

CASH MARKET TRANSACTION SURVEY 2001/02



Hong Kong Exchanges and Clearing Limited
Research & Policy, Corporate Strategy

17 March 2003



CONTENT

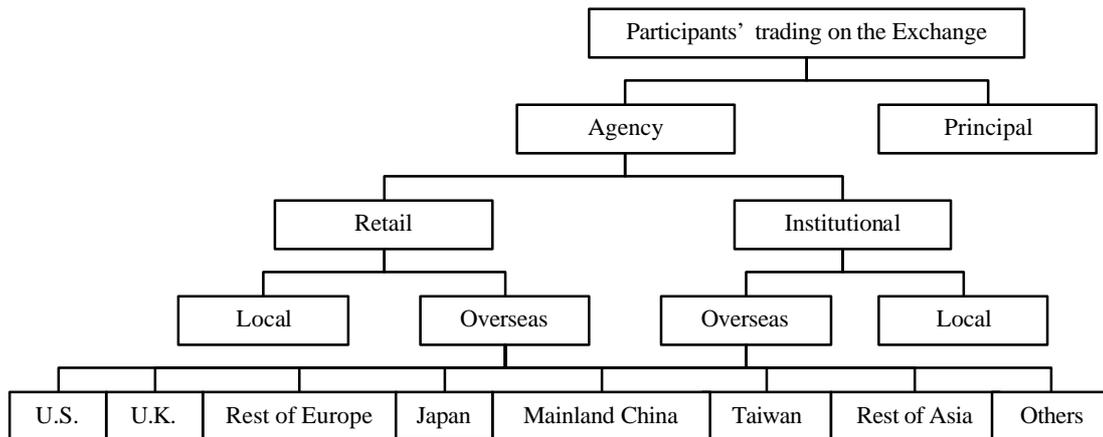
	Page
1. Introduction.....	2
2. Key findings	3
3. Distribution of market trading value by investor type.....	4
4. Breakdown of contribution by type of trade	5
5. Distribution of overseas agency trading by origin	6
6. Online trading.....	7
7. Distribution of market trading value by broker size group	9
8. Distribution of market trading value over time.....	12
GLOSSARY	15
APPENDIX	
1. Response rate	16
2. Representativeness of responded sample of small-sized Exchange Participants.....	16
3. Survey methodology	17



1. INTRODUCTION

Hong Kong Exchanges and Clearing Ltd. (HKEx) has conducted the Cash Market Transaction Survey annually since 1991 (formerly by Stock Exchange of Hong Kong) to study the trading composition of Stock Exchange Participants (EPs). The main objective is to understand the relative contribution of trading value in the HKEx cash market by different investor types (*see classification chart below*). The market share of online trading¹ has been covered since the 1999/2000 survey to track its latest development.

Classification of Stock Exchange Participants' trading



The Cash Market Transaction Survey 2001/02 covered EPs' transactions on both the Main Board and the Growth Enterprise Market from October 2001 to September 2002. Fieldwork was conducted during November to December 2002. EPs in the target population² were ranked in descending order of their turnover values and were divided into three groups with equal shares by turnover value — 8 large-sized brokers (contributing the top one-third of the target population's turnover), 23 medium-sized brokers (contributing the second one-third) and 428 small-sized brokers (contributing the bottom one-third). The survey sample consisted of all large- and medium-sized brokers and a random sample covering 60% of small-sized brokers in the target population. Survey questionnaires were mailed to the respective target samples. Out of the 309 questionnaires sent, 289 duly completed questionnaires were received, representing an overall response rate of 94% by number or 95% by turnover value of respondents.

Each respondent was asked to provide the percentage breakdown of its trading value during the study period by the classified types of investors and the percentage of retail agency turnover as online trading. The percentages were weighted by the respondent's total turnover value (or retail agency turnover value for online trading) accordingly to obtain the respective values in the responded sample. Based on the respective size group's total turnover value in the responded sample relative to that in the target population, the implied percentage shares of different types of trade in the market were then calculated.

¹ Please refer to "Glossary" or Section 6 for definition.

² Please refer to Appendix 3 for survey methodology.



2. KEY FINDINGS

- Local investors remained the major players, contributing 56% of total market turnover value, more or less the same as in 2000/01. Local retail investors were dominant within this group, though their contribution declined to 32% of market turnover, the lowest in the 12 years the survey has been conducted.
- Overseas investors, pre-dominantly institutional investors, contributed 37% of the market total, down from 40% in 2000/01 but still significantly higher than the 30% in 1999/2000.
- For the second year since 2000/01, overseas institutional investors (contributing 35% in 2001/02) surpassed local retail investors (32%) and were the largest contributors to market turnover.
- As in prior years, the largest overseas contributors were UK investors (28% of overseas agency turnover), followed by US investors (23%) and European (excluding UK) investors (23%). The contribution from the rest of Europe (excluding UK) expanded significantly in 2001/02 to the highest recorded figure since the annual survey began³.
- Almost half of local agency trading (48%) was handled by small-sized brokers while overseas agency trading was mainly processed through large- and medium-sized brokers (43% each).
- The majority of trading from the US (61%) and the UK (48%) was processed through large-sized brokers and the majority of trading from the rest of Europe (62%) was processed through medium-sized brokers. The origins where small-sized brokers obtain the largest market share in overseas agency trading were Mainland China (31%) and Taiwan (28%).
- The proportion of online trading grew to 8% of retail agency trading value or 3% of market turnover value, up from 6% and 2% in 2000/01 respectively.

³ The annual survey started to assess distribution of overseas agency trading by origin from 1993/94 survey.

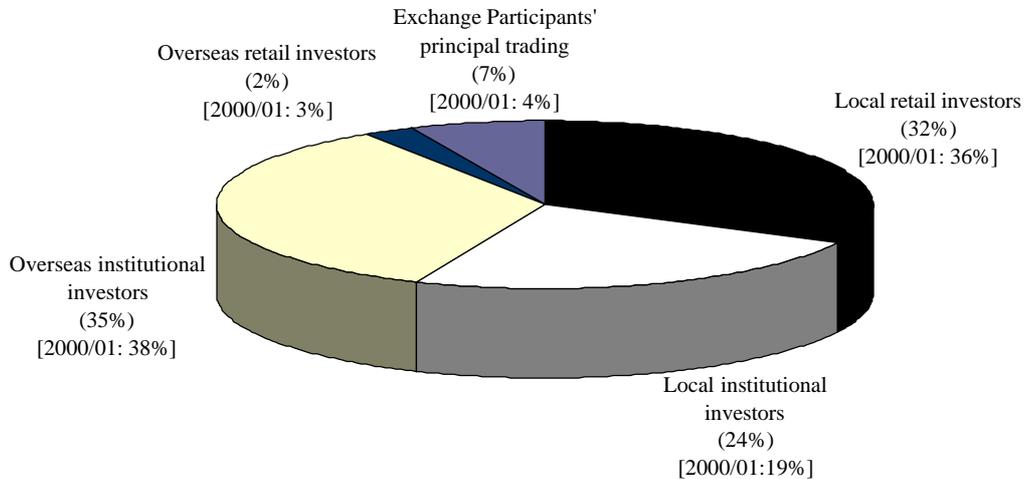


3. DISTRIBUTION OF MARKET TRADING VALUE BY INVESTOR TYPE (FIGURE 1)

Given the sluggish performance of the stock market, the turnover in 2001/02 study period contracted further by 16%. Turnover values of different types of investors dropped by differing degrees, except EPs' principal trading and local institutional trading which recorded an increase. Findings on the distribution by investor type are as below:

- Local investors remained the dominant contributors (56%) to the total market turnover in 2001/02, more or less the same as in 2000/01. The contribution from local retail investors shrank further to 32% in 2001/02, the lowest in the 12 years since the survey began. The contribution from local institutional investors, on the other hand, increased to 24% from 19% in 2000/01 and 18% in 1999/2000.
- Overseas investors' contribution to total market turnover decreased to 37% in 2001/02 from 40% in 2000/01, but was still higher than the 30% in 1999/2000. The contribution came mainly from overseas institutional investors (35% of total market turnover in 2001/02, down from 38% in 2000/01).
- Principal trading increased significantly from 4% in 2000/01 to 7% in 2001/02.

**Figure 1. Distribution of market trading value by investor type
(Oct 2001 - Sep 2002)**



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

**4. BREAKDOWN OF CONTRIBUTION BY TYPE OF TRADE (TABLE 1)**

- Almost two-thirds of agency trading (63%) came from institutional investors, and most of institutional agency trading came from overseas institutions (59%).
- The main source of agency trading was local investors, who contributed 60% of total agency trading. The majority (58%) of local agency trading came from retail investors.
- Retail agency trading was dominated by local investors, who contributed 93% of this type of trade.
- Overseas agency trading was dominated by institutional investors, who contributed 94% of this type of trade.

Table 1. Breakdown of contribution by type of trade

Type of trade	All participants		
	1999/2000	2000/01	2001/02
All trading			
Agency	97.10	96.00	93.35
Principal	2.90	4.00	6.65
	<u>100.00</u>	<u>100.00</u>	<u>100.00</u>
Agency trading			
Retail	53.05	40.47	37.33
Institutional	46.95	59.53	62.67
	<u>100.00</u>	<u>100.00</u>	<u>100.00</u>
Agency trading			
Local	68.91	58.09	60.28
Overseas	31.09	41.91	39.72
	<u>100.00</u>	<u>100.00</u>	<u>100.00</u>
Retail agency trading			
Local	95.87	93.35	93.14
Overseas	4.13	6.65	6.86
	<u>100.00</u>	<u>100.00</u>	<u>100.00</u>
Institutional agency trading			
Local	38.46	34.12	40.70
Overseas	61.54	65.88	59.30
	<u>100.00</u>	<u>100.00</u>	<u>100.00</u>
Local agency trading			
Retail	73.80	65.04	57.69
Institutional	26.20	34.96	42.31
	<u>100.00</u>	<u>100.00</u>	<u>100.00</u>
Overseas agency trading			
Retail	7.05	6.42	6.44
Institutional	92.95	93.58	93.56
	<u>100.00</u>	<u>100.00</u>	<u>100.00</u>

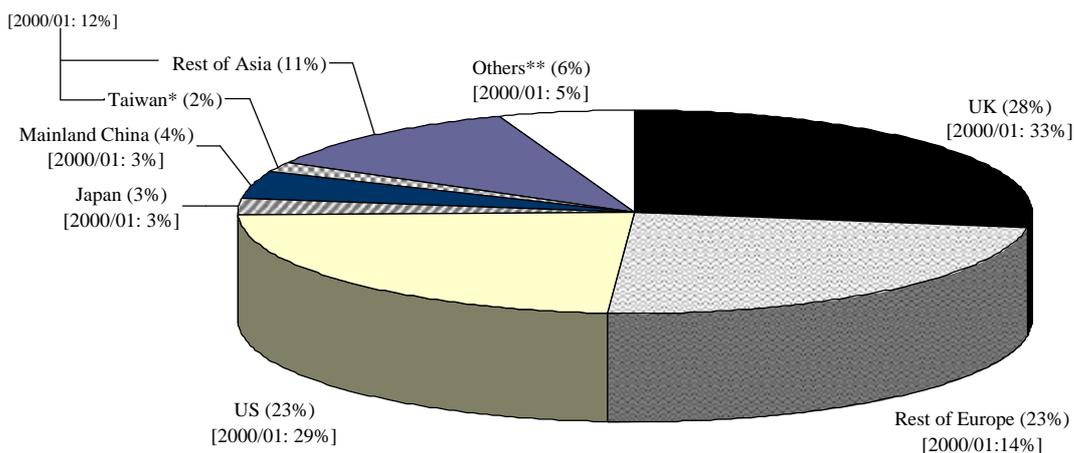


5. DISTRIBUTION OF OVERSEAS AGENCY TRADING BY ORIGIN (FIGURE 2)

Overseas agency trading contributed about 37% of total market turnover value in 2001/02, down from 40% in 2000/01.

- The UK remained the largest source of overseas agency trading (28%, down from 33% in 2000/01), followed by the US (23%, down from 29% in 2000/01). The contribution from the rest of Europe (excluding the UK) expanded significantly from 14% in 2000/01 to 23% in 2001/02. These origins already made up three quarters of overseas agency trading.
- The contribution of Asia to overseas agency trading was 20% in 2001/02, slightly up from 18% in 2000/01. The contribution from the greater China region (Mainland China and Taiwan) amounted to about 6%. Japanese investors remained small players in the Hong Kong stock market, contributing only 3% of overseas agency trading.

Figure 2. Distribution of overseas agency trading by origin (Oct 2001 - Sep 2002)



* Taiwan was added in the 2001/02 survey as a designated origin for the first time, being included in the rest of Asia in previous surveys.

** Includes Australia, British Virgin Islands, Canada, New Zealand and Cayman Islands.

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



6. ONLINE TRADING (FIGURE 3, TABLE 2)

“Online trading” in this survey refers to retail trading originated from orders entered directly by clients and channelled to the brokers via electronic media (e.g. the Internet and mobile phone). This includes 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. Respondents were asked to give the percentage share of their retail agency trading as online trading.

Respondents, who claimed that part of their retail agency trading was channelled online, are defined as online brokers. Statistics on online trading in the market were projected from the percentage share of online trading to retail agency turnover as reported by each respondent, the respondent’s turnover relative to its size group in the sample, and the sample size group’s turnover relative to the total target population.

- Online trading’s contribution increased to 8% of retail agency trading in 2001/02 from 6% in 2000/01 and 2% in 1999/2000. To total market turnover, its contribution increased to 3% in 2001/02, from 2% in 2000/01 and 1% in 1999/2000⁴. The implied online trading value⁵ during the survey period in 2001/02 was HK\$49 billion, up by 6.6% from 2000/01, despite a 16% drop in total market turnover for the period.
- Among the responded sample, none of the large-sized brokers, 8 (or 36%) of medium-sized brokers and 40 (or 15%) of small-sized brokers responded as online brokers. Overall, 17% of all brokers in the responded sample were online brokers, 13% was recorded in 2000/01.

Analysis by broker size group

- Online trading contributed 17% and 11% of all agency business of medium-sized and small-sized online brokers respectively, compared to 14% and 13% respectively in 2000/01.
- 21% of the retail agency trading of medium-sized brokers was channeled online, while the corresponding figure for small-sized brokers was only 13%.
- Among the respondents, the percentage of online brokers requiring manual order re-input dropped significantly — only 3 (8%) small-sized brokers (33% in 2000/01) reported requiring manual re-input.

⁴ “Internet trading” instead of “online trading” was asked in the 1999/2000 survey. However, it is understood that electronic means of order placing other than the Internet was not popular during 1999/2000 survey. Online trading is predominantly conducted via the Internet.

⁵ Calculated by multiplying the actual market turnover during the study period (Oct 2001 – Sep 2002) by the percentage of total turnover as online trading as obtained from the survey.



Figure 3. Percentage share of online trading



* The term “Internet trading” instead of “online trading” was used in the 1999/2000 survey.

Table 2. Statistics on online trading by broker size group (Oct 2001 - Sep 2002)

	2001/02				2000/01			
	Large-sized	Medium-sized	Small-sized	Overall	Large-sized	Medium-sized	Small-sized	Overall
Responded sample size	8	22	259	289	9	30	423	462
<i>Online trading in responded sample *</i>								
Number of online brokers	0	8	40	-	1	12	47	60
Online brokers as % of size group	-	36%	15%	-	11%	40%	11%	13%
Online broker turnover as % of size group turnover	-	31%	32%	-	3%	11%	7%	21%
No. of online brokers normally requiring manual order re-input**	-	0	3	-	0	0	15	15
% of all online brokers	-	0%	8%	-	0%	0%	33%	25%
<i>Online trading in target population</i>								
<i>Among online brokers:</i>								
As % of retail agency trading #	-	21.5%	12.7%	16.7%	-	-	-	17.1%
As % of all agency trading	-	16.7%	11.2%	13.9%	1.1%	14.1%	12.5%	11.6%
As % of total turnover	-	16.6%	11.1%	13.8%	1.0%	12.8%	12.0%	10.8%
<i>Among all brokers:</i>								
As % of retail agency trading #	-	15.3%	5.1%	8.2%	-	-	-	5.8%
As % of all agency trading	-	5.1%	3.6%	3.1%	0.1%	4.2%	2.6%	2.2%
As % of total turnover	-	5.1%	3.5%	2.9%	0.1%	4.0%	2.6%	2.2%

* The survey sample in 2000/01 included the entire target population while that in 2001/02 included all large- and medium-sized brokers and a random sample of small-sized brokers in the target population. An overall figure is not presented for the responded sample in 2001/02 to avoid misleading comparison with the 2000/01 figure.

** For brokers with orders routed to HKEx trading system on a straight-through basis, manual re-input of orders may still be required under special circumstances like orders at above market price, exceptionally large order sizes, odd lots or stock price lower than HK\$0.01.

In the 2000/01 survey, percentage of all agency trading as online trading was asked. In the 2001/02 survey, the percentage of retail agency trading as online trading was asked.



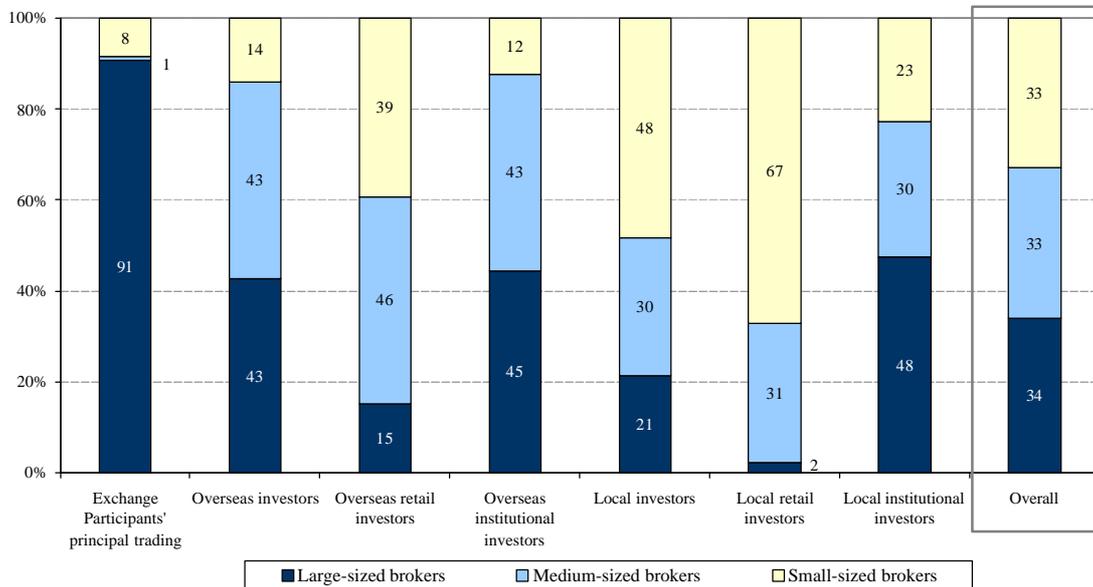
7. DISTRIBUTION OF MARKET TRADING VALUE BY BROKER SIZE GROUP (FIGURES 4 - 6)

EPs in the target population were divided into three groups with equal shares by turnover value — large-, medium- and small-sized brokers. The size groups had different composition of trading value by type of investor and overseas agency trading by origin. The findings by broker size group are as below.

Market share of each size group in each type of trade

- Almost half of local agency trading (48%) was handled by small-sized brokers. The majority of local retail investors’ trading (67%) was processed through small-sized brokers while about half of local institutional investors’ trading (48%) was processed through large-sized brokers.
- Overseas agency trading was mainly processed through large- and medium-sized brokers (43% each). Since overseas agency trading came mainly from institutional investors, the market share by broker size group for overseas institutional trading was more or less the same as that for overall overseas agency trading. Larger proportions of overseas retail trading were handled by medium-sized brokers (46%) and small-sized brokers (39%).
- 91% of EPs’ principal trading came from large-sized brokers.

Figure 4. Distribution of trading value by size group (Oct 2001 – Sep 2002)



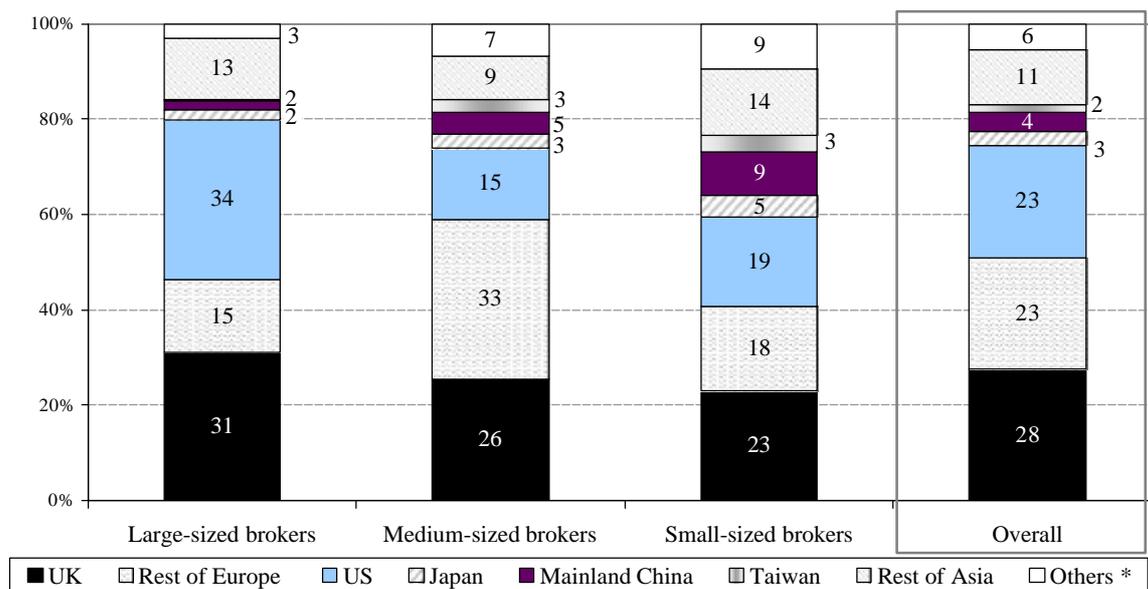
Note: Numbers may not add up to 100% due to rounding.



Composition of overseas agency trading by origin for each size group

- For overseas agency trading, large-sized brokers have a large business share originating from Europe and the US (46% and 34% respectively of overseas agency trading of the size group). Medium-sized brokers have an even larger business share from Europe (59%) but smaller share from the US (15%). Small-sized brokers have a smaller business share from Europe (14%) and the US (19%), but a larger business share from the Asia region (31%).

Figure 5. Distribution of overseas agency trading by origin for each size group (Oct 2001 – Sep 2002)



	Distribution of overseas agency trading by origin for each size group (%)			
	Large-sized brokers	Medium-sized brokers	Small-sized brokers	Overall
Europe	46.33	58.91	40.69	51.00
UK	31.09	25.53	22.90	27.53
Rest of Europe	15.24	33.38	17.79	23.47
US	33.63	14.88	18.76	23.42
Asia	17.14	19.37	31.17	20.07
Japan	1.96	3.22	4.64	2.88
Mainland China	2.04	4.54	9.20	4.13
Taiwan	0.11	2.68	3.39	1.68
Rest of Asia	13.04	8.93	13.95	11.38
Others *	2.89	6.83	9.38	5.51
Overall	100.00	100.00	100.00	100.00

* Includes Australia, British Virgin Islands, Canada, New Zealand and Cayman Islands.

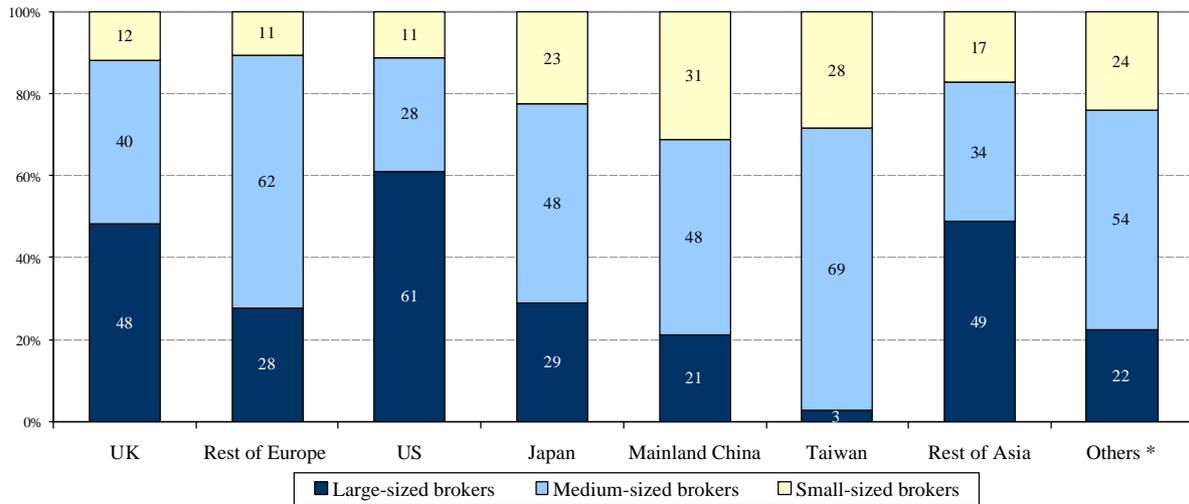
Note: Numbers may not add up to 100% due to rounding.



Market share of each size group in overseas agency trading by origin

- Overseas agency trading was mainly processed by large- and medium- sized brokers (43% each).
- For the major origins of overseas agency trading, trading from the UK was mainly processed through large-sized brokers (48%) and medium-sized brokers (40%); the majority of trading from the rest of Europe (excluding the UK) (62%) was processed by medium-sized brokers; and the majority of trading from the US (61%) was processed by large-sized brokers.
- Medium-sized brokers had a greater market share in trading originating from the Asia region as a whole (42%) than large- and small-sized brokers (36% and 22% respectively). In particular, medium-sized brokers were dominant in processing trading from Japan (48%), Mainland China (48%) and Taiwan (69%); while trading from the rest of Asia (49%) was mainly processed through large-sized brokers.
- Small-sized brokers had the largest market share in overseas agency trading originating from Mainland China (31%) and Taiwan (28%), among all the origins.

Figure 6. Market share of each size group in overseas agency trading by origin (Oct 2001 – Sep 2002)



	Market share of each size group in overseas agency trading by origin (%)			Overall
	Large-sized brokers	Medium-sized brokers	Small-sized brokers	
Europe	38.72	50.12	11.15	100.00
UK	48.13	40.24	11.63	100.00
Rest of Europe	27.68	61.72	10.60	100.00
US	61.21	27.58	11.20	100.00
Asia	36.41	41.88	21.71	100.00
Japan	29.00	48.50	22.50	100.00
Mainland China	21.09	47.76	31.15	100.00
Taiwan	2.68	69.16	28.17	100.00
Rest of Asia	48.82	34.04	17.14	100.00
Others *	22.39	53.81	23.81	100.00
Overall	42.62	43.39	13.98	100.00

* Includes Australia, British Virgin Islands, Canada, New Zealand and Cayman Islands.

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

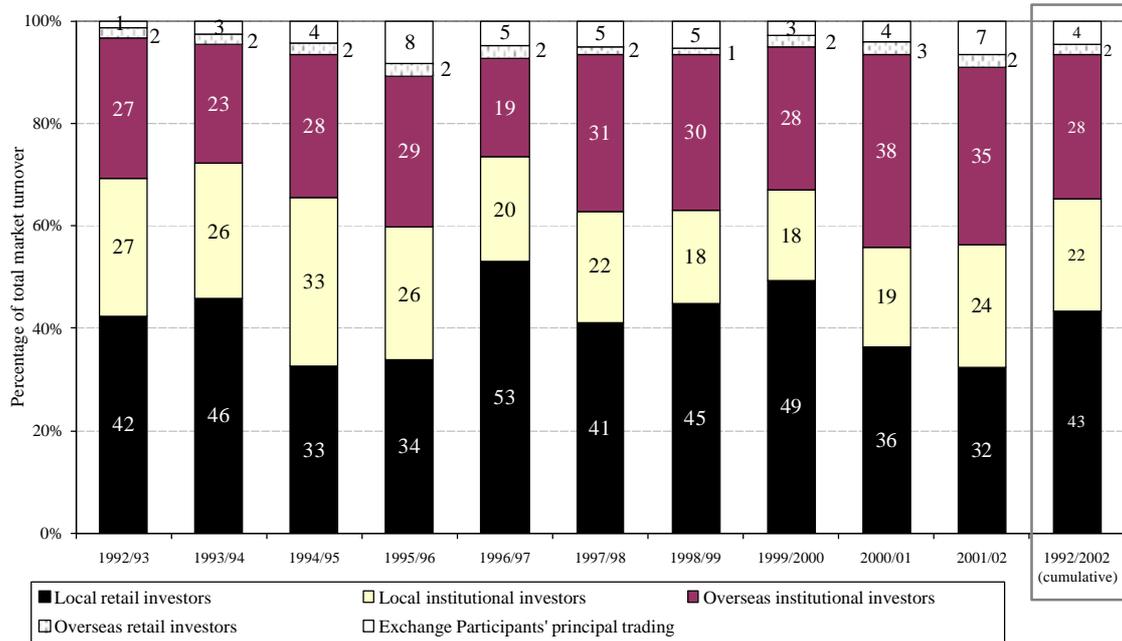


8. DISTRIBUTION OF MARKET TRADING VALUE OVER TIME (FIGURES 7 -10)

- Local investors remained the major contributors to market turnover (56%). Local retail investors were the dominant players — though their contribution declined to 32% of total market turnover in 2001/02, the lowest in the past 12 years since the survey began — contributing 43% of the cumulative market turnover for the past decade.
- Turnover from local retail investors was the most sensitive to the market sentiment across years (see Figure 7). While the market turnover in 2001/02 shrank by 16%, trading by local retail investors dropped by 25% to below one-third of market turnover.
- The contribution from overseas institutions was 28% of cumulative market turnover in the past decade and was 35% of market turnover in 2001/02. For the second year since 2000/01, overseas institutional investors surpassed local retail investors and became the largest contributor to market turnover.
- The principal trading of EPs gained a greater share of market turnover during bearish periods. Its contribution increased for the second year to 7%, the highest level in the past 6 years.
- The contribution from UK investors decreased for four consecutive years from 44% of overseas agency trading in 1997/98 to 28% in 2001/02. Meanwhile, the contribution from rest of Europe expanded to 23%, the highest recorded figure. European investors (UK and other European origins) contributed about 50% of overseas agency trading over the past five years. The US investors were another major group, contributing 23-32% of overseas agency trading from year to year in the past decade.
- The contribution from Mainland China investors increased for three consecutive years, although remaining very low at 4% of overseas agency trading in 2001/02.
- Along with the decrease in the contribution of Japanese investors since 1997/98, the contribution from the Asian region in aggregate has remained at around 20% since the 1997 Asian financial crisis.



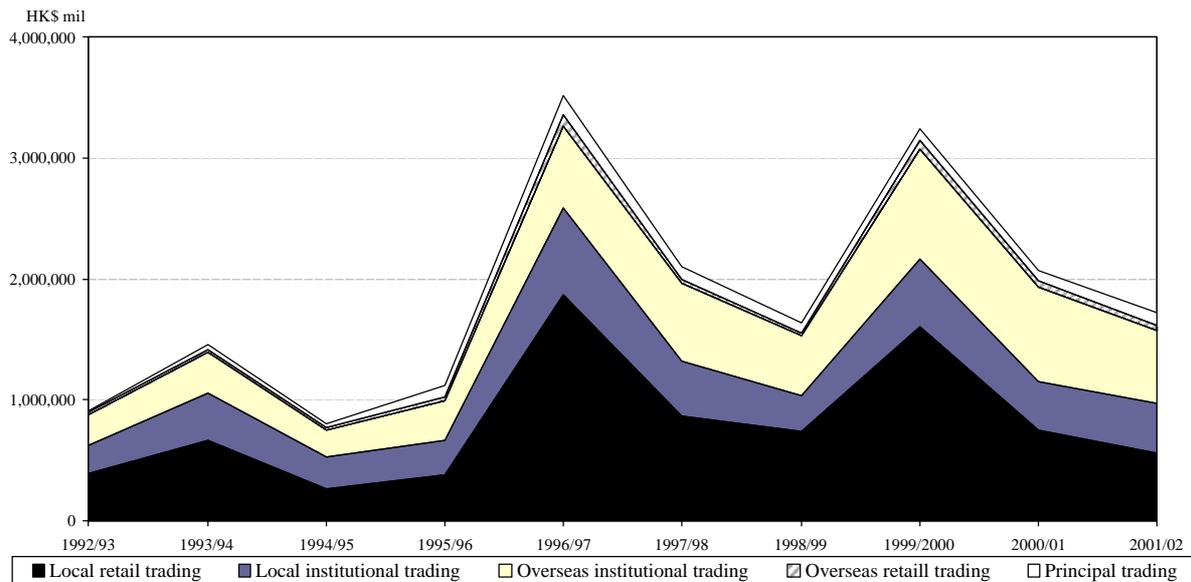
Figure 7. Distribution of trading value by type of investor (1992/93 - 2001/02)



Type	Distribution of trading value by type of investor										1992/2002 cumulative market turnover (%)
	1992/93 %	1993/94 %	1994/95 %	1995/96 %	1996/97 %	1997/98 %	1998/99 %	1999/2000 %	2000/01 %	2001/02 %	
Principal trading	1.43	2.70	4.43	8.43	4.77	5.06	5.38	2.90	4.00	6.65	4.50
Overseas agency trading	29.43	25.15	30.02	31.84	21.85	32.11	31.53	30.19	40.23	37.08	30.36
Retail	1.96	1.85	2.08	2.35	2.49	1.54	1.30	2.13	2.58	2.39	2.11
Institutional	27.47	23.30	27.94	29.49	19.36	30.58	30.23	28.06	37.65	34.69	28.24
Local agency trading	69.14	72.15	65.55	59.73	73.38	62.83	63.09	66.91	55.77	56.27	65.14
Retail	42.40	45.75	32.73	33.76	52.94	41.16	44.87	49.38	36.27	32.46	43.42
Institutional	26.74	26.40	32.81	25.97	20.44	21.67	18.22	17.53	19.50	23.81	21.72

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

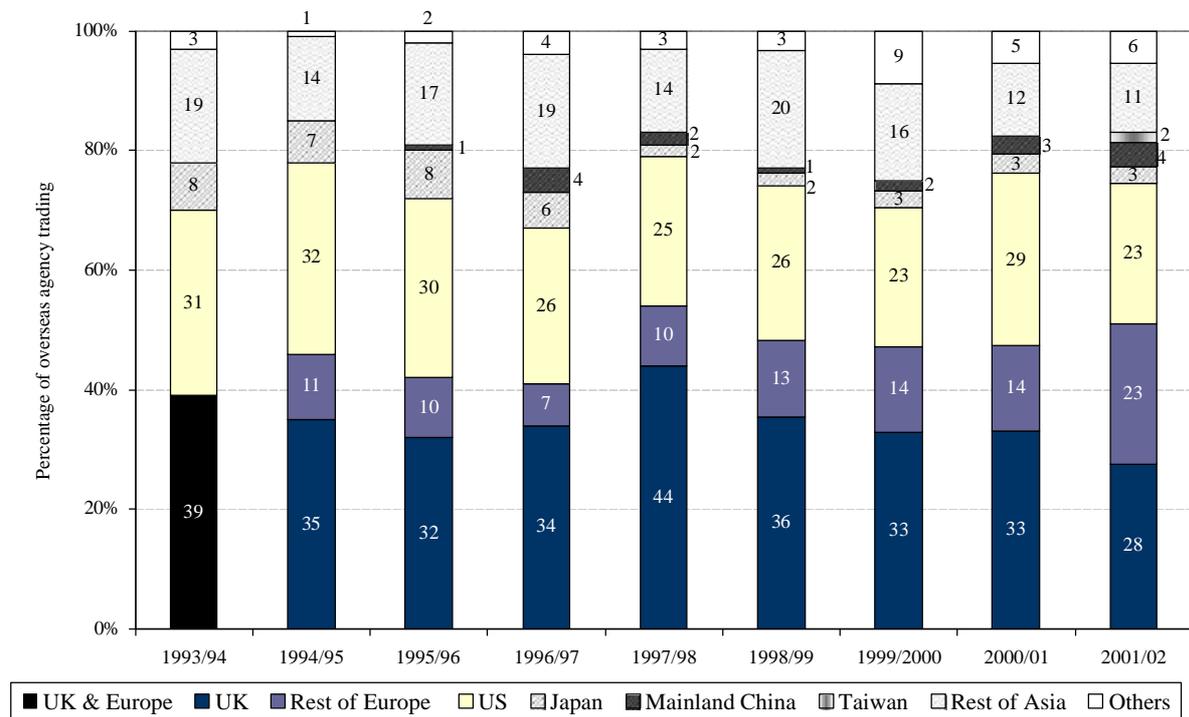
Figure 8. Implied value of trading in the market by type of trade (1992/93 - 2001/02)



Note: The implied value of trading for a particular type of trade is determined by multiplying the percentage contribution to market turnover by that type of trade as obtained from the survey by the total market turnover during the study period for that year of survey.



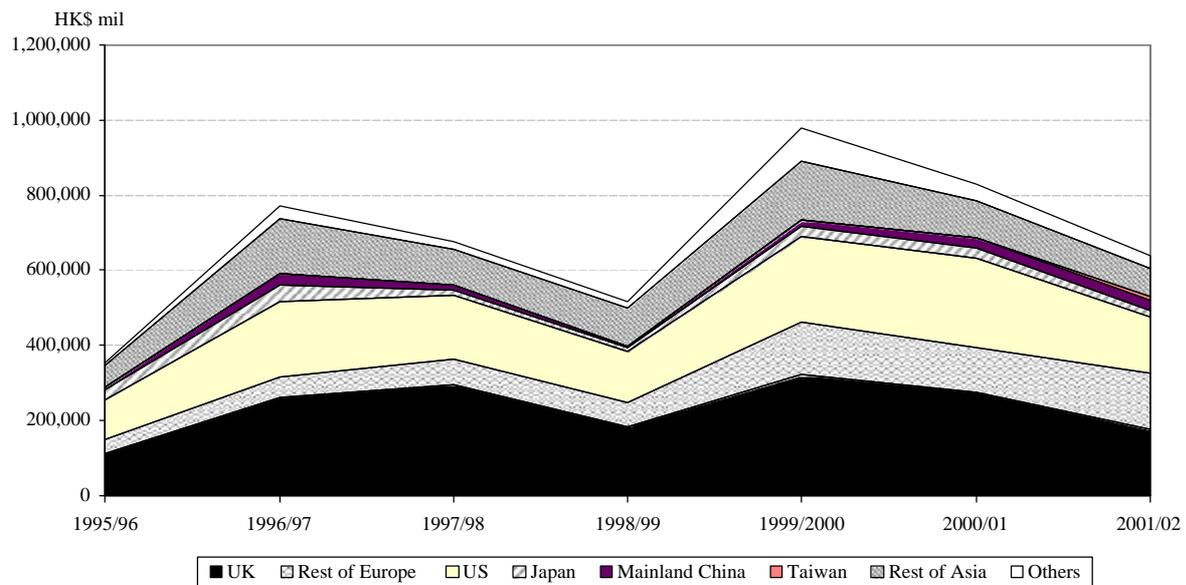
Figure 9. Distribution of overseas agency trading by origin (1993/94 - 2001/02)



Notes:

- (1) UK was combined with Europe in the 1993/94 Survey.
- (2) Mainland China was included in the rest of Asia in the 1993/94 and 1994/95 Surveys.
- (3) Taiwan was included in the rest of Asia in surveys prior to 2001/02 Survey.
- (4) Numbers may not add up to 100% due to rounding.

Figure 10. Implied value of overseas agency trading by origin (1995/96 - 2001/02)



Note: The implied value of trading from a particular origin is determined by first calculating the implied overseas agency trading value during the study period for that year of survey, and then multiplying it by the percentage contribution to overseas agency trading by that origin as obtained from the survey.



GLOSSARY

Principal trading

Trading on the participant firm's own account.

Agency trading

Trading on behalf of the participant firm's clients, including client trading channelled from the firm's parent or sister companies.

Individual / Retail clients

Clients who trade on their personal accounts.

Institutional clients

Clients who are not individual clients.

Local clients

Individual/retail clients residing in Hong Kong or institutional clients operating in Hong Kong
Hong Kong as the source of funds.

Overseas clients

Individual/retail clients residing outside Hong Kong or institutional clients operating outside
Hong Kong overseas as the source of funds.

Online trading

Retail trading originating from orders entered directly by clients and channelled to the brokers via electronic media (e.g. Internet and mobile phone). 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.

Online brokers

Respondents who claimed that part of their retail agency trading was online trading.

Large-sized brokers

Stock Exchange Participants who contributed the top one-third of the total turnover value of the target population for the period October 2001 to September 2002.

Medium-sized brokers

Stock Exchange Participants who contributed the second one-third of the total turnover value of the target population for the period October 2001 to September 2002.

Small-sized brokers

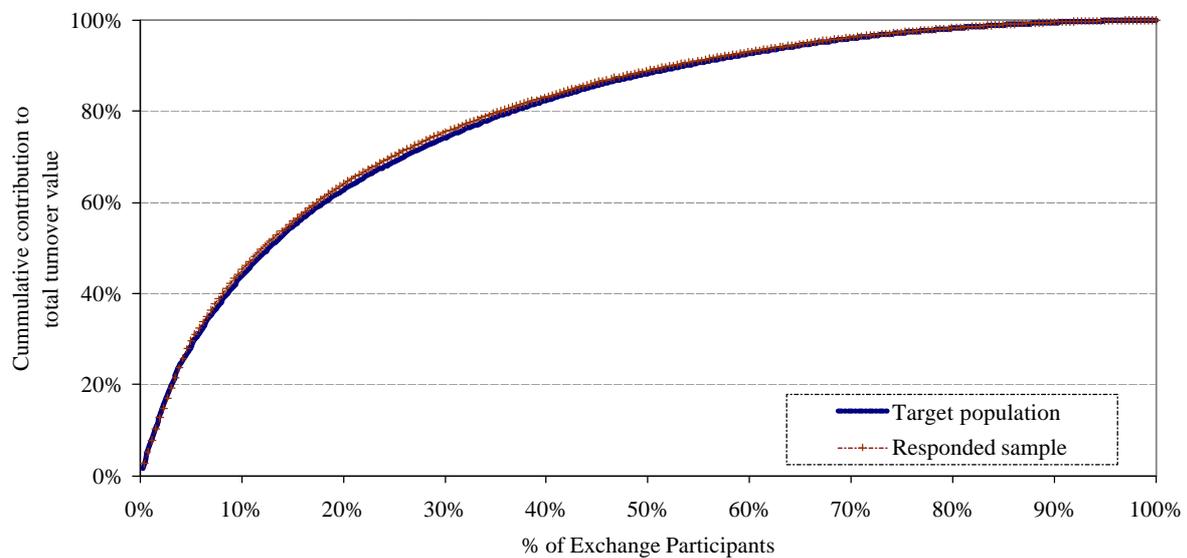
Stock Exchange Participants who contributed the bottom one-third of the total turnover value of the target population for the period October 2001 to September 2002.



Appendix 1. Response rate

Participant group	Target population	Survey sample	Responded sample	Response rate	As % of turnover value in sample	As % of turnover in target population
Large-sized brokers	8	8	8	100.00%	100.00%	100.00%
Medium-sized brokers	23	23	22	95.65%	91.67%	91.67%
Small-sized brokers	428	278	259	93.17%	92.02%	64.33%
All participants	459	309	289	93.53%	94.89%	85.48%

Appendix 2. Representativeness of responded sample to target population of small-sized Exchange Participants





Appendix 3. Survey methodology

1. Target population

- (1) Included all Stock Exchange Participants who became trading participants prior to the end of March 2002 (i.e. who had been in business for over 6 full months during the study period) and remained so at the end of September 2002.
- (2) Excluded participants whose trading was suspended from July 2002 to September 2002 or ceased on or before September 2002 or whose trading was less than 6 months during the study period. This is to avoid distortion of the results by participants who were in an abnormal course of business.
- (3) Each Exchange Participant firm was regarded as one responding unit. A partnership firm operated by two or more individual participants is regarded as one responding unit.

2. Methodology

- (1) The study period is from October 2001 to September 2002.
- (2) Exchange Participants (EPs) in the target population were ranked in descending order of their turnover value and were divided into three groups with equal shares by turnover value — large-sized brokers (contributing the top one-third of turnover in the target population), medium-sized brokers (contributing the second one-third of turnover) and small-sized brokers (contributing the bottom one-third of turnover). To achieve a fairer ranking, the actual turnover of new EPs whose trading periods were less than 12 months during the full-year study period were annualised for the ranking. The actual turnover of the EPs were used in analysing the results.
- (3) The survey sample consisted of all large-sized and medium-sized brokers as well as a random sample covering 60% of small-sized brokers in the target population. Survey questionnaires were mailed to the respective target respondents in the sample.
- (4) Compared to last year's survey where all trading participants in the target population were included in the survey sample, this year's survey adopted a random sampling method for the small-sized brokers in order to reduce the workload on follow-up. In order to provide for refusals, the random sample to whom questionnaires were sent was somewhat larger than 60% to ensure that the resulting responded sample could achieve 60% of the small-sized EP population. As a result, 150 EPs were not included in the survey sample. The use of sampling method is expected to have no significant impact on the quality of the survey findings, given the high sampling ratio and a close follow-up.
- (5) There was close telephone follow-up to ensure a high response rate.



Appendix 3. Survey methodology (cont'd)

- (6) In the survey questionnaire, EPs were requested to provide an estimated percentage breakdown of their trading value during the study period in accordance with the prescribed classification. EPs were requested to provide their consolidated trading composition including trading channelled through their affiliate or sister companies as far as possible, if applicable. For those who were known to have such situation but who refused to provide details, implied percentage figures from the rest of the responses in the same size group were used.
- (7) Each responding EP's answers in percentage terms were weighted by its actual turnover value in order to obtain the relative contribution of each type of trading to total market turnover. The percentages were weighted by the respondent's total turnover value (or retail agency turnover value for online trading) accordingly to obtain respective values in the responded sample. Based on the respective size group's total turnover value in the responded sample relative to that in the target population, the implied percentage shares of different types of trade in the market were then calculated.
- (8) The implied value of trading for a particular type of trade is determined by multiplying the percentage contribution to market turnover by that type of trade as obtained from the survey by the actual total market turnover during the study period for that year of survey.

3. Limitations

- (1) In providing the breakdown of total turnover value by the type of trade, many EPs could only provide their best estimates instead of hard data.
- (2) 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.
- (3) In practice, it is not unusual for EPs to convey client orders to other EPs for execution. When providing the breakdown of their investor composition, most of the EPs would treat those EPs who conveyed orders to them as their ultimate clients, i.e. as local institutions, regardless of the client origin.
- (4) Random sampling used for small-sized EPs is subject to sampling error. Besides, errors would also result from refusals even upon close follow-up. Since the response rates of EPs of different size groups are high, such error should have minimal impact on the findings. *(See appendix 2 for the representativeness of responded sample of target population of small-sized EPs.)*

*** End ***