

Research & Corporate Development

DERIVATIVES MARKET  
TRANSACTION SURVEY 2006/07

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

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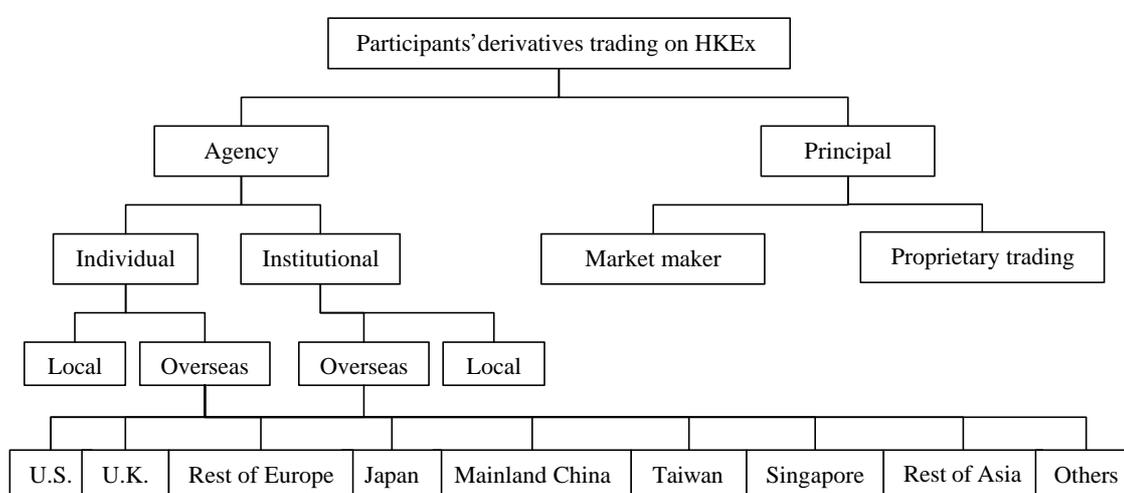
# 1. INTRODUCTION

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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, 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<sup>1</sup>. Out of the 166 questionnaires sent out, 153 completed questionnaires were received, representing an overall response rate of 92%. The responded sample represented 96% in total contract volume of the target population. (See Appendix 1)

The survey covers transactions during July 2006 to June 2007<sup>2</sup> 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. They together contributed 99.3% of the total turnover volume of 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.

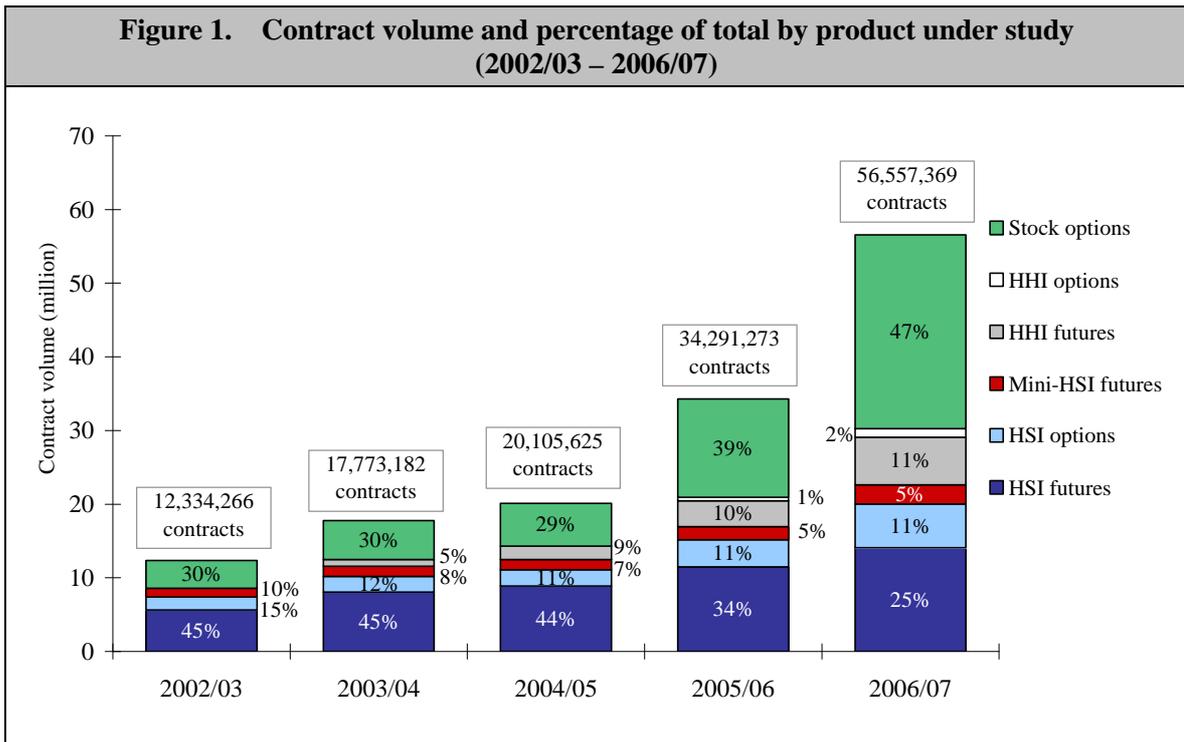
Other derivative products which in aggregate contributed less than 1% of HKEx's total derivatives turnover during the same period were excluded. These products were Hang Seng China H-Financials Index Futures (launched on 16 April 2007), FTSE/Xinhua China 25 Index futures and options, HIBOR futures, Three-year Exchange Fund Note futures, stock futures and Mini-HSI options.

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<sup>1</sup> The target population consists of all the EPs with trading during the study period excluding those that ceased their operations during the study period. (See Appendix 3 for survey methodology.)

<sup>2</sup> Referred to as the year 2006/07 throughout the report; the same convention is used for the past surveys.

In 2006/07, market turnover (products under study only) increased 65% to 56.6 million contracts from 2005/06. The increase in market turnover was mainly due to a significant volume growth (97%) in stock options — from 13.4 million contracts in 2005/06 to 26.3 million contracts in 2006/07. Other products under study also increased in turnover in 2006/07 compared to 2005/06, particularly HHI products (84% for HHI futures and 139% for HHI options). In 2006/07, stock options remained the most significant contributor to derivatives market turnover (47%, compared to 39% in 2005/06). (Figure 1)



As stock options have a very different trading composition from other derivative products, the change in trading patterns of the HKEx derivatives market reflects, to a considerable extent, the increasing dominance of the stock options market segment over the past two years (see key findings in section 2).

For analysis purpose, the contract volume for each transaction type in the survey was estimated (referred to as the “implied contract volume<sup>3</sup>”) 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.

<sup>3</sup> See glossary for the definition of implied contract volume.

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## 2. KEY FINDINGS

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### Trading by transaction purpose

- (1) Overall, pure trading remained the main transaction purpose of derivatives trading. It accounted for 49% of the total market turnover in 2006/07, the same level as in 2005/06. The proportion of turnover for hedging was 31%, at similar level as the 32% in 2005/06. Arbitrage turnover accounted for 21% of the overall market in 2006/07, compared to 19% in 2005/06.
- (2) The proportion of pure trading and that of arbitrage were the highest for trading in Mini-HSI futures (61% and 34% respectively). Hedging was quite common among all products under study except Mini-HSI futures (ranging from 28% to 43% for each of the other products, compared to 5% for Mini-HSI futures).
- (3) In number of contracts, significant increases in the contract volume for arbitrage were observed for trading in Mini-HSI futures (586% increase from 2005/06), HHI options (331%) and HSI options (132%)<sup>4</sup>. The increase in arbitrage trading in stock options was also high (91%). The result was that the year-on-year percentage increase in total trading for arbitrage purpose exceeded the increase in overall market trading (85% vs 65%). In comparison, trading for hedging purpose had a year-on-year percentage increase (56%) lower than that of the overall market.

### Trading by investor type

- (4) In 2006/07, EP principal trading (comprising trading as market makers and EP proprietary trading) dominated market turnover in HKEx's derivatives market, accounting for 55% of total market volume (up from 47% in 2005/06<sup>5</sup>) and was the highest level in the past seven years — 40% from market makers (up from 34% in 2005/06) and 15% from proprietary trading (compared to 14% in 2005/06). The majority of EP principal trading came from stock options (mostly as market making) — stock options contributed 47% to total market turnover but its EP principal trading contributed 73% to total EP principal trading in derivatives.
- (5) The percentage contribution from institutional investors (local and overseas) was 25% in 2006/07, down from 29% in 2005/06 and 36% in 2004/05. Retail investors' contribution (local and overseas) also continued to decrease from 28% in 2004/05 and 24% in 2005/06 to 20% in 2006/07, the lowest in the past seven years since HKEx undertook the survey in 2000/01.
- (6) The contribution from overseas investors was 21% (19% from institutions) in 2006/07, compared to 23% in 2005/06 and 29% in 2004/05. The contribution from local investors was 24% — 18% from retail and 6% from institutions (down from 21% and 8% respectively in 2005/06) — a drop for the third consecutive year.

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<sup>4</sup> The large increase in the proportion of arbitrage and the corresponding decrease in the proportion of pure trading for Mini-HSI futures was resulted from such change in the trading composition by purpose for a single EP which contributed the majority of trading in that product. Compared to Mini-HSI futures, the increase in the proportion of arbitrage for the index options was resulted from a more wide-spread increase in arbitrage trading among FEPs.

<sup>5</sup> The large increase in the percentage contribution of principal trading was resulted from a general increase in principal trading across most of the EPs in 2006/07 against 2005/06, and in particular significant increases in respect of several EPs which were major contributors to total principal trading, particular in stock options.

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- (7) The trading distribution by investor type differed by product. For stock options, the majority of turnover was EP principal trading, which accounted for 86% (77% from market making) of the product's total volume in 2006/07. EP principal trading also dominated the trading in HSI options (47%; 39% from market making). For HSI futures, the contributions from overseas institutional and local retail investors were both significant (35% and 30% respectively). For Mini-HSI futures, local retail investors remained the dominant participant type (contributing 50% of product turnover). Overseas institutional investors were the major contributors to trading in HHI futures and HHI options (43% for both) — in particular, their contribution to trading in HHI options increased significantly from 30% in 2005/06.
- (8) In number of contracts, both retail and institutional investor trading increased from year to year since HKEx undertook the survey in 2000/01. A remarkable year-on-year percentage increase was recorded for retail investor trading in 2005/06 and 2006/07 (44% and 38% respectively) and for institutional investor trading (35% and 43% respectively). Trading from overseas investors also increased from year to year since 2000/01 and trading from local investors increased year-on-year since 2002/03.

#### **Trading by overseas investors by origin**

- (9) Among overseas investors, UK investors remained the largest contributor to overseas investor trading in 2006/07 (31%, compared to 33% in 2005/06). They were followed by US investors (26% in 2006/07, up from 18% in 2005/06)<sup>6</sup> who overtook European (excluding UK) investors (11% in 2006/07, down from 19% in 2005/06) and became the second largest contributor to overseas investor trading.
- (10) The aggregate contribution to overseas investor trading from Asian investors (Mainland China, Singapore, Japan, Taiwan and the rest of Asia) was 20% in 2006/07, compared to 21% in 2005/06. The contribution by investors from the rest of the world other than the UK, the US, the rest of Europe and Asia was large (in aggregate 13%<sup>7</sup> of overseas investor trading, up from 9% in 2005/06; and the majority came from Australia).
- (11) The distribution of overseas investor trading by origin for stock options was different from other derivative product types. US investors contributed only 2% of overseas investor trading for stock options but 29% for other derivatives. Together with UK and the rest of Europe, the three origins contributed only 40% of overseas investor trading for stock options but a majority of 70% for other derivatives. Investors from the rest of the world (other than US, UK, Europe and Asia, comprising Australia, New Zealand and British Virgin Islands) were 39% of overseas investor trading for stock options but only 9% for other derivatives. However, overseas investor trading contributed only 5% to total stock options trading but 35% to other derivatives trading.

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<sup>6</sup> The increase in percentage contribution from US investors mainly reflected the increase in contribution to trading in futures and options other than stock options via a few FEPs.

<sup>7</sup> The increase in the percentage contribution mainly reflected the increase in the contribution from trading via a single FEP.

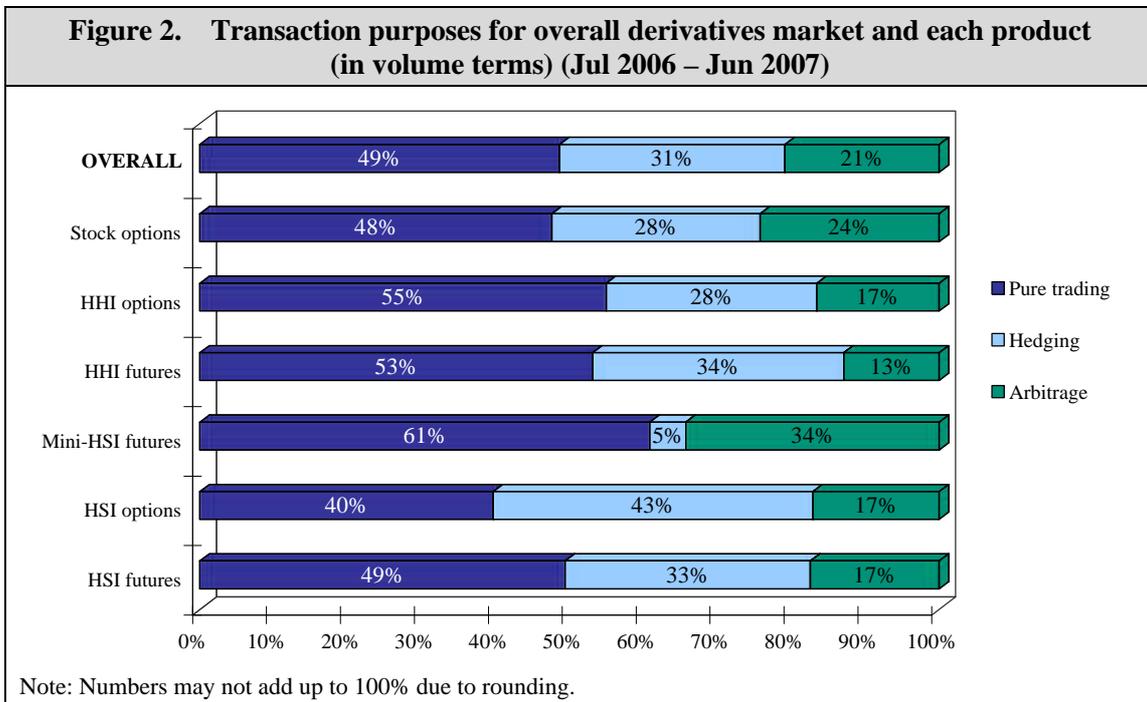
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**Retail online trading**

- (12) Retail online trading contributed 31% of total retail investor trading in 2006/07, a significant increase from 22% in 2005/06. Its contribution to total market turnover was 6%, compared to 5% in 2005/06.
- (13) A total of 40 (vs 33 in 2005/06) or 26% of responding EPs (vs 24% in 2005/06) offered online trading service to retail investors (referred to as “online brokers”) and all online brokers recorded retail online trading. Retail online trading accounted for 26% of total turnover of the online brokers, up from 20% in 2005/06.

### 3. FIGURES AND TABLES

#### 3.1 Distribution of trading by transaction purpose



<b>Table 1. Transaction purposes for overall derivatives market and each product (2002/03 – 2006/07)</b>								
Product	Purpose	Percentage contribution <sup>(2)</sup>					Implied contract volume <sup>(1)</sup> 2006/07	
		2002/03	2003/04	2004/05	2005/06	2006/07	No. of contracts	Y-o-Y change
HSI futures	Pure trading	61.5	62.8	53.2	51.8	<b>49.4</b>	<b>6,956,384</b>	17.0%
	Hedging	28.2	26.6	34.9	31.1	<b>33.2</b>	<b>4,673,740</b>	30.7%
	Arbitrage	10.3	10.6	11.9	17.1	<b>17.4</b>	<b>2,448,243</b>	24.5%
	<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>14,078,367</b>	<b>22.5%</b>
HSI options	Pure trading	43.1	47.6	57.3	50.7	<b>39.7</b>	<b>2,367,063</b>	27.2%
	Hedging	45.3	38.1	31.8	37.4	<b>43.2</b>	<b>2,578,863</b>	88.0%
	Arbitrage	11.6	14.3	10.9	12.0	<b>17.1</b>	<b>1,017,974</b>	131.6%
	<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>5,963,900</b>	<b>62.4%</b>
Mini-HSI futures	Pure trading	78.1	79.9	85.0	82.8	<b>60.9</b>	<b>1,587,971</b>	7.0%
	Hedging	3.6	9.4	8.9	9.9	<b>4.9</b>	<b>126,961</b>	-28.7%
	Arbitrage	18.3	10.6	6.1	7.3	<b>34.3</b>	<b>893,894</b>	586.3%
	<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>2,608,826</b>	<b>45.5%</b>
HHI futures	Pure trading	-	62.1	46.2	54.8	<b>53.2</b>	<b>3,421,797</b>	78.5%
	Hedging	-	28.9	44.9	31.7	<b>34.0</b>	<b>2,186,675</b>	97.5%
	Arbitrage	-	9.0	8.9	13.5	<b>12.9</b>	<b>829,325</b>	75.9%
	<b>Total</b>	<b>-</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>6,437,797</b>	<b>84.2%</b>
HHI options	Pure trading	-	-	n.a.	62.4	<b>55.0</b>	<b>636,669</b>	110.2%
	Hedging	-	-	n.a.	28.4	<b>28.5</b>	<b>329,984</b>	139.6%
	Arbitrage	-	-	n.a.	9.2	<b>16.5</b>	<b>191,349</b>	331.1%
	<b>Total</b>	<b>-</b>	<b>-</b>	<b>n.a.</b>	<b>100.0</b>	<b>100.0</b>	<b>1,158,002</b>	<b>138.8%</b>
<b>Total futures &amp; options (excl. stock options)</b>	<b>Pure trading</b>	<b>59.5</b>	<b>62.2</b>	<b>56.0</b>	<b>55.0</b>	<b>49.5</b>	<b>14,984,281</b>	<b>30.2%</b>
	<b>Hedging</b>	<b>28.7</b>	<b>26.7</b>	<b>33.2</b>	<b>30.5</b>	<b>32.5</b>	<b>9,831,698</b>	<b>54.2%</b>
	<b>Arbitrage</b>	<b>11.7</b>	<b>11.1</b>	<b>10.8</b>	<b>14.6</b>	<b>18.0</b>	<b>5,430,912</b>	<b>78.1%</b>
	<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>30,246,892</b>	<b>44.5%</b>
Stock options	Pure trading	24.9	35.0	36.3	39.8	<b>47.6</b>	<b>12,536,257</b>	135.5%
	Hedging	67.7	44.4	42.7	35.2	<b>28.2</b>	<b>7,414,964</b>	57.5%
	Arbitrage	7.4	20.6	21.0	24.9	<b>24.2</b>	<b>6,359,256</b>	91.1%
	<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>26,310,477</b>	<b>97.0%</b>
<b>Overall</b>	<b>Pure trading</b>	<b>47.9</b>	<b>54.0</b>	<b>50.1</b>	<b>49.1</b>	<b>48.7</b>	<b>27,522,297</b>	<b>63.4%</b>
	<b>Hedging</b>	<b>41.9</b>	<b>32.0</b>	<b>36.0</b>	<b>32.3</b>	<b>30.5</b>	<b>17,250,680</b>	<b>55.7%</b>
	<b>Arbitrage</b>	<b>10.3</b>	<b>14.0</b>	<b>13.9</b>	<b>18.6</b>	<b>20.8</b>	<b>11,784,392</b>	<b>85.1%</b>
	<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>56,557,369</b>	<b>64.9%</b>

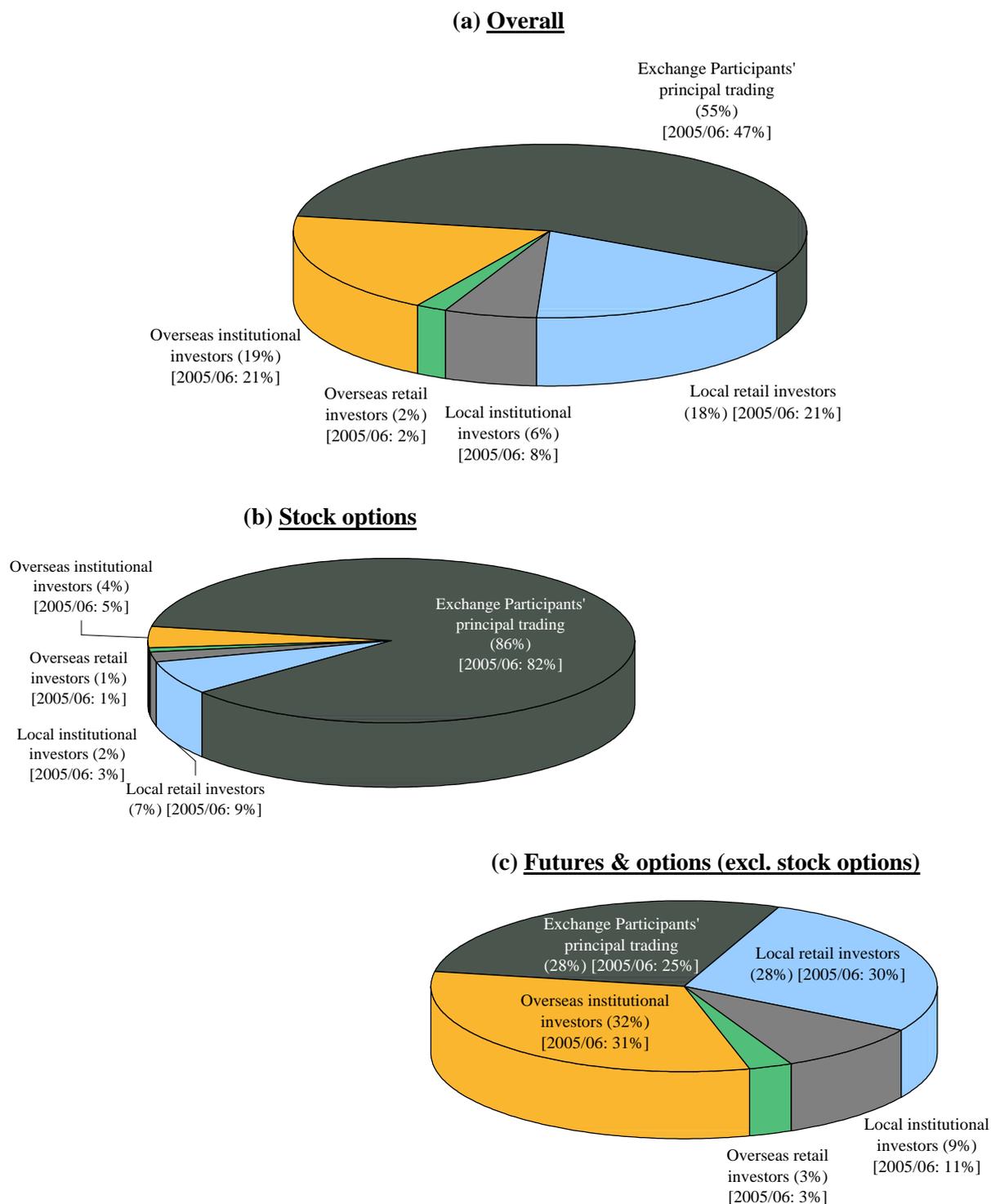
n.a.: Not available  
- : Not applicable

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

## 3.2 Distribution of trading by investor type

### 3.2.1 Overall pattern

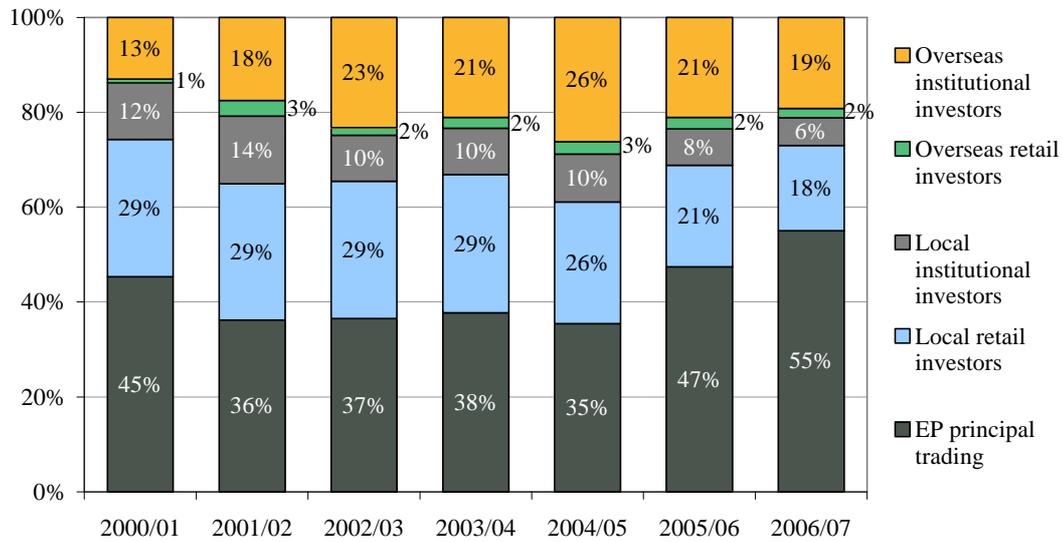
**Figure 3. Distribution of derivatives market trading volume by investor type (Jul 2006 – Jun 2007)**



**Notes:**

- (1) Exchange Participants' principal trading comprised trading as market makers and proprietary trading.
- (2) Numbers may not add up to 100% due to rounding.

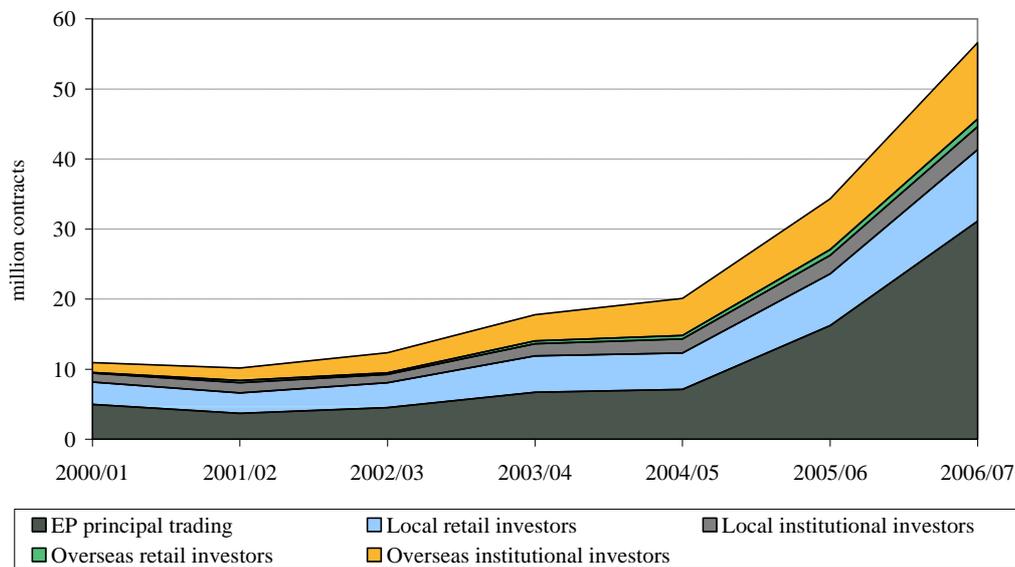
**Figure 4. Distribution of derivatives market trading volume by investor type (2000/01 – 2006/07)**



Notes:

- (1) Exchange Participants' principal trading comprised trading as market makers and 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 – 2006/07)**

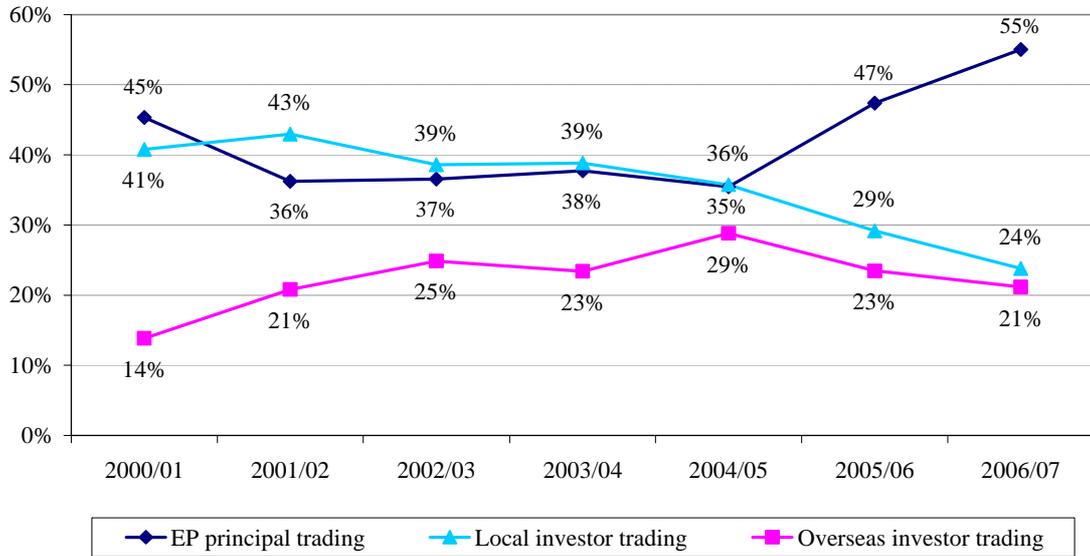


Type of trade	Year-on-year % change					
	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07
EP principal trading	-25.82%	22.24%	48.69%	6.20%	128.14%	91.57%
Market maker	-	-	46.73%	5.64%	141.11%	95.95%
Proprietary trading	-	-	52.97%	7.37%	101.51%	80.79%
Local investor trading	-2.14%	8.71%	45.11%	4.11%	39.07%	34.75%
Retail	-7.66%	21.86%	45.28%	-0.29%	42.66%	38.21%
Institutional	11.21%	-17.72%	44.61%	17.29%	29.95%	25.07%
Overseas investor trading	39.52%	44.77%	35.70%	39.28%	38.84%	48.65%
Retail	272.57%	-40.70%	108.19%	28.47%	52.10%	39.87%
Institutional	24.89%	60.77%	30.70%	40.47%	37.51%	49.63%
Retail investor trading	0.06%	15.44%	48.59%	1.84%	43.54%	38.38%
Institutional investor trading	18.36%	25.53%	34.79%	33.15%	35.41%	43.08%
<b>Total</b>	<b>-7.11%</b>	<b>21.11%</b>	<b>44.08%</b>	<b>13.13%</b>	<b>70.56%</b>	<b>64.93%</b>

- : Not applicable

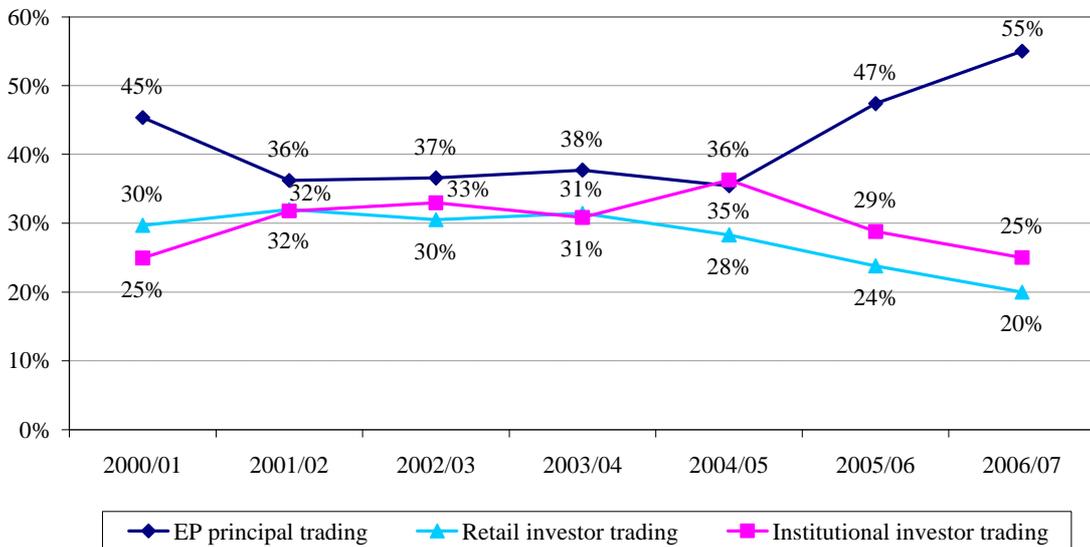
Note: Exchange Participants' principal trading comprised trading as market makers and proprietary trading.

**Figure 6. Distribution of derivatives market trading volume by investor type (local vs overseas) (2000/01 – 2006/07)**



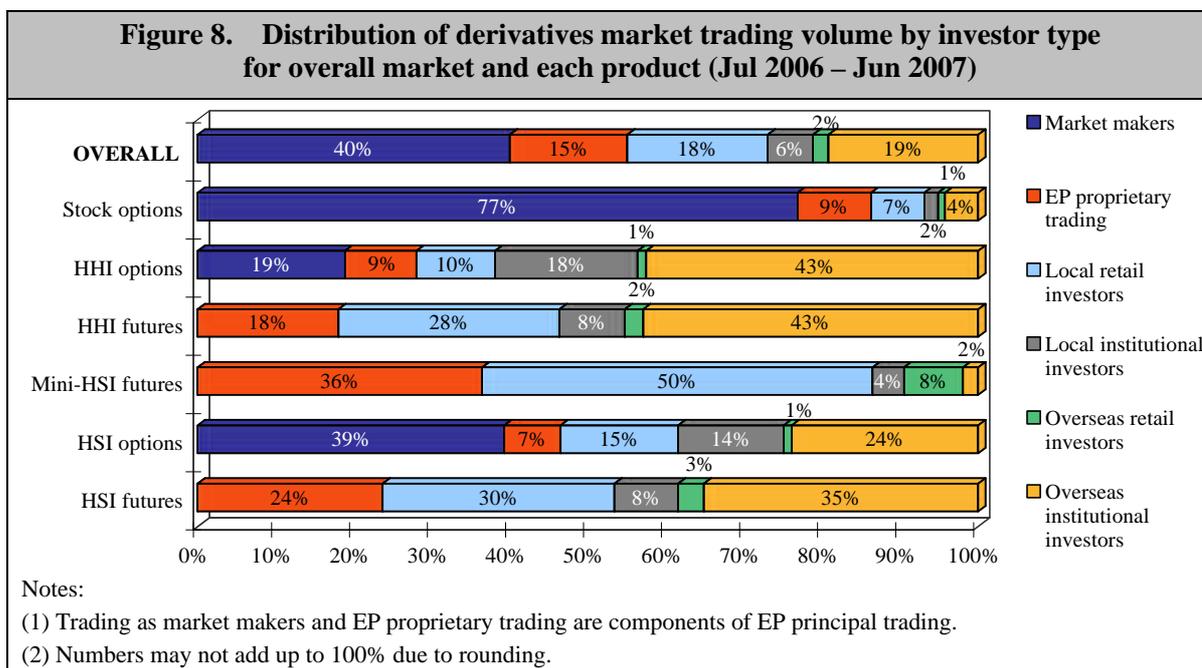
Note: Numbers may not add up to 100% due to rounding.

**Figure 7. Distribution of derivatives market trading volume by investor type (retail vs institutional) (2000/01 – 2006/07)**



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

### 3.2.2 By product/market segment



**Table 2. Distribution of derivatives trading by investor type (2002/03 – 2006/07)**

Type of investor	Percentage contribution <sup>(3)</sup>					Implied contract volume <sup>(4)</sup>	
	2002/03	2003/04	2004/05	2005/06	2006/07	2006/07	Y-o-Y change
						No. of contracts	
<b>HSI Futures</b>							
Market makers	-	-	-	-	-	-	-
Proprietary trading	15.7	20.2	16.6	21.3	23.7	3,335,194	36.6%
Local investors	43.7	42.9	39.4	37.9	37.9	5,331,971	22.4%
Retail	35.6	34.7	29.5	29.3	29.7	4,179,332	24.0%
Institutional	8.0	8.2	9.8	8.6	8.2	1,152,639	17.0%
Overseas investors	40.6	36.9	44.0	40.8	38.4	5,411,201	15.3%
Retail	1.9	2.4	3.2	2.9	3.3	465,078	42.0%
Institutional	38.7	34.5	40.9	38.0	35.1	4,946,124	13.3%
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>14,078,367</b>	<b>22.5%</b>
<b>HSI Options</b>							
Principal trading <sup>(1)</sup>	28.2	32.7	29.2	40.5	46.5	2,773,225	86.3%
Market makers	23.3	25.5	23.2	32.1	39.3	2,342,094	98.6%
Proprietary trading	4.9	7.2	6.0	8.4	7.2	431,132	39.5%
Local investors	48.1	43.2	42.2	40.2	28.6	1,705,524	15.7%
Retail	21.3	18.7	21.1	22.0	15.1	898,356	11.3%
Institutional	26.8	24.5	21.1	18.2	13.5	807,168	21.0%
Overseas investors	23.8	24.1	28.5	19.3	24.9	1,485,151	109.7%
Retail	0.6	0.7	1.2	2.0	1.0	61,532	-14.8%
Institutional	23.2	23.4	27.4	17.3	23.9	1,423,619	123.8%
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>5,963,900</b>	<b>62.4%</b>
<b>Mini-HSI Futures</b>							
Market makers	-	-	-	-	-	-	-
Proprietary trading	18.7	6.1	16.6	32.5	36.4	950,849	63.2%
Local investors	76.1	87.1	76.2	60.5	54.1	1,410,537	30.0%
Retail	73.9	79.7	67.5	56.7	50.0	1,305,406	28.4%
Institutional	2.3	7.3	8.7	3.9	4.0	105,131	52.3%
Overseas investors	5.2	6.9	7.2	7.0	9.5	247,440	98.0%
Retail	4.5	6.0	5.9	5.7	7.6	197,107	92.8%
Institutional	0.7	0.9	1.3	1.3	1.9	50,333	121.7%
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>2,608,826</b>	<b>45.5%</b>
<b>HFI Futures</b>							
Principal trading <sup>(1)</sup>	-	17.2	14.4	15.8	18.0	1,160,955	110.1%
Market makers <sup>(2)</sup>	-	2.2	2.1	0.4	-	-	-
Proprietary trading	-	15.0	12.4	15.4	18.0	1,160,955	115.3%
Local investors	-	40.2	34.3	40.5	36.7	2,360,845	66.8%
Retail	-	28.5	23.8	27.7	28.3	1,821,655	88.1%
Institutional	-	11.7	10.5	12.8	8.4	539,190	20.5%
Overseas investors	-	42.7	51.3	43.7	45.3	2,915,997	91.0%
Retail	-	3.0	2.4	2.9	2.4	153,713	52.8%
Institutional	-	39.7	48.8	40.8	42.9	2,762,284	93.7%
<b>Total</b>	<b>-</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>6,437,797</b>	<b>84.2%</b>
<b>HFI Options</b>							
Principal trading <sup>(1)</sup>	-	-	n.a.	25.8	28.0	324,477	159.6%
Market makers	-	-	n.a.	19.3	18.8	218,225	133.2%
Proprietary trading	-	-	n.a.	6.5	9.2	106,251	238.0%
Local investors	-	-	n.a.	44.0	28.4	328,403	53.9%
Retail	-	-	n.a.	17.9	10.1	116,612	34.2%
Institutional	-	-	n.a.	26.1	18.3	211,791	67.4%
Overseas investors	-	-	n.a.	30.2	43.6	505,123	244.7%
Retail	-	-	n.a.	1.8	1.1	12,885	46.2%
Institutional	-	-	n.a.	28.4	42.5	492,238	257.4%
<b>Total</b>	<b>-</b>	<b>-</b>	<b>n.a.</b>	<b>100.0</b>	<b>100.0</b>	<b>1,158,002</b>	<b>138.8%</b>
<b>Total futures &amp; options (excl. stock options)</b>							
Principal trading <sup>(1)</sup>	18.9	20.5	18.3	24.8	28.3	8,560,044	64.8%
Market makers	3.1	4.4	3.9	6.2	8.5	2,567,982	97.2%
Proprietary trading	15.8	16.1	14.4	18.6	19.8	5,992,062	53.9%
Local investors	49.0	47.8	42.6	40.8	36.8	11,145,550	30.6%
Retail	37.6	36.7	31.1	29.8	27.5	8,329,939	33.6%
Institutional	11.5	11.1	11.6	11.0	9.3	2,815,611	22.3%
Overseas investors	32.0	31.8	39.0	34.4	34.9	10,541,298	46.4%
Retail	1.9	2.5	3.0	2.9	3.0	892,997	46.4%
Institutional	30.1	29.2	36.0	31.5	31.9	9,648,301	46.4%
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>30,246,892</b>	<b>44.5%</b>

(to be continued on next page)

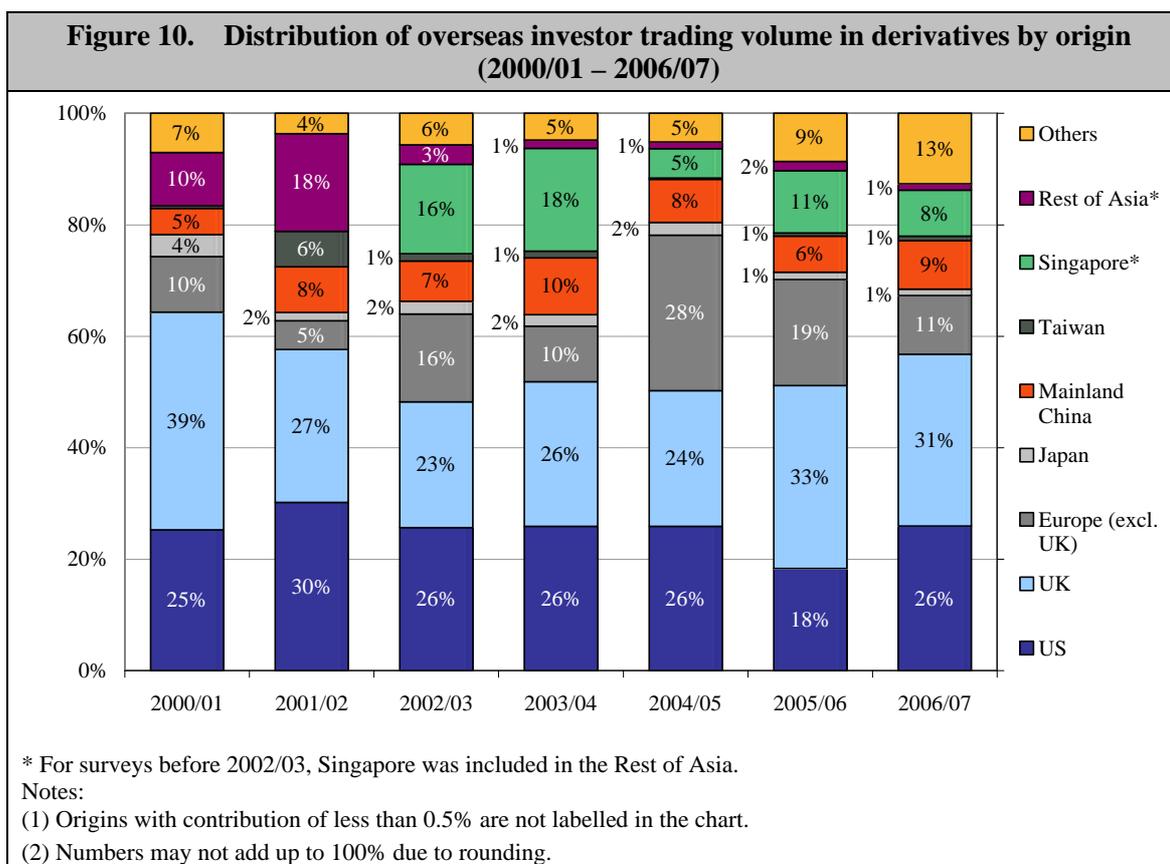
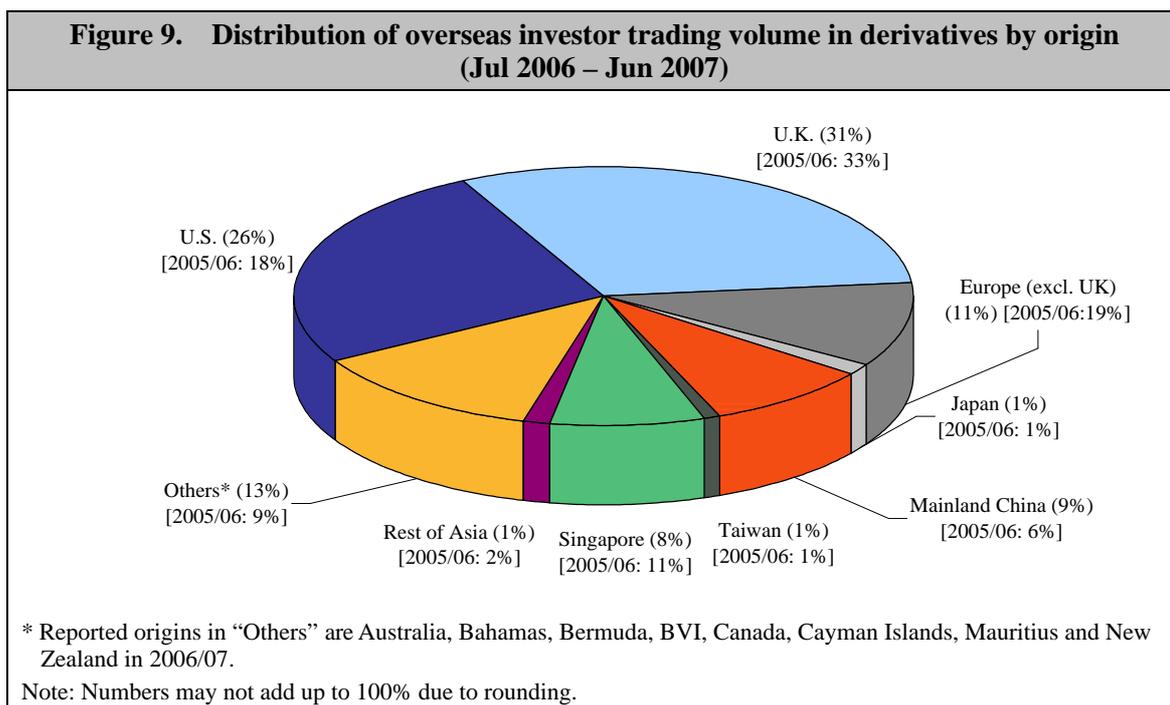
**Table 2. Distribution of derivatives trading by investor type  
(2002/03 – 2006/07) (cont'd)**

<b>Table 2. Distribution of derivatives trading by investor type (2002/03 – 2006/07) (cont'd)</b>							
<b>Stock Options</b>							
Principal trading <sup>(1)</sup>	72.8	78.6	76.8	81.8	<b>86.3</b>	22,703,269	107.7%
Market makers	65.8	75.5	71.9	75.6	<b>76.9</b>	20,224,567	100.3%
Proprietary trading	7.0	3.1	4.8	6.2	<b>9.4</b>	2,478,702	198.0%
Local investors	17.1	17.8	19.1	11.4	<b>8.6</b>	2,258,920	48.2%
Retail	11.0	11.2	12.6	8.8	<b>6.8</b>	1,795,935	53.1%
Institutional	6.1	6.6	6.5	2.6	<b>1.8</b>	462,985	31.8%
Overseas investors	10.1	3.7	4.1	6.8	<b>5.1</b>	1,348,288	49.3%
Retail investors	1.0	1.8	1.7	1.5	<b>0.9</b>	229,020	15.1%
Institutional investors	9.1	1.9	2.4	5.3	<b>4.3</b>	1,119,268	58.9%
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>26,310,477</b>	<b>97.0%</b>
<b>Overall</b>							
Principal trading <sup>(1)</sup>	36.6	37.7	35.4	47.4	<b>55.0</b>	31,124,486	91.6%
Market makers	25.1	25.5	23.8	33.7	<b>40.0</b>	22,628,850	96.0%
Proprietary trading	11.5	12.2	11.6	13.7	<b>15.0</b>	8,495,636	80.8%
Local investors	38.6	38.9	35.8	29.2	<b>23.8</b>	13,472,131	34.7%
Retail investors	28.9	29.1	25.7	21.5	<b>18.0</b>	10,175,463	38.2%
Institutional investors	9.7	9.7	10.1	7.7	<b>5.8</b>	3,296,668	25.1%
Overseas investors	24.9	23.4	28.8	23.5	<b>21.1</b>	11,960,751	48.7%
Retail investors	1.6	2.3	2.6	2.3	<b>2.0</b>	1,127,001	39.9%
Institutional investors	23.3	21.1	26.2	21.1	<b>19.2</b>	10,833,750	49.6%
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>56,557,369</b>	<b>64.9%</b>
n.a.: Not available - : Not applicable Notes: (1) Comprised trading of market makers 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.							

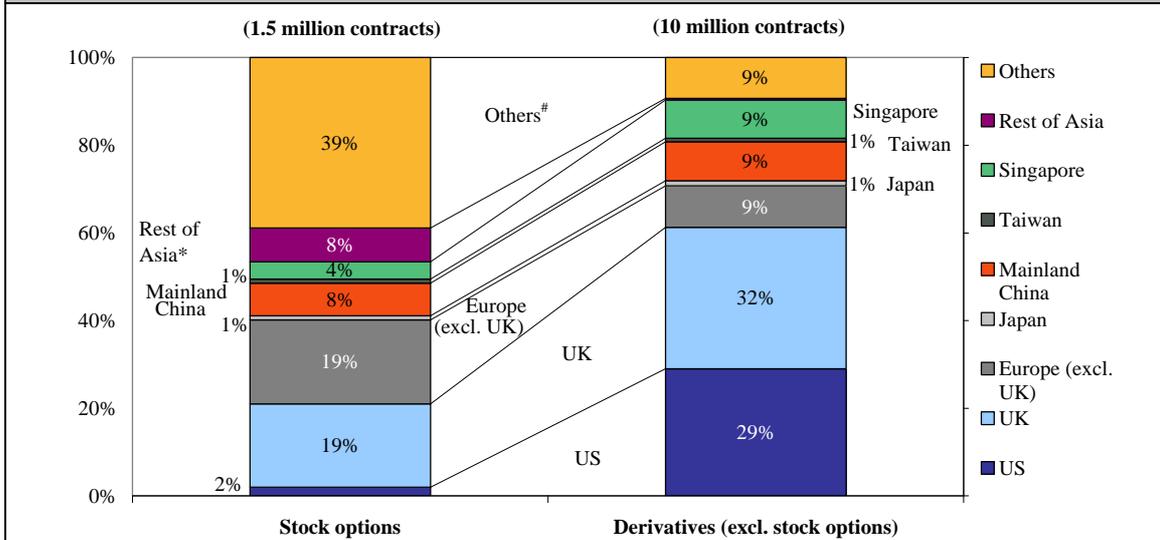
**Table 3. Business composition of Exchange Participants in derivatives  
by trade type (in volume terms) (%)**

	2002/03 Overall	2003/04 Overall	2004/05 Overall	2005/06 Overall	2006/07 Overall	2006/07					
						HSI futures	HSI options	Mini-HSI futures	HHI futures	HHI options	Stock options
<b>All trading</b>											
Principal <sup>#</sup>	36.6	37.7	35.4	47.4	<b>55.0</b>	23.7	46.5	36.4	18.0	28.0	86.3
Agency	63.4	62.3	64.6	52.6	<b>45.0</b>	76.3	53.5	63.6	82.0	72.0	13.7
	100.0	100.0	100.0	100.0	<b>100.0</b>	100.0	100.0	100.0	100.0	100.0	100.0
<b>Agency trading</b>											
Local	60.8	62.4	55.4	55.4	<b>53.0</b>	49.6	53.5	85.1	44.7	39.4	62.6
Overseas	39.2	37.6	44.6	44.6	<b>47.0</b>	50.4	46.5	14.9	55.3	60.6	37.4
	100.0	100.0	100.0	100.0	<b>100.0</b>	100.0	100.0	100.0	100.0	100.0	100.0
<b>Agency trading</b>											
Retail	48.1	50.5	43.8	45.3	<b>44.4</b>	43.2	30.1	90.6	37.4	15.5	56.1
Institutional	51.9	49.5	56.2	54.7	<b>55.6</b>	56.8	69.9	9.4	62.6	84.5	43.9
	100.0	100.0	100.0	100.0	<b>100.0</b>	100.0	100.0	100.0	100.0	100.0	100.0
<b>Retail investor trading</b>											
Local	94.7	92.6	90.7	90.1	<b>90.0</b>	90.0	93.6	86.9	92.2	90.1	88.7
Overseas	5.3	7.4	9.3	9.9	<b>10.0</b>	10.0	6.4	13.1	7.8	9.9	11.3
	100.0	100.0	100.0	100.0	<b>100.0</b>	100.0	100.0	100.0	100.0	100.0	100.0
<b>Institutional investor trading</b>											
Local	29.4	31.6	27.8	26.7	<b>23.3</b>	18.9	36.2	67.6	16.3	30.1	29.3
Overseas	70.6	68.4	72.2	73.3	<b>76.7</b>	81.1	63.8	32.4	83.7	69.9	70.7
	100.0	100.0	100.0	100.0	<b>100.0</b>	100.0	100.0	100.0	100.0	100.0	100.0
<b>Local investor trading</b>											
Retail	74.9	75.0	71.8	73.6	<b>75.5</b>	78.4	52.7	92.5	77.2	35.5	79.5
Institutional	25.1	25.0	28.2	26.4	<b>24.5</b>	21.6	47.3	7.5	22.8	64.5	20.5
	100.0	100.0	100.0	100.0	<b>100.0</b>	100.0	100.0	100.0	100.0	100.0	100.0
<b>Overseas investor trading</b>											
Retail	6.5	9.9	9.1	10.0	<b>9.4</b>	8.6	4.1	79.7	5.3	2.6	17.0
Institutional	93.5	90.1	90.9	90.0	<b>90.6</b>	91.4	95.9	20.3	94.7	97.4	83.0
	100.0	100.0	100.0	100.0	<b>100.0</b>	100.0	100.0	100.0	100.0	100.0	100.0
# Comprises trading of registered traders/market makers and proprietary trading. Note: Numbers may not add up to 100% due to rounding.											

### 3.3 Distribution of overseas investor trading by origin



**Figure 11. Distribution of overseas investor trading volume in derivatives by origin by market segment (Jul 2006 – Jun 2007)**



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

\* Reported origins in "Rest of Asia" are India, Indonesia, Macau, Malaysia, Philippines and Thailand.

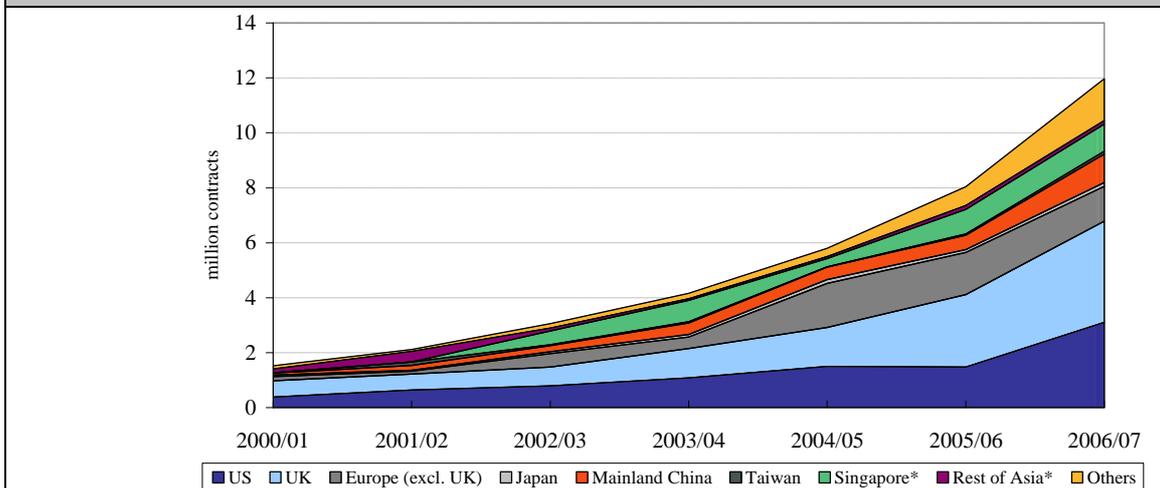
# Reported origins in "Others" are Australia, BVI, Canada and New Zealand for both segments; plus Bahamas, Bermuda, Cayman Islands and Mauritius for derivatives excluding stock options

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 – 2006/07)**

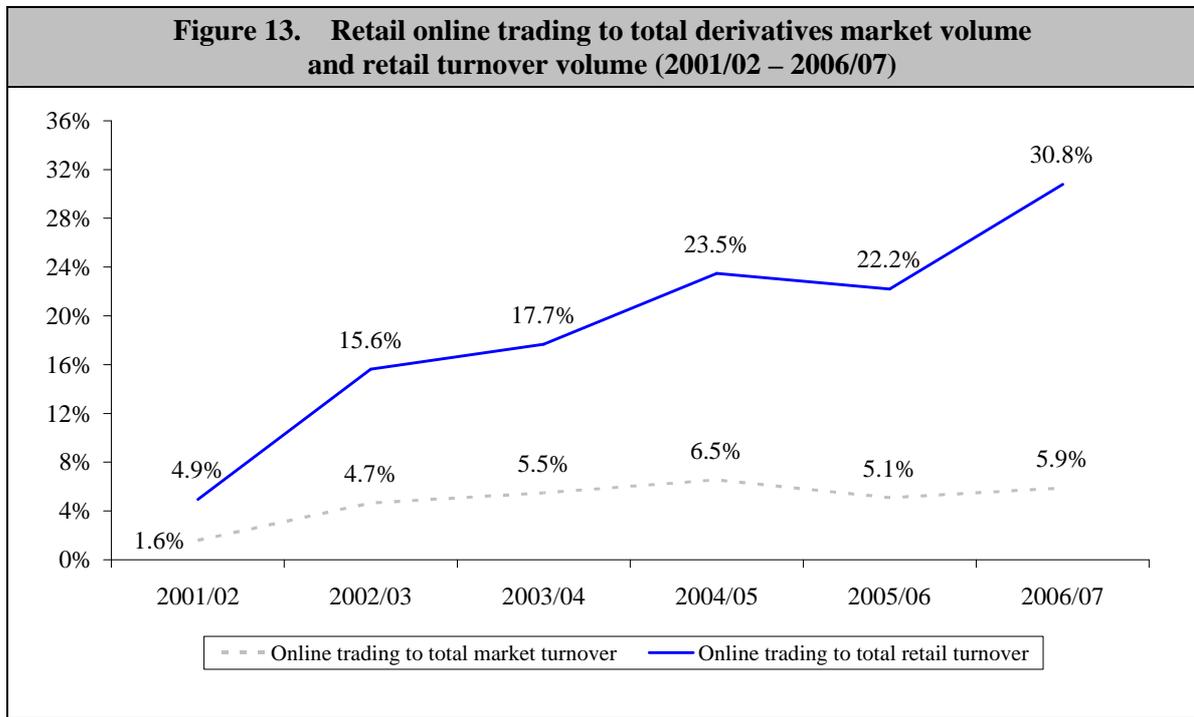


Overseas origin	Year-on-year % change					
	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07
US	66.71%	23.07%	36.93%	39.59%	-1.90%	110.60%
UK & Europe	-7.36%	70.40%	27.16%	102.25%	37.97%	18.51%
UK	-1.98%	19.16%	56.08%	30.41%	87.33%	39.52%
Europe (excluding the UK)	-28.37%	344.19%	-14.31%	289.83%	-5.14%	-17.75%
Asia	151.04%	30.85%	49.24%	-30.29%	75.63%	41.01%
Japan	-46.30%	118.01%	23.79%	55.52%	-19.06%	29.61%
Mainland China	145.28%	26.99%	91.35%	5.85%	15.33%	100.38%
Taiwan	1,722.09%	-69.92%	20.05%	-70.04%	230.00%	109.66%
Singapore*	-	-	56.14%	-60.61%	196.62%	9.19%
Rest of Asia*	155.25%	-71.17%	-42.14%	10.37%	88.40%	8.39%
Others	-27.60%	123.90%	15.46%	50.24%	133.24%	116.73%
<b>Total</b>	<b>39.52%</b>	<b>44.77%</b>	<b>35.72%</b>	<b>39.27%</b>	<b>38.84%</b>	<b>48.65%</b>

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

<b>Table 4. Distribution of overseas investor trading in derivatives by origin (2002/03 – 2006/07)</b>							
<b>Overall Market</b>							
Origin	Percentage contribution <sup>(2)</sup>					Implied contract volume <sup>(1)</sup> 2006/07	
	2002/03	2003/04	2004/05	2005/06	2006/07	No of contracts	Y-o-Y change
US	25.7	25.9	25.9	18.3	26.0	3,105,747	110.6%
UK	22.6	26.0	24.3	32.8	30.8	3,684,925	39.5%
Europe (excl. UK)	15.8	10.0	27.9	19.0	10.5	1,259,256	-17.8%
Japan	2.3	2.1	2.3	1.3	1.2	140,527	29.6%
Mainland China	7.2	10.2	7.8	6.4	8.7	1,038,288	100.4%
Taiwan	1.3	1.2	0.2	0.6	0.8	100,055	109.7%
Singapore	16.1	18.5	5.2	11.2	8.2	981,565	9.2%
Rest of Asia	3.5	1.5	1.2	1.6	1.2	139,744	8.4%
Others	5.6	4.8	5.2	8.7	12.6	1,510,643	116.7%
<b>Total<sup>(1)</sup></b>	100.0	100.0	100.0	100.0	100.0	11,960,751	48.7%
<b>Total futures and options (excl. stock options)</b>							
Origin	Percentage contribution <sup>(2)</sup>					Implied contract volume <sup>(1)</sup> 2006/07	
	2002/03	2003/04	2004/05	2005/06	2006/07	No of contracts	Y-o-Y change
US	28.9	26.7	27.0	20.1	29.0	3,054,806	110.9%
UK	25.1	27.0	24.9	35.0	32.3	3,404,587	34.9%
Europe (excl. UK)	12.4	9.6	28.7	16.8	9.4	995,098	-17.8%
Japan	2.6	2.1	2.4	1.5	1.2	127,342	16.3%
Mainland China	7.8	10.1	7.2	7.1	8.8	930,636	82.3%
Taiwan	1.5	1.2	0.3	0.7	0.8	87,253	81.3%
Singapore	16.2	19.1	5.1	12.0	8.7	921,122	6.2%
Rest of Asia	3.1	0.4	0.5	0.3	0.3	36,771	50.3%
Others	2.4	3.8	3.9	6.4	9.3	983,683	114.9%
<b>Total</b>	100.0	100.0	100.0	100.0	100.0	10,541,298	46.4%
<b>Stock options</b>							
Origin	Percentage contribution <sup>(2)</sup>					Implied contract volume <sup>(1)</sup> 2006/07	
	2002/03	2003/04	2004/05	2005/06	2006/07	No of contracts	Y-o-Y change
US	5.6	9.9	1.3	4.5	2.0	27,009	-33.3%
UK	7.4	5.5	11.0	15.6	19.0	255,718	82.0%
Europe (excl. UK)	36.4	16.3	8.0	36.2	19.2	258,636	-20.9%
Japan	0.0	1.0	0.0	0.0	0.9	12,288	-
Mainland China	3.7	12.2	20.1	1.4	7.5	101,207	697.6%
Taiwan	0.0	0.0	0.0	0.0	0.9	12,223	15,379.7%
Singapore	15.4	5.7	8.7	4.4	4.0	53,641	36.2%
Rest of Asia	6.0	24.8	16.2	11.4	7.7	103,624	0.5%
Others	25.4	24.7	34.7	26.6	38.9	523,942	118.3%
<b>Total</b>	100.0	100.0	100.0	100.0	100.0	1,348,288	49.3%
- : Not applicable							
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.							

### 3.4 Retail online trading



**Table 5. Statistics on retail online trading in derivatives (2002/03 – 2006/07)**

<b>Online brokers<sup>(1)</sup></b>	<b>2002/03</b>	<b>2003/04</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>
Total number of online brokers	11	21	31	33	<b>40</b>
- As % of all responding EPs (%)	8%	15%	22%	24%	<b>26%</b>
Number of online brokers requiring manual order re-input for online trading	1	0	0	0	<b>0</b>
- As % of all online brokers (%)	9%	0%	0%	0%	<b>0%</b>
<b>Online trading</b>	<b>2002/03</b>	<b>2003/04</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>
Total implied contract volume	1,090,283	1,941,128	2,633,008	3,483,994	<b>6,650,331</b>
- As % of total market turnover <sup>(2)</sup> (%)	4.7%	5.5%	6.5%	5.1%	<b>5.9%</b>
- As % of total agency (investor) trading (%)	7.5%	8.9%	10.3%	10.1%	<b>13.7%</b>
- As % of total retail investor trading (%)	15.6%	17.7%	23.5%	22.2%	<b>30.8%</b>
- As % of total turnover of online brokers (%)	31.0%	24.5%	26.6%	20.1%	<b>25.8%</b>
Percentage of online trading requiring manual order re-input <sup>(3)</sup> (%)	0.3%	0%	0%	0%	<b>0%</b>

Notes:

- (1) "Online brokers" refers to EPs offering online trading service to retail clients since the 2004/05 survey but refers to EPs recording retail online trading in the previous surveys.
- (2) 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.
- (3) Calculated in terms of implied online trading volume as reported by responding EPs which indicated the need for manual re-input as a percentage of total implied online trading volume of all responding EPs. Implied online trading volume is the reported percentage of retail investor trading as online trading multiplied by the EPs' retail turnover volume. The retail turnover volume of an EP is in turn calculated by multiplying the reported percentage of total turnover as retail trading by the EP's total turnover during the study period.

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# GLOSSARY

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<b>Hedging</b>	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.
<b>Pure trading</b>	Trading for potential profit in anticipation of a price movement in either the short or long term, but not for hedging or arbitrage purpose.
<b>Arbitrage</b>	Trading to take riskless or near riskless profit from price differentials in related markets.
<b>Principal trading</b>	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.
<b>Agency trading</b>	Trading on behalf of the participant firm's clients, including client trading channelled from the firm's parent or sister companies.
<b>Market maker trading</b>	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.
<b>EP proprietary trading</b>	Trading on the participant firm's own account but not as a market maker.
<b>Individual/Retail investors</b>	Investors who trade on their personal account.
<b>Institutional investors</b>	Investors who are not individual/retail investors.
<b>Local investors</b>	Individual/Retail investors residing in Hong Kong or institutional investors operating in Hong Kong Hong Kong as the source of funds.
<b>Online brokers</b>	EPs who offer online trading service to individual/retail investors.
<b>Overseas investors</b>	Individual/Retail investors residing outside Hong Kong or institutional investors operating outside Hong Kong overseas as the source of funds.
<b>Retail online trading</b>	Trading originating from orders entered directly by individual/retail investors and channelled to the brokers via electronic media (e.g. Internet). This would include client orders routed to the HKEx trading system automatically on a straight-through basis and client orders received via electronic media but having to be manually re-input into the HKEx trading system.
<b>Implied contract volume</b>	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.

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## APPENDIX 1. RESPONSE RATE

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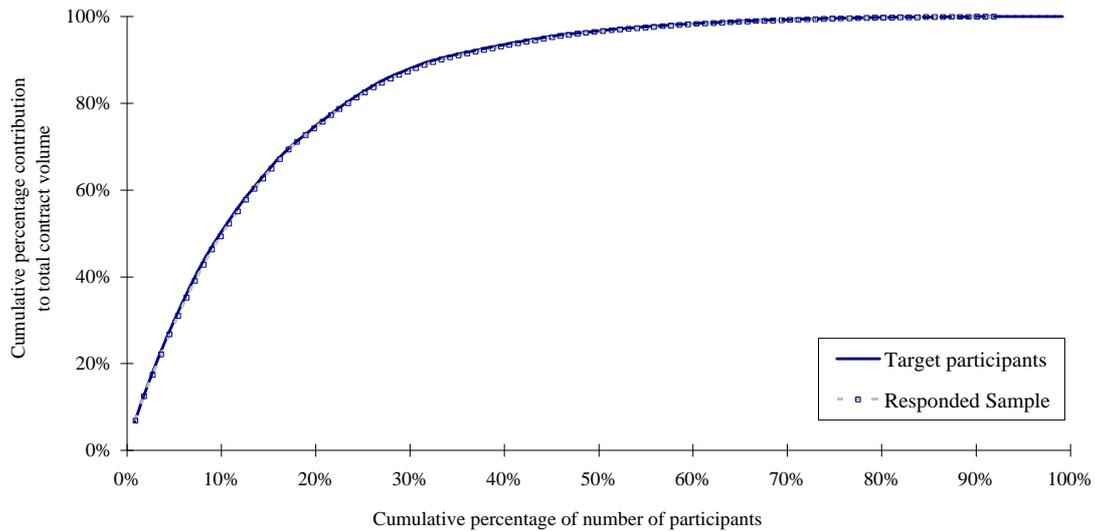
<b>Exchange Participants</b>	<b>Target population</b>	<b>Responded participants</b>	<b>Response Rate</b>	<b>% share of turnover in target population</b>
<b>Futures EPs</b>	120	111	92.5%	96.3%
<b>Stock Options EPs</b>	46	42	91.3%	94.7%
<b>All Participants</b>	166	153	92.2%	95.6%

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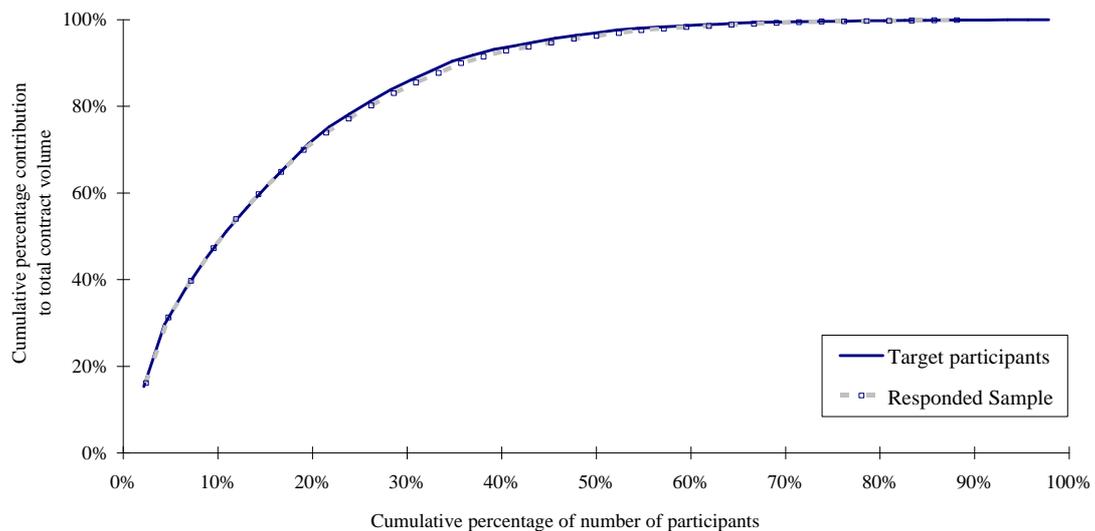
# APPENDIX 2. REPRESENTATIVENESS OF THE RESPONDED SAMPLE RELATIVE TO TARGET RESPONDENTS

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**(a) Futures Exchange Participants (Jul 2006 – Jun 2007)**



**(b) Stock Options Exchange Participants (Jul 2006 – Jun 2007)**



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## APPENDIX 3. SURVEY METHODOLOGY

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### (1) Target population

Exchange participation 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 2007.

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 2006 to June 2007.
- Products under study were Hang Seng Index (HSI) futures, HSI options, Mini-HSI futures, H-shares Index (HHI) futures, HHI options and stock options.
- The survey was done by mailed questionnaires. 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 made to ensure a high response rate, especially for the participant firms which were top-ranked in the target population by contract volume.
- Each participant firm's answers in percentage terms were weighted by its actual contract volume during the study period obtained internally to arrive at the relative contribution of each type of trading to the total volume of a particular product and of the whole market.

### (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". Two EPs in the 2006/07 survey could not provide the answer for the question on trading purposes. They were excluded in the analysis of turnover by trading purposes.
- 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.

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- The number of derivatives EPs was relatively small, especially for SOEPs. Their degree of participation in the different derivative products varied greatly. The trading pattern of the different derivative products was also very different. Therefore, the non-response of particular EPs would reduce the reliability of the survey findings. However, the impact is not expected to be serious because of the high response rate by turnover volume and the high representativeness of the responded sample to the target population (see Appendix 1 and 2).
  - 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<sup>8</sup>. 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.

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<sup>8</sup> 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.