose

Figure 2. Transaction purposes for overall derivatives market and each product (in volume terms) (Jul 2009 – Jun 2010)



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

Table 1. Transaction purposes for overall derivatives market and each product (2005/06 – 2009/10)

Product	Purpose	Percentage contribution [2]					Implied contract volume[1] 2009/10	
		2005/06	2006/07	2007/08	2008/09	2009/10	No. of contracts	Y-o-Y change
HSI futures	Pure trading	51.8	49.4	50.9	54.3	**55.5**	**11,255,458**	-6.9%
	Hedging	31.1	33.2	36.5	32.0	**32.6**	**6,607,184**	-7.3%
	Arbitrage	17.1	17.4	12.7	13.6	**11.9**	**2,407,226**	-20.5%
	Total	100.0	100.0	100.0	100.0	**100.0**	**20,269,869**	-8.9%
HSI options	Pure trading	50.7	39.7	39.5	47.9	**38.1**	**2,581,972**	21.9%
	Hedging	37.4	43.2	45.9	39.2	**44.6**	**3,022,361**	74.5%
	Arbitrage	12.0	17.1	14.6	12.9	**17.3**	**1,172,357**	104.9%
	Total	100.0	100.0	100.0	100.0	**100.0**	**6,776,690**	53.2%
Mini-HSI futures	Pure trading	82.8	60.9	78.2	76.9	**63.9**	**5,622,042**	-19.7%
	Hedging	9.9	4.9	4.7	16.9	**25.6**	**2,255,807**	46.9%
	Arbitrage	7.3	34.3	17.0	6.2	**10.4**	**918,379**	63.0%
	Total	100.0	100.0	100.0	100.0	**100.0**	**8,796,228**	-3.4%
HHI futures	Pure trading	54.8	53.2	55.2	43.7	**37.8**	**4,506,961**	-28.4%
	Hedging	31.7	34.0	32.2	40.8	**43.9**	**5,227,424**	-11.0%
	Arbitrage	13.5	12.9	12.5	15.5	**18.3**	**2,185,325**	-2.1%
	Total	100.0	100.0	100.0	100.0	**100.0**	**11,919,709**	-17.3%
HHI options	Pure trading	62.4	55.0	46.2	58.4	**30.3**	**722,597**	-34.0%
	Hedging	28.4	28.5	35.9	34.0	**56.1**	**1,337,133**	109.7%
	Arbitrage	9.2	16.5	17.9	7.5	**13.6**	**323,187**	129.2%
	Total	100.0	100.0	100.0	100.0	**100.0**	**2,382,917**	27.2%
Futures & options (excl. stock options)	**Pure trading**	55.0	49.5	54.7	55.0	**49.2**	**24,689,030**	-13.7%
	Hedging	30.5	32.5	31.6	32.5	**36.8**	**18,449,909**	9.1%
	Arbitrage	14.6	18.0	13.7	12.6	**14.0**	**7,006,474**	7.2%
	Total	100.0	100.0	100.0	100.0	**100.0**	**50,145,413**	-3.7%
Stock options	Pure trading	39.8	47.6	29.3	28.1	**29.2**	**14,406,758**	0.6%
	Hedging	35.2	28.2	43.8	50.6	**53.6**	**26,429,094**	2.5%
	Arbitrage	24.9	24.2	26.9	21.3	**17.2**	**8,470,778**	-21.9%
	Total	100.0	100.0	100.0	100.0	**100.0**	**49,306,631**	-3.2%
Overall market	**Pure trading**	49.1	48.7	40.2	41.7	**39.3**	**39,095,788**	-8.9%
	Hedging	32.3	30.5	38.6	41.5	**45.1**	**44,879,004**	5.1%
	Arbitrage	18.6	20.8	21.2	16.9	**15.6**	**15,477,252**	-10.9%
	Total	100.0	100.0	100.0	100.0	**100.0**	**99,452,044**	-3.4%
Total contract volume [3]		34,291,273	56,557,369	105,681,108	103,001,728	**99,452,044**		

Notes:

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

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

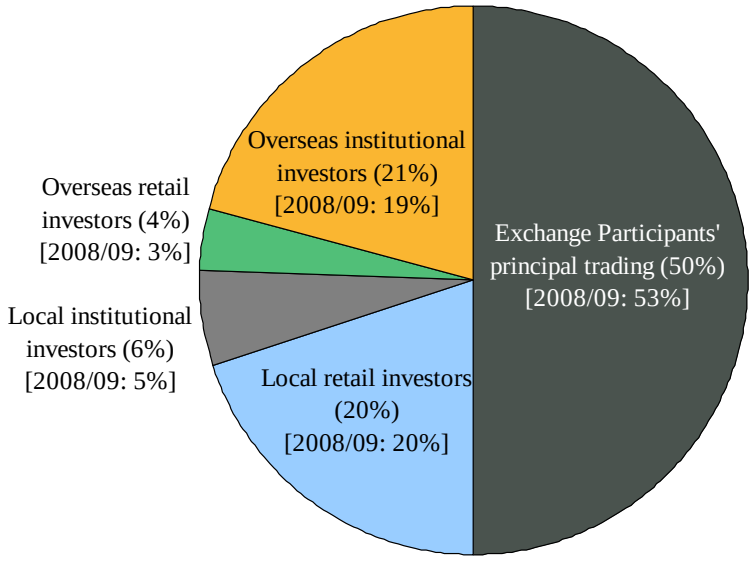
(3) Actual total contract volume of all products under study during the study period.

3.2 Distribution of trading by investor type

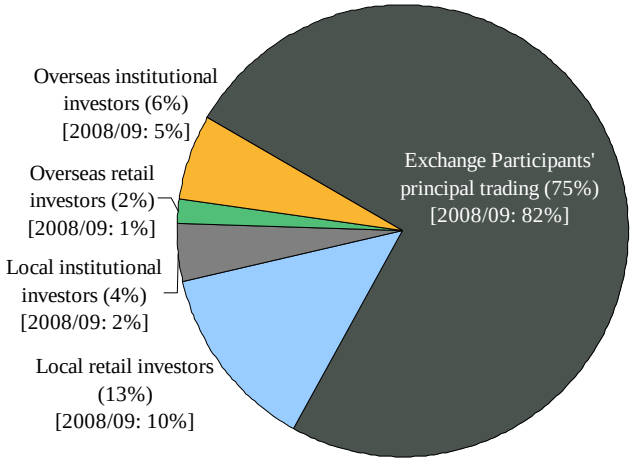
3.2.1 Overall pattern

Figure 3. Distribution of derivatives market trading volume by investor type (Jul 2009 – Jun 2010)

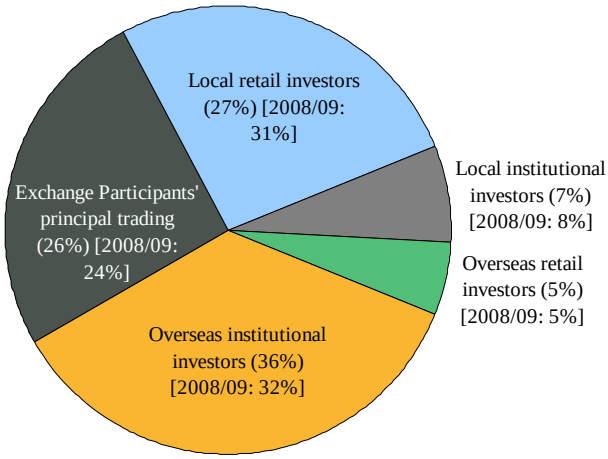
(a) Overall



(b) Stock options

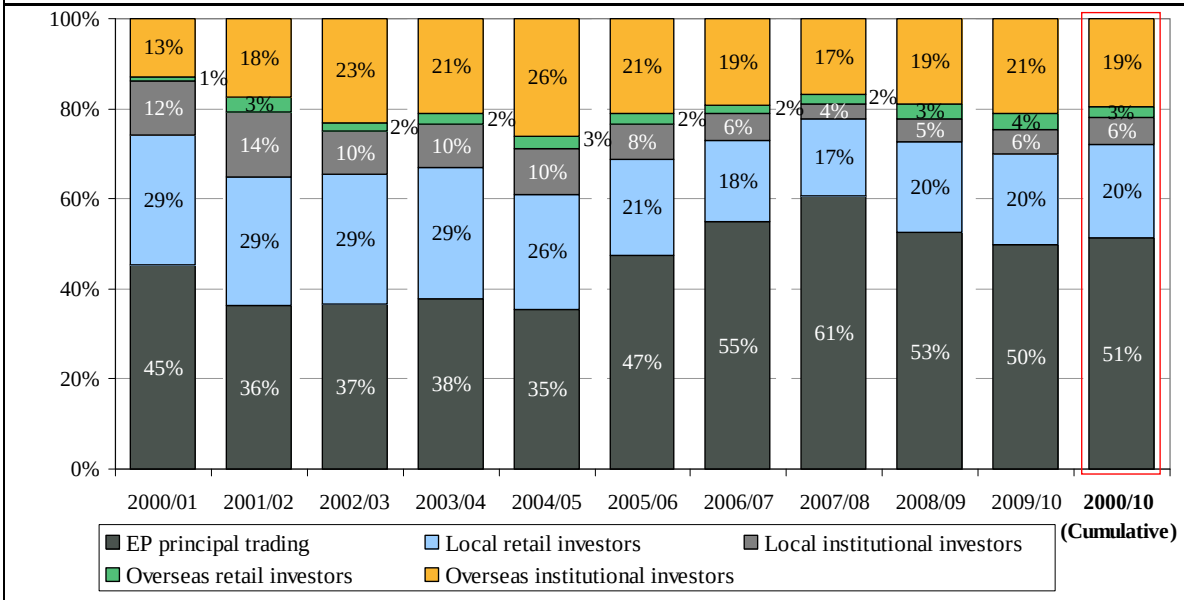


(c) Futures & options (excluding stock options)



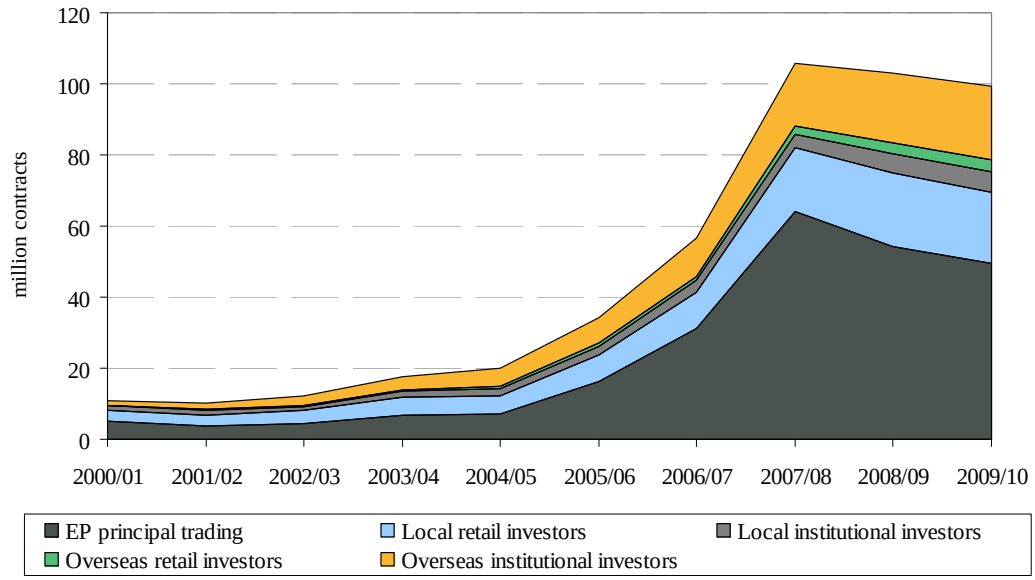
Notes: (1) Exchange Participants' principal trading comprised market maker trading and EP proprietary trading.
(2) Numbers may not add up to 100% due to rounding.

Figure 4. Distribution of derivatives market trading volume by investor type (2000/01 – 2009/10)



Notes: (1) Exchange Participants' principal trading comprised 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 (2000/01 – 2009/10)

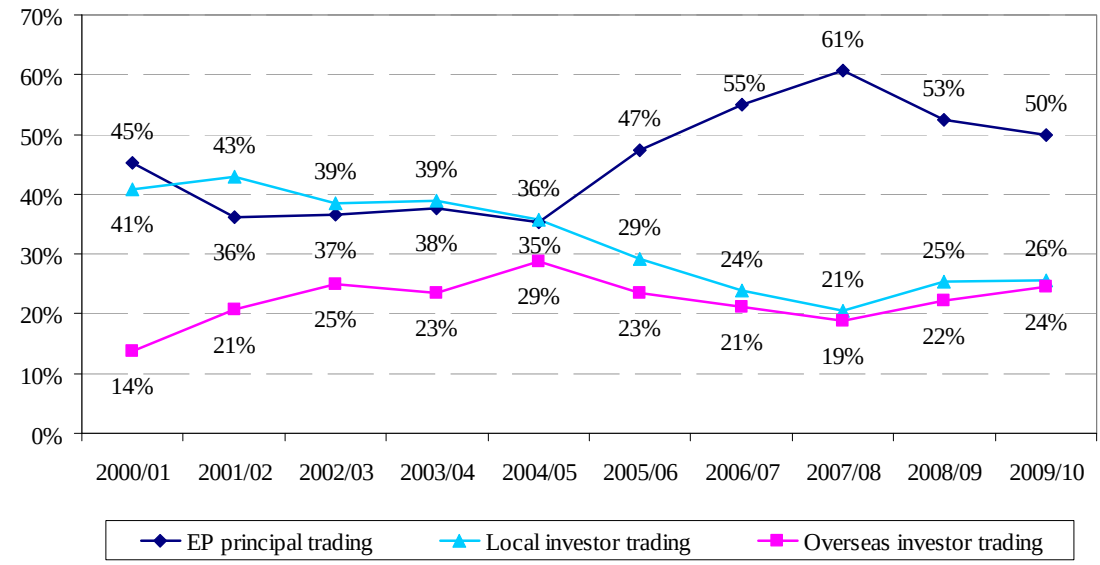


	Year-on-year % change								
Type of trade	**2001/02**	**2002/03**	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**	**2008/09**	**2009/10**
EP principal trading	-25.82%	22.24%	48.70%	6.19%	128.14%	91.57%	105.85%	-15.57%	-8.30%
Market maker	n.a.	n.a.	46.72%	5.64%	141.11%	95.95%	128.95%	-20.73%	-12.30%
Proprietary trading	n.a.	n.a.	53.01%	7.34%	101.51%	80.79%	44.34%	6.24%	4.31%
Local investor trading	-2.14%	8.71%	45.13%	4.10%	39.07%	34.75%	61.63%	20.05%	-2.47%
Retail	-7.66%	21.86%	45.29%	-0.29%	42.66%	38.21%	76.70%	15.52%	-4.12%
Institutional	11.21%	-17.72%	44.65%	17.25%	29.95%	25.07%	15.11%	41.53%	3.91%
Overseas investor trading	39.52%	44.77%	35.72%	39.27%	38.84%	48.65%	65.84%	14.77%	6.96%
Retail	272.57%	-40.70%	108.07%	28.55%	52.10%	39.87%	88.65%	56.14%	6.22%
Institutional	24.89%	60.77%	30.72%	40.45%	37.51%	49.63%	63.47%	9.81%	7.08%
Retail investor trading	*0.06%*	*15.44%*	*48.59%*	*1.83%*	*43.54%*	*38.38%*	*77.89%*	*19.82%*	*-2.69%*
Institutional investor trading	*18.36%*	*25.53%*	*34.82%*	*33.12%*	*35.41%*	*43.08%*	*52.19%*	*15.40%*	*6.40%*
Total	**-7.11%**	**21.11%**	**44.10%**	**13.12%**	**70.56%**	**64.93%**	**86.86%**	**-2.54%**	**-3.45%**

n.a.: Not available

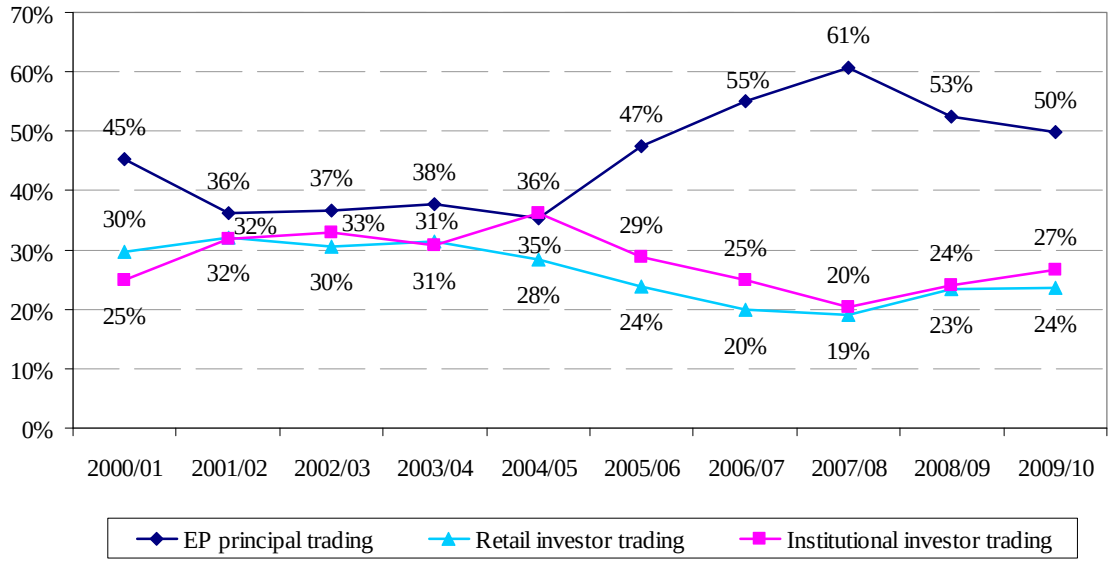
Note: Exchange Participants' principal trading comprised market maker trading and EP proprietary trading.

Figure 6. Distribution of derivatives market trading volume by investor type (local vs overseas) (2000/01 – 2009/10)



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

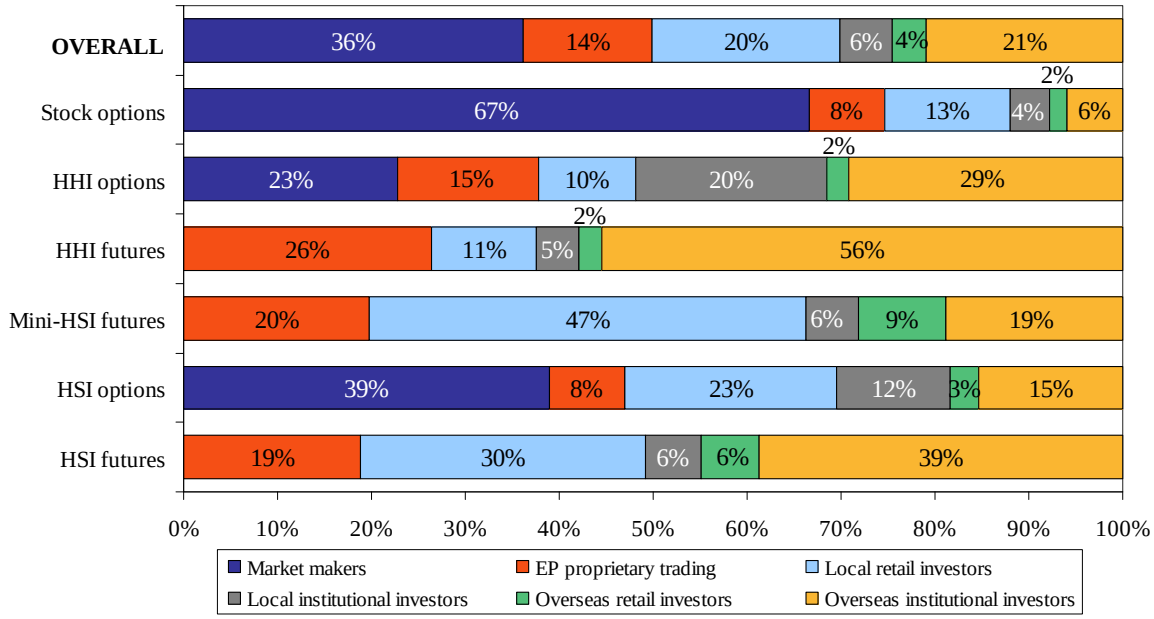
Figure 7. Distribution of derivatives market trading volume by investor type (retail vs institutional) (2000/01 – 2009/10)



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

3.2.2 By product/market segment

Figure 8. Distribution of derivatives market trading volume by investor type for overall market and each product (Jul 2009 – Jun 2010)



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 2. Distribution of derivatives trading by investor type (2005/06 – 2009/10)

Type of investor						Implied contract volume [4] 2009/10	
	2005/06	2006/07	2007/08	2008/09	2009/10	No. of contracts	Y-o-Y change
HSI Futures							
Market makers	-	-	-	-	-	-	-
Proprietary trading	21.3	23.7	21.0	20.0	**18.9**	**3,825,142**	**-13.8%**
Local investors	37.9	37.9	38.3	40.9	**36.2**	**7,344,691**	**-19.2%**
Retail	29.3	29.7	32.2	31.8	**30.3**	**6,133,271**	**-13.2%**
Institutional	8.6	8.2	6.1	9.1	**6.0**	**1,211,420**	**-40.2%**
Overseas investors	40.8	38.4	40.7	39.2	**44.9**	**9,100,036**	**4.5%**
Retail	2.9	3.3	4.4	4.7	**6.1**	**1,239,635**	**19.4%**
Institutional	38.0	35.1	36.2	34.5	**38.8**	**7,860,400**	**2.4%**
Total	100.0	100.0	100.0	100.0	**100.0**	**20,269,869**	**-8.9%**
HSI Options							
Principal trading [1]	40.5	46.5	56.0	51.1	**47.0**	**3,187,168**	**41.1%**
Market makers	32.1	39.3	47.3	42.2	**39.0**	**2,643,332**	**41.5%**
Proprietary trading	8.4	7.2	8.7	8.8	**8.0**	**543,836**	**39.2%**
Local investors	40.2	28.6	21.2	31.8	**34.6**	**2,344,805**	**66.7%**
Retail	22.0	15.1	16.1	19.9	**22.5**	**1,526,944**	**73.1%**
Institutional	18.2	13.5	5.1	11.9	**12.1**	**817,861**	**55.9%**
Overseas investors	19.3	24.9	22.8	17.1	**18.4**	**1,244,717**	**64.2%**
Retail	2.0	1.0	2.6	2.6	**3.0**	**200,918**	**77.2%**
Institutional	17.3	23.9	20.2	14.6	**15.4**	**1,043,799**	**61.9%**
Total	100.0	100.0	100.0	100.0	**100.0**	**6,776,690**	**53.2%**
Mini-HSI Futures							
Market makers	-	-	-	-	-	-	-
Proprietary trading	32.5	36.4	29.3	20.5	**19.7**	**1,734,694**	**-7.2%**
Local investors	60.5	54.1	60.1	61.8	**52.1**	**4,585,989**	**-18.4%**
Retail	56.7	50.0	58.3	57.6	**46.5**	**4,093,611**	**-22.0%**
Institutional	3.9	4.0	1.8	4.1	**5.6**	**492,378**	**30.4%**
Overseas investors	7.0	9.5	10.7	17.7	**28.1**	**2,475,545**	**53.6%**
Retail	5.7	7.6	7.3	8.7	**9.3**	**817,328**	**2.9%**
Institutional	1.3	1.9	3.4	9.0	**18.9**	**1,658,217**	**102.8%**
Total	100.0	100.0	100.0	100.0	**100.0**	**8,796,228**	**-3.4%**
HHI Futures							
Principal trading [1]	15.8	18.0	17.6	22.3	**26.4**	**3,144,890**	**-2.0%**
Market makers [2]	0.4	-	-	-	-	-	-
Proprietary trading	15.4	18.0	17.6	22.3	**26.4**	**3,144,890**	**-2.0%**
Local investors	40.5	36.7	30.8	23.9	**15.7**	**1,867,052**	**-45.8%**
Retail	27.7	28.3	24.7	16.9	**11.2**	**1,330,270**	**-45.3%**
Institutional	12.8	8.4	6.1	7.0	**4.5**	**536,782**	**-47.1%**
Overseas investors	43.7	45.3	51.6	53.8	**58.0**	**6,907,766**	**-10.8%**
Retail	2.9	2.4	2.7	4.6	**2.4**	**291,824**	**-55.5%**
Institutional	40.8	42.9	48.9	49.2	**55.5**	**6,615,942**	**-6.7%**
Total	100.0	100.0	100.0	100.0	**100.0**	**11,919,709**	**-17.3%**
HHI Options							
Principal trading [1]	25.8	28.0	34.9	33.9	**37.8**	**900,605**	**41.9%**
Market makers	19.3	18.8	23.4	21.6	**22.8**	**542,634**	**34.3%**
Proprietary trading	6.5	9.2	11.5	12.3	**15.0**	**357,971**	**55.1%**
Local investors	44.0	28.4	26.5	35.1	**30.6**	**730,297**	**11.1%**
Retail	17.9	10.1	13.1	14.5	**10.3**	**245,456**	**-9.9%**
Institutional	26.1	18.3	13.3	20.5	**20.3**	**484,840**	**26.0%**
Overseas investors	30.2	43.6	38.6	31.1	**31.6**	**752,016**	**29.2%**
Retail	1.8	1.1	2.9	3.1	**2.3**	**55,287**	**-5.2%**
Institutional	28.4	42.5	35.8	27.9	**29.2**	**696,729**	**33.1%**
Total	100.0	100.0	100.0	100.0	**100.0**	**2,382,917**	**27.2%**
Futures & options (excl. stock options)							
Principal trading [1]	24.8	28.3	25.7	23.8	**25.5**	**12,792,499**	**3.1%**
Market makers	6.2	8.5	6.2	4.4	**6.4**	**3,185,965**	**40.3%**
Proprietary trading	18.6	19.8	19.4	19.5	**19.2**	**9,606,533**	**-5.3%**
Local investors	40.8	36.8	36.8	38.9	**33.6**	**16,872,834**	**-16.6%**
Retail	29.8	27.5	31.1	30.5	**26.6**	**13,329,552**	**-16.2%**
Institutional	11.0	9.3	5.6	8.3	**7.1**	**3,543,282**	**-18.1%**
Overseas investors	34.4	34.9	37.6	37.3	**40.8**	**20,480,080**	**5.5%**
Retail	2.9	3.0	4.1	5.1	**5.2**	**2,604,992**	**-2.0%**
Institutional	31.5	31.9	33.5	32.2	**35.6**	**17,875,088**	**6.7%**
Total	100.0	100.0	100.0	100.0	**100.0**	**50,145,413**	**-3.7%**

(to be continued on next page)

Table 2. Distribution of derivatives trading by investor type (2005/06 – 2009/10) (cont'd)

Type of investor						Implied contract volume [4] 2009/10	
	2005/06	2006/07	2007/08	2008/09	2009/10	No. of contracts	Y-o-Y change
Stock options							
Principal trading [1]	81.8	86.3	88.6	81.8	**74.7**	**36,814,281**	**-11.7%**
Market makers	75.6	76.9	83.2	76.1	**66.6**	**32,831,143**	**-15.4%**
Proprietary trading	6.2	9.4	5.4	5.7	**8.1**	**3,983,138**	**38.0%**
Local investors	11.4	8.6	7.7	11.6	**17.5**	**8,622,463**	**45.8%**
Retail	8.8	6.8	5.7	9.6	**13.4**	**6,585,001**	**35.2%**
Institutional	2.6	1.8	2.0	2.0	**4.1**	**2,037,462**	**95.1%**
Overseas investors	6.8	5.1	3.7	6.6	**7.8**	**3,869,886**	**15.3%**
Retail investors	1.5	0.9	0.4	1.3	**1.9**	**921,234**	**39.5%**
Institutional investors	5.3	4.3	3.4	5.3	**6.0**	**2,948,652**	**9.4%**
Total	100.0	100.0	100.0	100.0	**100.0**	**49,306,631**	**-3.2%**
Overall market							
Principal trading [1]	47.4	55.0	60.6	52.5	**49.9**	**49,606,780**	**-8.3%**
Market makers	33.7	40.0	49.0	39.9	**36.2**	**36,017,108**	**-12.3%**
Proprietary trading	13.7	15.0	11.6	12.6	**13.7**	**13,589,672**	**4.3%**
Local investors	29.2	23.8	20.6	25.4	**25.6**	**25,495,298**	**-2.5%**
Retail investors	21.5	18.0	17.0	20.2	**20.0**	**19,914,553**	**-4.1%**
Institutional investors	7.7	5.8	3.6	5.2	**5.6**	**5,580,745**	**3.9%**
Overseas investors	23.5	21.1	18.8	22.1	**24.5**	**24,349,967**	**7.0%**
Retail investors	2.3	2.0	2.0	3.2	**3.5**	**3,526,226**	**6.2%**
Institutional investors	21.1	19.2	16.8	18.9	**20.9**	**20,823,740**	**7.1%**
Total	100.0	100.0	100.0	100.0	**100.0**	**99,452,044**	**-3.4%**

- : Not applicable

Notes:

(1) Comprised market maker trading and EP proprietary trading.

(2) Market marker system for HHI futures was lifted on 14 November 2005.

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

(4) 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. Numbers may not add up to total due to rounding.

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

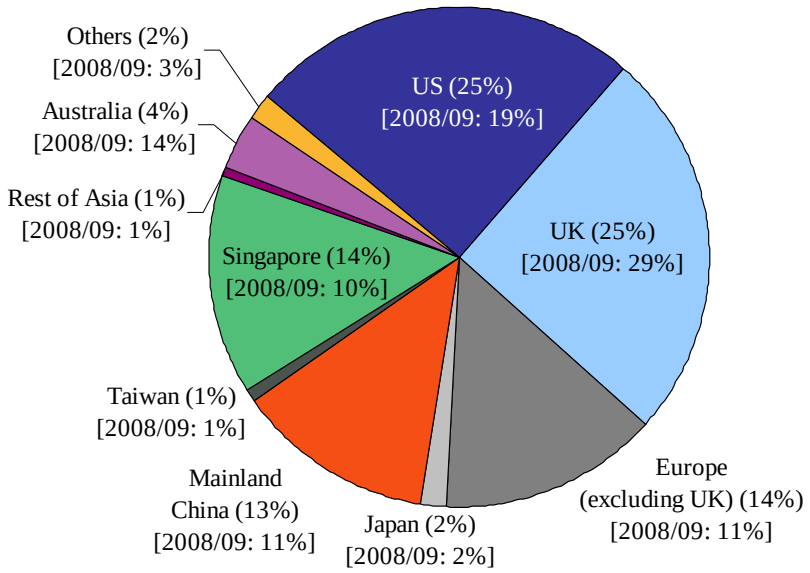
						2009/10					
	2005/06 Overall	2006/07 Overall	2007/08 Overall	2008/09 Overall	2009/10 Overall	HSI futures	HSI options	Mini-HSI futures	HHI futures	HHI options	Stock options
All trading											
Principal#	47.4	55.0	60.6	52.5	**49.9**	18.9	47.0	19.7	26.4	37.8	74.7
Agency	52.6	45.0	39.4	47.5	**50.1**	81.1	53.0	80.3	73.6	62.2	25.3
	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	55.4	53.0	52.3	53.5	**51.1**	44.7	65.3	64.9	21.3	49.3	69.0
Overseas	44.6	47.0	47.7	46.5	**48.9**	55.3	34.7	35.1	78.7	50.7	31.0
	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	45.3	44.4	48.3	49.3	**47.0**	44.8	48.1	69.5	18.5	20.3	60.1
Institutional	54.7	55.6	51.7	50.7	**53.0**	55.2	51.9	30.5	81.5	79.7	39.9
	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	90.1	90.0	89.4	86.2	**85.0**	83.2	88.4	83.4	82.0	81.6	87.7
Overseas	9.9	10.0	10.6	13.8	**15.0**	16.8	11.6	16.6	18.0	18.4	12.3
	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	26.7	23.3	17.6	21.6	**21.1**	13.4	43.9	22.9	7.5	41.0	40.9
Overseas	73.3	76.7	82.4	78.4	**78.9**	86.6	56.1	77.1	92.5	59.0	59.1
	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	73.6	75.5	82.6	79.5	**78.1**	83.5	65.1	89.3	71.2	33.6	76.4
Institutional	26.4	24.5	17.4	20.5	**21.9**	16.5	34.9	10.7	28.8	66.4	23.6
	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	10.0	9.4	10.7	14.6	**14.5**	13.6	16.1	33.0	4.2	7.4	23.8
Institutional	90.0	90.6	89.3	85.4	**85.5**	86.4	83.9	67.0	95.8	92.6	76.2
	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.

3.3 Distribution of overseas investor trading by origin

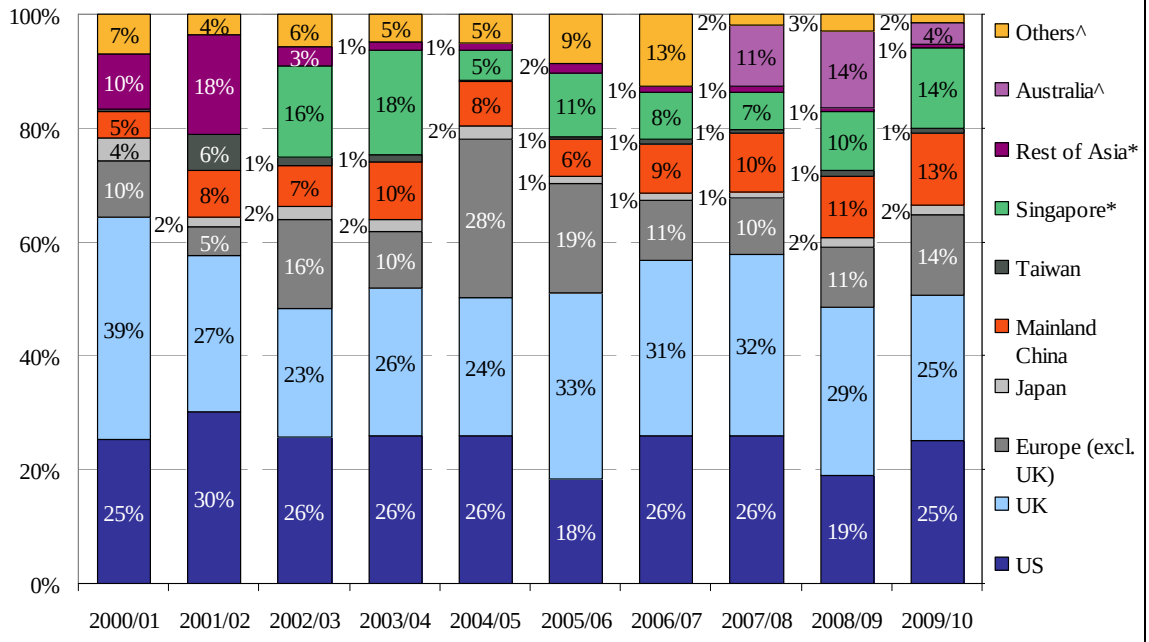
Figure 9. Distribution of overseas investor trading volume in derivatives by origin (Jul 2009 – Jun 2010)



* Reported origins in "Others" in 2009/2010 comprised Africa, Belize, British Virgin Islands, Canada, Caribbean, Cayman Islands, Liberia, Middle East and New Zealand.

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

Figure 10. Distribution of overseas investor trading volume in derivatives by origin (2000/01 – 2009/10)



* For surveys before 2002/03, Singapore was included in "Rest of Asia".

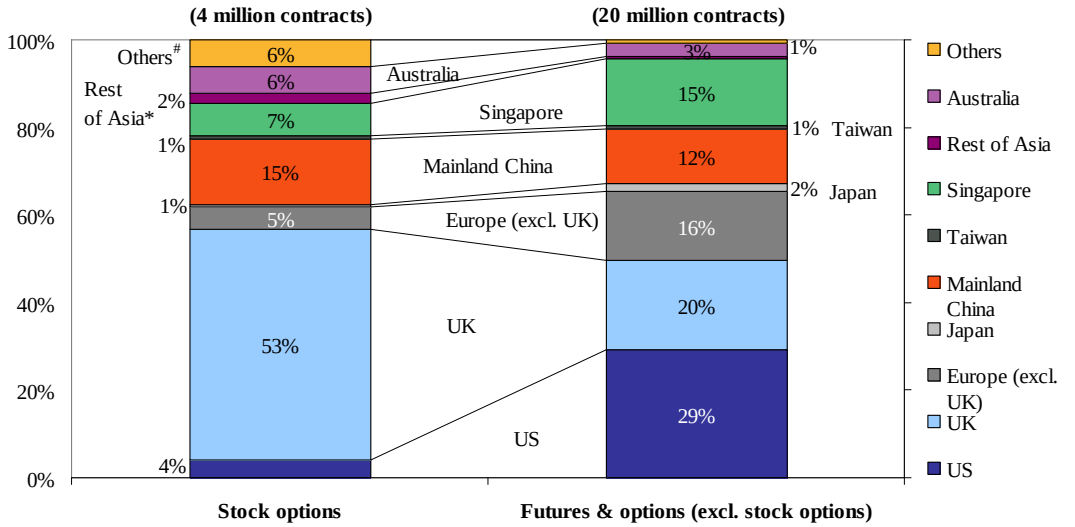
^ For surveys before 2007/08, Australia was included in "Others".

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 11. Distribution of overseas investor trading volume in derivatives by origin by market segment (Jul 2009 – Jun 2010)



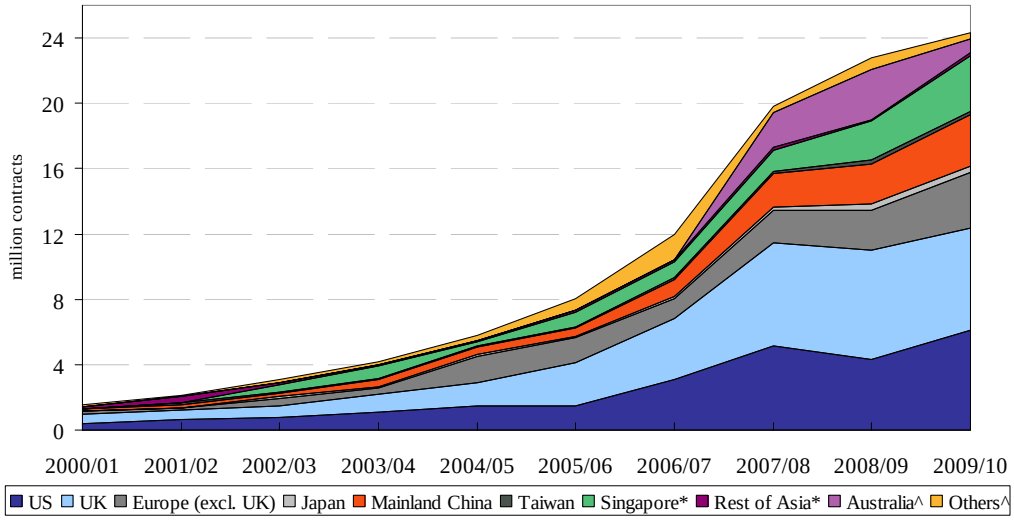
( ): Implied contract volume of overseas investor trading in the market segment.

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

\# Reported origins in "Others" are British Virgin Islands, Middle East and New Zealand for both segments; plus Africa, Belize, Canada, Caribbean, Cayman Islands for derivatives excluding stock options; plus Liberia for stock options.

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 (2000/01 – 2009/10)



	Year-on-year % change								
Overseas origin	**2001/02**	**2002/03**	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**	**2008/09**	**2009/10**
US	66.71%	23.07%	36.93%	39.59%	-1.90%	110.60%	65.43%	-15.50%	41.19%
UK & Europe	-7.36%	70.40%	27.16%	102.25%	37.97%	18.51%	67.89%	9.63%	5.85%
UK	-1.98%	19.16%	56.08%	30.41%	87.33%	39.52%	71.41%	5.88%	-7.22%
Europe (excluding the UK)	-28.37%	344.19%	-14.31%	289.83%	-5.14%	-17.75%	57.59%	21.58%	42.07%
Asia	151.04%	30.85%	49.24%	-30.29%	75.63%	41.01%	62.07%	43.19%	31.25%
Japan	-46.30%	118.01%	23.79%	55.52%	-19.06%	29.61%	43.49%	83.44%	7.39%
Mainland China	145.28%	26.99%	91.35%	5.85%	15.33%	100.38%	96.75%	21.18%	26.16%
Taiwan	1,722.09%	-69.92%	20.05%	-70.04%	230.00%	109.66%	36.92%	88.74%	-20.30%
Singapore*	-	-	56.14%	-60.61%	196.62%	9.19%	34.00%	78.66%	45.59%
Rest of Asia*	155.25%	-71.17%	-42.14%	10.37%	88.40%	8.39%	38.24%	-39.84%	40.38%
Australia^	-	-	-	-	-	-	-	45.21%	-71.05%
Others^	-27.60%	123.90%	15.46%	50.24%	133.24%	116.73%	-75.08%	75.32%	-42.30%
Total	**39.52%**	**44.77%**	**35.72%**	**39.27%**	**38.84%**	**48.65%**	**65.84%**	**14.77%**	**6.96%**

- : Not applicable

* For surveys before 2002/03, Singapore was included in “Rest of Asia”.

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

Table 4. Distribution of overseas investor trading in derivatives by origin (2005/06 – 2009/10)

Overall market (All futures and options)

Origin	Percentage contribution [2]					Implied contract volume[1] (2009/10)	
	2005/06	2006/07	2007/08	2008/09	2009/10	No. of contracts	Y-o-Y change
US	18.3	26.0	25.9	19.1	**25.2**	**6,129,970**	**41.2%**
Europe	51.9	41.3	41.8	40.0	**39.6**	**9,632,521**	**5.8%**
UK	32.8	30.8	31.8	29.4	**25.5**	**6,204,776**	**-7.2%**
Europe (excl. UK)	19.0	10.5	10.0	10.6	**14.1**	**3,427,745**	**42.1%**
Asia	21.2	20.1	19.6	24.5	**30.0**	**7,310,811**	**31.3%**
Japan	1.3	1.2	1.0	1.6	**1.6**	**397,229**	**7.4%**
Mainland China	6.4	8.7	10.3	10.9	**12.8**	**3,122,997**	**26.2%**
Taiwan	0.6	0.8	0.7	1.1	**0.8**	**206,083**	**-20.3%**
Singapore	11.2	8.2	6.6	10.3	**14.1**	**3,421,357**	**45.6%**
Rest of Asia	1.6	1.2	1.0	0.5	**0.7**	**163,145**	**40.4%**
Australia^	n.a.	n.a.	10.7	13.6	**3.7**	**895,788**	**-71.0%**
Others^	8.7	12.6	1.9	2.9	**1.6**	**380,877**	**-42.3%**
Total[1]	100.0	100.0	100.0	100.0	**100.0**	**24,349,967**	**7.0%**

Futures and options (excl. stock options)

Origin	Percentage contribution [2]					Implied contract volume[1] (2009/10)	
	2005/06	2006/07	2007/08	2008/09	2009/10	No. of contracts	Y-o-Y change
US	20.1	29.0	29.1	21.9	**29.2**	**5,973,030**	**40.7%**
Europe	51.9	41.7	39.2	37.3	**36.1**	**7,397,682**	**2.1%**
UK	35.0	32.3	31.5	27.7	**20.4**	**4,169,183**	**-22.4%**
Europe (excl. UK)	16.8	9.4	7.7	9.7	**15.8**	**3,228,499**	**72.2%**
Asia	21.7	20.0	20.5	25.0	**30.8**	**6,306,616**	**30.1%**
Japan	1.5	1.2	1.1	1.9	**1.8**	**376,453**	**1.9%**
Mainland China	7.1	8.8	11.3	10.7	**12.4**	**2,541,253**	**22.6%**
Taiwan	0.7	0.8	0.8	1.2	**0.9**	**175,714**	**-23.8%**
Singapore	12.0	8.7	6.7	11.0	**15.3**	**3,142,201**	**47.8%**
Rest of Asia	0.3	0.3	0.5	0.3	**0.3**	**70,995**	**41.6%**
Australia^	n.a.	n.a.	10.0	14.4	**3.2**	**655,478**	**-76.6%**
Others^	6.4	9.3	1.2	1.4	**0.7**	**147,274**	**-45.8%**
Total	100.0	100.0	100.0	100.0	**100.0**	**20,480,080**	**5.5%**

Stock options

Origin	Percentage contribution [2]					Implied contract volume[1] (2009/10)	
	2005/06	2006/07	2007/08	2008/09	2009/10	No. of contracts	Y-o-Y change[3]
US	4.5	2.0	0.6	2.8	**4.1**	**156,940**	**64.2%**
Europe	51.8	38.1	62.9	55.3	**57.7**	**2,234,839**	**20.5%**
UK	15.6	19.0	34.6	39.2	**52.6**	**2,035,594**	**54.6%**
Europe (excl. UK)	36.2	19.2	28.3	16.0	**5.1**	**199,245**	**-63.0%**
Asia	17.2	21.0	12.8	21.5	**25.9**	**1,004,195**	**39.2%**
Japan	0.0	0.9	0.0	0.0	**0.5**	**20,776**	**3283.1%**
Mainland China	1.4	7.5	2.2	12.0	**15.0**	**581,744**	**44.6%**
Taiwan	0.0	0.9	0.2	0.8	**0.8**	**30,369**	**8.7%**
Singapore	4.4	4.0	5.7	6.7	**7.2**	**279,155**	**24.4%**
Rest of Asia	11.4	7.7	4.7	2.0	**2.4**	**92,150**	**39.4%**
Australia^	n.a.	n.a.	16.5	8.8	**6.2**	**240,310**	**-18.8%**
Others^	26.6	38.9	7.1	11.6	**6.0**	**233,603**	**-39.9%**
Total	100.0	100.0	100.0	100.0	**100.0**	**3,869,886**	**15.3%**

n.a.: Not available - : Not applicable

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

Notes:

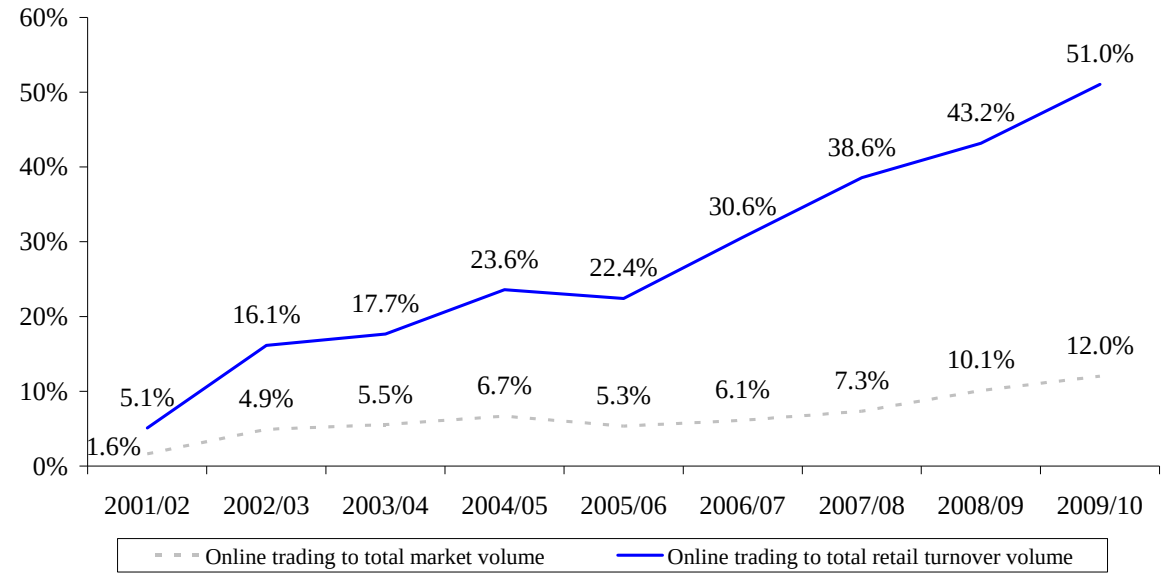
(1) See glossary for the definition of implied contract volume. The total figure is the actual total contract volume, multiplied by the percentage contribution of overseas investor trading by origin. Numbers may not add up to total due to rounding.

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

(3) The year-on-year percentage increase in overseas investor trading in stock options from Japan was exceptionally high due to: firstly the relatively small base volume from Japan in 2008/09; and secondly the increased number of responding SOEPs reporting trades from Japan and a large increase in volume reported from this origin by SOEPs.

3.4 Retail online trading

Figure 13. Retail online trading to total derivatives market volume and retail turnover volume (2001/02 – 2009/10)



Note: Figures before 2009/10 for the percentage of online trading to total market volume/total retail turnover volume were adjusted to reflect the refinement in the calculation of total implied online trading volume for the overall market.

Table 5. Statistics on retail online trading in derivatives (2005/06 - 2009/10)

Overall market (All futures and options)	**2005/06**	**2006/07**	**2007/08**	**2008/09**	**2009/10**
Online brokers[1]					
Total number of online brokers	33	40	48	57	**78**
- As % of all responding EPs (%)	24%	26%	29%	33%	**39%**
Online trading					
Total implied contract volume (1-sided)[5]	1,830,993	3,456,374	7,755,787	10,398,020	**11,963,260**
- As % of total market turnover[3, 5] (%)	5.3%	6.1%	7.3%	10.1%	**12.0%**
- As % of total agency (investor) trading[5] (%)	10.1%	13.6%	18.6%	21.3%	**24.0%**
- As % of total retail investor trading[5] (%)	22.4%	30.6%	38.6%	43.2%	**51.0%**
- As % of total turnover of online brokers (%)	20.1%	25.8%	36.1%	42.6%	**54.4%**
Futures and options (excl. stock options)	**2005/06**	**2006/07**	**2007/08**	**2008/09**	**2009/10**
Online brokers[1]					
Total number of online brokers	31	37	45	52	**69**
- As % of all responding EPs (%)	30%	33%	38%	42%	**50%**
Online trading					
Total implied contract volume (1-sided)[2]	1,766,201	3,159,124	7,209,475	9,135,894	**9,602,615**
- As % of total product turnover[4] (%)	8.4%	10.4%	15.4%	17.6%	**19.1%**
- As % of total product agency (investor) trading (%)	11.2%	14.6%	20.7%	23.0%	**25.7%**
- As % of total product retail investor trading (%)	25.8%	34.3%	43.7%	49.2%	**60.3%**
- As % of total product turnover of online brokers (%)	20.6%	25.7%	36.2%	42.5%	**55.9%**
Stock options	**2005/06**	**2006/07**	**2007/08**	**2008/09**	**2009/10**
Online brokers[1]					
Total number of online brokers	2	3	3	5	**9**
- As % of all responding EPs (%)	5%	7%	7%	10%	**15%**
Online trading					
Total implied contract volume (1-sided)[2]	64,792	297,250	546,312	1,262,126	**2,360,644**
- As % of total product turnover[4] (%)	0.5%	1.1%	0.9%	2.5%	**4.8%**
- As % of total product agency (investor) trading (%)	2.7%	8.2%	8.1%	13.6%	**18.9%**
- As % of total product retail investor trading (%)	4.7%	14.7%	15.2%	22.8%	**31.4%**
- As % of total product turnover of online brokers (%)	12.2%	26.6%	35.2%	43.4%	**48.8%**

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 calculation method for the implied contract volume of online trading in the overall market has been refined in 2009/10. It is now calculated by adding the implied contract volume of online trading for futures and options (excluding stock options) and that for stock options. The corresponding figures for surveys before 2009/10 were revised using the same method and its percentage shares in the different types of trading were revised accordingly.

GLOSSARY

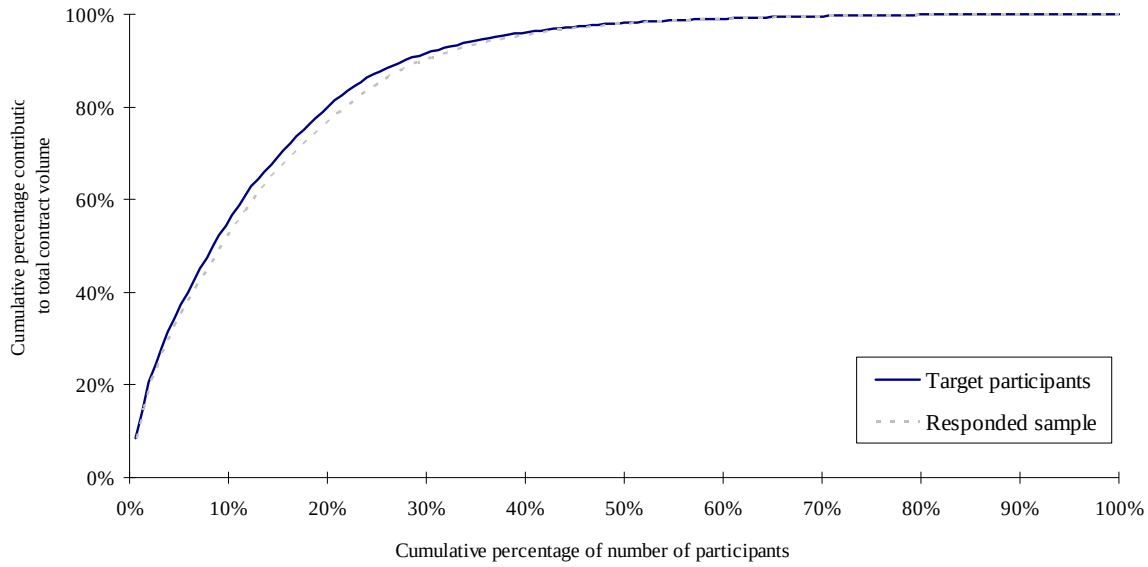
Hedging	Utilisation of futures/options to reduce or eliminate the market risk of a portfolio by compensating for the effect of price fluctuations of an underlying asset.
Pure trading	Trading for potential profit in anticipation of a price movement in either the short or long term, but not for hedging 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 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

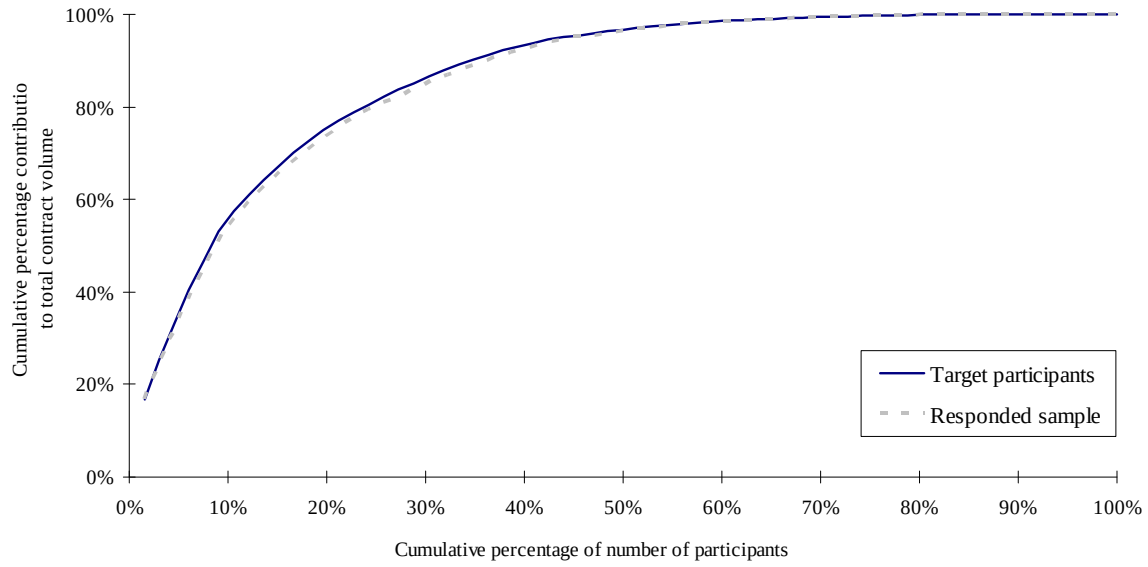
Exchange Participants	Target population	Responded participants	Response rate	% share of turnover in target population
Futures EPs	154	137	89.0%	98.6%
Stock Options EPs	66	62	93.9%	99.5%
All Participants	220	199	90.5%	99.0%

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

(a) Futures Exchange Participants (Jul 2009 – Jun 2010)



(b) Stock Options Exchange Participants (Jul 2009 – Jun 2010)



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

Product	Contract multiplier (HK$ per index point)	Notional value per contract[1] (HK$) (as at 30 June 2010)	Turnover in notional value during the study period	
			(HK$m)	% of total
HSI futures	50	1,006,450	20,400,600	53.5%
HSI options	50	1,006,450	6,820,396	17.9%
Mini-HSI futures	10	201,290	1,770,592	4.6%
HHI futures	50	573,312	6,833,712	17.9%
HHI options	50	573,312	1,366,155	3.6%
Stock options	—[2]	20,363[3]	951,865	2.5%
Overall market			38,143,320	100.0%

Notes:

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

(2) The contract size for a stock options class is one board lot of the underlying stock; 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$1,550 to HK$107,400), based on the stock closing prices as at 30 June 2010 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 2010. 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.
- The study period or survey period is from July 2009 to June 2010.
- Products under study were Hang Seng Index (HSI) futures, HSI options, Mini-HSI futures, H-shares Index (HHI) futures, HHI options and stock options. These products together contributed 98.6% of the total volume of the HKEx derivatives market during the study period.
- The survey was done 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.
- Compared with surveys before 2008/09, the methodology to arrive at the relative contribution of each type of trade to the total market volume has been improved 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 calculation methodology has been further improved in 2009/10. The total reported online trading volume of each product segment — futures and options (excluding stock 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 (rather than to the target population's total as in the survey before 2008/09) in the product segment was computed. 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 previous surveys, no such weighting was adopted). The 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". Three FEPs in the 2009/10 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. In this survey, execution statistics were used for analysis as in the past surveys.

* * *

[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.