

TURNOVER OF FOREIGN EXCHANGE AND DERIVATIVES MARKET IN HONG KONG

Hong Kong retained its seventh position in the global foreign exchange market and eighth position taking into account over-the-counter (OTC) derivatives transactions. The average daily net turnover of the foreign exchange and OTC derivatives markets amounted to US\$71 billion in April 2001. Of this total, foreign exchange and OTC derivatives transactions were US\$66.8 billion and US\$4.2 billion respectively.

Introduction

The Triennial Survey of Foreign Exchange and Derivatives Market Activity was conducted in April 2001 as part of a global survey of 48 economies co-ordinated by the Bank for International Settlements. This was the fifth time Hong Kong had participated in the survey. In Hong Kong, 272 participants (366 participants in 1998 survey) took part in the survey, comprising 152 licensed banks, 48 restricted licence banks, 59 deposit-taking companies and 13 major securities houses.

The survey covered data on turnover in spot deals, outright forward contracts, foreign exchange swaps, and OTC currency and interest rate derivatives.

Net Foreign Exchange Turnover

The net foreign exchange turnover¹ of all participating economies decreased to US\$1.2 trillion in April 2001 from US\$1.5 trillion in April 1998, representing a decline of 18.8%. Consistent with the global trend, average daily net turnover of the foreign exchange market in Hong Kong declined by 14.9% to US\$66.8 billion from April 1998.

Key factors identified to have contributed to the decline in foreign exchange turnover include:

- Reduced corporate and customer-driven foreign exchange business amid a slowdown in the global economy.

- Less choice of currency trading following the introduction of the euro.
- Bank consolidation, globally and in Hong Kong, reducing the number of interbank foreign exchange counterparties, and thus the number of reporting dealers. This trend is reflected in the decline in the number of participants in Hong Kong from 366 in 1998 to 272 in 2001 and globally from 3,087 participants in 43 economies in 1998 to 2,772 in 48 economies in 2001.
- Increased use of electronic broking, which is more efficient in providing traders with the best market price in the interbank market.

Hong Kong nonetheless remains one of the leading foreign exchange centres (Table I). It has a market share of 4.1% (4.0% in 1998) of global foreign exchange turnover, following closely after Switzerland with a share of 4.3%, Germany with 5.4%, Singapore with 6.2%, Japan with 9.1%, the United States with 15.6% and the United Kingdom, which remained the top foreign exchange centre, with 31.1%.

Net Over-The-Counter Derivatives Turnover

The global average daily net turnover in OTC derivative transactions (foreign exchange derivatives² and interest rate derivatives³)

¹ Hong Kong's turnover is adjusted for local inter-dealer double counting while the global turnover is adjusted for both local and cross-border inter-dealer double counting and for estimated gaps in reporting.

² Foreign exchange derivatives include currency swaps, currency options and other OTC foreign exchange derivatives.

³ Interest rate derivatives include forward rate agreements, interest rate swaps, OTC interest rate options and other OTC interest rate derivatives.

Table I
Global Average Daily Turnover in Foreign Exchange and Derivatives Market Activity

US\$ billion

Country/Economy	Foreign exchange			OTC derivatives			Total		
	April 2001	April 1998	% change	April 2001	April 1998	% change	April 2001	April 1998	% change
United Kingdom	504	637	-21%	275	171	61%	779	808	-4%
United States	254	351	-28%	135	90	50%	389	441	-12%
Japan	147	136	8%	22	42	-48%	169	178	-5%
Singapore	101	139	-27%	6	11	-45%	107	150	-29%
Germany	88	94	-6%	97	34	185%	185	128	45%
Switzerland	71	82	-13%	15	16	-6%	86	98	-12%
Hong Kong	67	79	-15%	4	4	9%	71	83	-14%
Australia	52	47	11%	12	5	140%	64	52	23%
France	48	72	-33%	67	46	46%	115	118	-3%
Canada	42	37	14%	13	7	86%	55	44	25%
Netherlands	30	41	-27%	25	6	317%	55	47	17%
Sweden	24	15	60%	4	5	-20%	28	20	40%
Denmark	23	27	-15%	6	5	20%	29	32	-9%
Italy	17	28	-39%	24	5	380%	41	33	24%
Luxembourg	13	22	-41%	5	3	67%	18	25	-28%
Norway	13	9	44%	3	3	0%	16	12	33%
Belgium	10	27	-63%	14	6	133%	24	33	-27%
Austria	8	11	-27%	5	4	25%	13	15	-13%
Ireland	8	10	-20%	6	3	100%	14	13	8%
Spain	8	19	-58%	21	4	425%	29	23	26%
Others	90	75	20%	5	5	-7%	95	80	18%
Total "net-gross" turnover ⁽¹⁾	1,618	1,958	-17%	764	475	61%	2,382	2,433	-2%
Estimated global turnover ⁽²⁾	1,210	1,490	-19%	575	375	53%	1,785	1,865	-4%

Notes: (1) Data are adjusted for local inter-dealer double counting ("net-gross" basis).

(2) Data are adjusted for cross-border double counting ("net-net" basis). Estimated global turnover for foreign exchange transactions also includes estimates for less than full coverage within individual reporting economies and for active non-reporting economies.

Figures may not add up due to rounding.

amounted to US\$575 billion, exceeding that of 1998 by 53.3%, due largely to an increase in interest rate derivatives.

In Hong Kong, average daily net turnover in OTC derivatives increased by 9.4% to US\$4.2 billion. The growth in OTC derivatives contrasts with the decline in overall foreign exchange transactions. This reflects the fact that market participants were generally more risk averse and were using derivatives instruments to hedge against

the downside risk of their financial portfolios. Market players were also reported to have keenly promoted new financial products with embedded derivatives instruments.

Types of Foreign Exchange Transactions

Forward transactions comprise a significant portion of the foreign exchange transactions in Hong Kong with a share of 71.6% (60.8% in 1998) compared to spot transactions with 28.4% (39.2%

in 1998). A discussion of the trends in the two types of transactions both in Hong Kong and globally are set out below, together with the quantitative analyses in Table 2 and Chart 1.

Spot transactions

At the global level, turnover in spot deals reduced by 31.9% compared to the 1998 survey. Net turnover in spot deals in Hong Kong also

registered a similar decline of 38.8%. As mentioned above, the general economic slowdown coupled with increased use of electronic broking in the spot interbank market were largely responsible for the reduction in spot transactions.

Forward transactions

Owing mainly to the reduction in the volume of foreign exchange swaps, the global turnover in

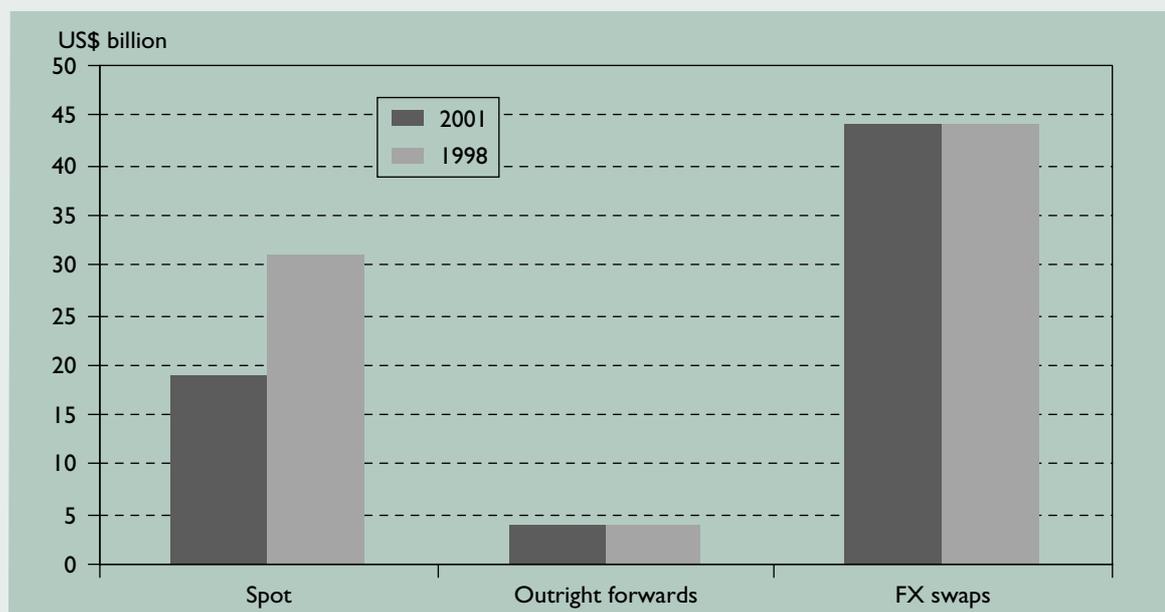
Table 2
Average Daily Net Turnover of Foreign Exchange by Transaction Type

US\$ billion

	Turnover in Hong Kong			Global turnover		
	April 2001	April 1998	% change	April 2001	April 1998	% change
Spot	19	31	-38.8%	387	568	-31.9%
Forwards	48	48	0.6%	787	862	-8.7%
Outright forwards	4	4	3.9%	131	128	2.3%
Foreign exchange swaps	44	44	0.3%	656	734	-10.6%
Estimated reporting gaps	-	-	-	36	60	-40.0%
Total foreign exchange transactions	67	79	-14.9%	1,210	1,490	-18.8%

Note: Average daily net turnover has been adjusted for local inter-dealer double reporting.

Chart 1
Average Daily Net Turnover of Foreign Exchange by Transaction Type



Note: Average daily net turnover has been adjusted for local inter-dealer double reporting.

forwards reduced by 8.7%. However, lifted by increases in transactions in both outright forwards and foreign exchange swaps, net turnover of forward transactions in Hong Kong edged up marginally by 0.6%, compared with a decrease of 14.6% in 1998. As with the global position, foreign exchange swaps accounted for the majority of forward transactions in Hong Kong.

A large proportion of forward transactions in Hong Kong was short-dated with 64.6% maturing within seven days and only 1.8% maturing over one year (Table 3). This characteristic was more apparent in foreign exchange swaps as most of the foreign exchange swaps were linked to short-dated money market deals and were often used to hedge currency risk and to manage liquidity. Forward transactions in other major markets such as the United States also consisted largely of short maturities.

Types of OTC Derivatives Transactions

Interest rate derivatives continued to account for the larger share (63.3%) of the OTC derivatives

market in Hong Kong compared to foreign exchange derivatives which accounted for a share of 36.6% (Table 4).

While the OTC derivatives market in Hong Kong is small compared to the global OTC derivatives market, as can be seen from Table 1, both the foreign exchange derivatives market and the interest rate derivatives market in Hong Kong have recorded some growth. Turnover in the foreign exchange derivatives market grew by 14.5% to reach US\$1.5 billion while the turnover in interest rate derivatives expanded by 8.3% over the three-year period to US\$2.6 billion (Table 4). Much of the increase in turnover in foreign exchange derivatives in Hong Kong was contributed by currency swaps, which grew by 41.7% over the three years, although it was from a small base. Within interest rate derivatives, the turnover of forward rate agreements and OTC options also rose from a small base by 31.6% and 129.7% respectively while interest rate swaps dropped by 2.3%. Interest rate swaps, nonetheless, still represent the largest segment of interest rate derivatives transacted.

Table 3
Average Daily Net Turnover of Forward Transactions by Maturity Breakdown

US\$ billion

	Average daily net turnover			% share	
	April 2001	April 1998	% change	April 2001	April 1998
Outright forwards	3.9	3.7	3.9%	100%	100%
Up to and for 7 days	1.2	1.6	-26.7%	31.2%	44.3%
Over 7 days and up to and for 1 year	2.5	2.0	22.1%	63.6%	54.1%
Over 1 year	0.2	0.1	231.6%	5.2%	1.6%
Foreign exchange swaps	44.0	43.9	0.3%	100%	100%
Up to and for 7 days	29.7	31.8	-6.5%	67.5%	72.4%
Over 7 days and up to and for 1 year	13.7	11.7	16.6%	31.0%	26.7%
Over 1 year	0.6	0.4	69.9%	1.5%	0.9%
Total forward transactions	47.9	47.6	0.6%	100%	100%
Up to and for 7 days	30.9	33.4	-7.5%	64.6%	70.2%
Over 7 days and up to and for 1 year	16.1	13.7	17.4%	33.7%	28.8%
Over 1 year	0.8	0.4	92.0%	1.8%	0.9%

Notes: Average daily net turnover has been adjusted for local inter-dealer double reporting.
Figures may not add up to total due to rounding.

Table 4
Average Daily Net Turnover of OTC Derivatives by Transaction Type

US\$ billion

	Average daily net turnover			% share	
	April 2001	April 1998	% change	April 2001	April 1998
Foreign exchange derivatives	1.5	1.3	14.5%	36.6%	35.0%
Currency swaps	0.5	0.4	41.7%	11.9%	9.2%
OTC options	1.0	1.0	4.7%	24.7%	25.8%
Interest rate derivatives	2.6	2.4	8.3%	63.3%	63.9%
Forward rate agreements	0.5	0.4	31.6%	12.7%	10.6%
Interest rate swaps	1.9	1.9	-2.3%	45.4%	50.8%
OTC options	0.2	0.1	129.7%	5.2%	2.5%
“Other” OTC derivatives products	0.004	0.044	-90.9%	0.0%	0.1%
Foreign exchange derivatives	0.004	0.043	-90.3%	0.0%	0.1%
Interest rate derivatives	-	0.001	-100.0%	0.0%	0.0%
Total OTC derivatives products	4.2	3.8	9.4%	100%	100%

Note: Average net daily turnover has been adjusted for local inter-dealer double reporting except for “other” OTC derivatives products which are residual OTC derivatives not categorised in the survey and are recorded on a gross basis, i.e. not adjusted for inter-dealer double counting.

There has been a greater awareness of foreign currency and interest rate risk since the Asian crisis. The introduction of new financial products such as structured notes which include an option or swap element, equity linked notes, and HIBOR-linked deposits have received a good market response and have contributed to the growth of the derivatives market. Increased activities in the fixed income market, in particular with the continuing development of the Hong Kong dollar bond market, have also encouraged the use of interest rate derivatives. Borrowers of longer-term fixed rate money may employ interest rate derivatives to hedge against interest rate risks, particularly in a declining interest rate environment. Some international borrowers may also have combined the interest rate derivative with a currency swap. The growing use of derivative products to hedge the risks is however somewhat limited by the range of tools available and the depth of the market in Hong Kong and the region generally. The growth is thus not high in absolute terms compared to some of the more advanced countries or to the global figures.

The global turnover in the foreign exchange derivatives market contracted by 30.9% and global interest rate derivatives grew by 84.5%. The divergent trend resulted in interest rate derivatives accounting for an even larger share of the total OTC derivatives market at 85.0%, compared to 70.7% three years ago. The decline in global turnover of foreign exchange derivatives was mainly concentrated in the US dollar and Japanese yen currency pair. The disappearance of the euro legacy currencies also contributed to the decrease in currency options. Global interest rate derivative activity on the other hand expanded significantly, largely due to the buoyancy of interest rate swaps and a deepening of the market as market participants switched to more effective hedging and trading tools. The development of a range of new instruments in interest rate derivatives in the more advanced countries also contributed to this growth.

Currency Composition

In the global foreign exchange market, US dollar against the euro was the most commonly

traded currency pair (market share of 30%), followed by US dollar against Japanese yen (20%) and US dollar against sterling (11%). In Hong Kong, trading between the Hong Kong dollar and the US dollar replaced the US dollar against Japanese yen to become the most heavily traded foreign currency pair. This currency pair accounted for 36.3% of the average net daily foreign exchange turnover, up from 22.3% in 1998. US dollar against Japanese yen, the second most commonly traded currency pair in Hong Kong, had a market share of 19.1%, followed by US dollar against euro with 15.3%. Table 5 and Chart 2 set out a

detailed analysis of turnover of the foreign exchange contracts in Hong Kong by currency pairs.

Trading in the Hong Kong dollar against the US dollar has grown more active as a result of shifts in trading strategies. This is reflected in the increase of 38.8% in trades between these two currencies. Turnover in US dollar against Japanese yen shrank by 35.2%. Reduced activity by the Japanese financial institutions in Hong Kong arising from consolidation, as well as reduced demand for the Japanese yen by overseas investors in view of

Table 5
Average Daily Net Turnover of Foreign Exchange and Foreign Exchange Derivatives
by Currency Pair

US\$ billion

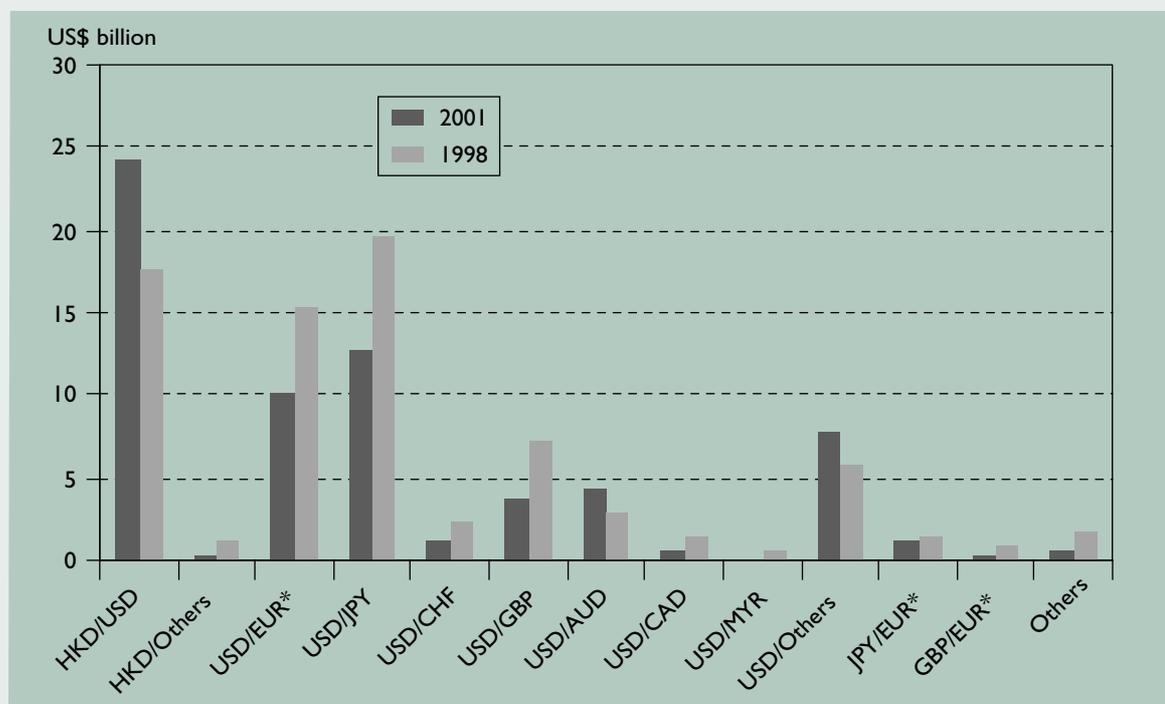
	Foreign Exchange					Foreign Exchange Derivatives				
	April 2001	% share	April 1998	% share	% change	April 2001	% share	April 1998	% share	% change
Hong Kong dollar against:										
US dollar	24.3	36.3%	17.5	22.3%	38.8%	0.43	28.2%	0.22	16.8%	92.4%
Others	0.3	0.5%	1.2	1.6%	-74.1%	0.01	0.5%	0.00	0.1%	437.3%
Subtotal	24.6	36.8%	18.7	23.8%	31.4%	0.44	28.7%	0.23	16.9%	94.7%
US dollar against:										
euro*	10.2	15.3%	15.3	19.5%	-33.5%	0.20	13.2%	0.06	4.6%	224.9%
Japanese yen	12.8	19.1%	19.7	25.1%	-35.2%	0.33	21.5%	0.65	48.5%	-49.2%
Swiss franc	1.1	1.7%	2.4	3.1%	-54.7%	0.02	1.2%	-	0.0%	n.a.
Pound sterling	3.7	5.5%	7.3	9.2%	-49.0%	0.04	2.3%	-	0.0%	n.a.
Australian dollar	4.2	6.3%	2.9	3.7%	44.8%	0.18	11.5%	-	0.0%	n.a.
Canadian dollar	0.6	0.9%	1.4	1.8%	-54.8%	0.01	0.5%	-	0.0%	n.a.
Malaysia ringgit	0.0	0.0%	0.7	0.9%	-99.8%	-	0.0%	-	0.0%	n.a.
Others (excluding Hong Kong dollar)	7.7	11.6%	5.8	7.3%	34.1%	0.24	15.8%	0.32	24.0%	-24.7%
Subtotal	40.4	60.4%	55.5	70.7%	-27.3%	1.01	66.0%	1.03	77.2%	-2.1%
Cross currencies (excluding Hong Kong dollar and US dollar):										
Japanese yen / euro*	1.1	1.7%	1.5	2.0%	-25.5%	0.03	1.9%	-	0.0%	n.a.
Pound sterling / euro*	0.2	0.2%	1.0	1.3%	-85.0%	0.01	0.5%	-	0.0%	n.a.
Others	0.6	0.9%	1.7	2.2%	-66.1%	0.04	2.7%	0.08	5.8%	-45.7%
Subtotal	1.9	2.8%	4.3	5.5%	-56.1%	0.08	5.2%	0.08	5.8%	2.2%
All currency pairs	66.8	100%	78.6	100%	-14.9%	1.53	100%	1.34	100.0%	14.5%

Notes: Average daily net turnover has been adjusted for local inter-dealer double reporting.

Figures may not add up to total due to rounding.

* Since the data in April 1998 were in respect of Deutsche mark transactions, (other major European currencies were captured in "others" item), data in April 2001 are not strictly comparable to the earlier data.

Chart 2
Average Daily Net Turnover of Foreign Exchange by Currency Pair



Note: In USD/Others currency pair, "others" exclude HKD.

* Since the data in April 1998 were in respect of Deutsche mark transactions (other major European currencies were captured in "others" item), data in April 2001 are not strictly comparable to the earlier data.

the weak Japanese stock market appear to have contributed to the decline. Global trades in the US dollar against Japanese yen also saw a 10.5% decline compared to 1998. Although a detailed breakdown of the trades in all euro constituent currencies was not collected in the Hong Kong survey, trading between the US dollar and the euro was lower than trading of US dollars against Deutsche mark and other euro constituent currencies taken together in 1998. In the global market, turnover of contracts denominated in the euro was also lower than that of all euro constituent currencies taken together in 1998.

In relation to foreign exchange derivative transactions, Hong Kong dollar against the US dollar was the most frequently traded currency pair, representing 28.2% of all foreign exchange derivative transactions (Table 5 and Chart 2). In terms of interest rate derivative transactions, Hong

Kong dollar contracts increased sharply by 109.7% and surpassed US dollar contracts to account for the largest share (59.3%) of total interest rate derivative turnover (Table 6). The surge in Hong Kong dollar interest rate derivatives was attributable to the need to hedge against interest rate risk following increased activity in the fixed income market and the promotion of option embedded financial products.

Types of Counterparty

Global foreign exchange contracts transacted among reporting dealers⁴ reduced by 24.2% and represented 58.7% of total global foreign exchange transactions. Consistent with the global results, a large portion (84.9%) of the foreign exchange transactions in Hong Kong was concluded with reporting dealers⁵ although their turnover reduced by 15.1% (Table 7). The contraction could in part

4 Global reporting dealers are institutions participating in the global survey.

5 Reporting dealers are all Authorized Institutions (AIs) and major securities houses participating in the survey.

Table 6
Average Daily Net Turnover of Single-currency Interest Rate Derivatives

US\$ million

	Average daily net turnover				
	April 2001	% share	April 1998	% share	% change
Hong Kong dollar	1.6	59.3%	0.7	30.7%	109.7%
US dollar	0.8	32.0%	1.2	47.2%	-26.5%
euro	0.04	1.5%	0.2	7.8%	-78.9%
Japanese yen	0.05	1.7%	0.3	11.3%	-83.5%
Others	0.1	5.4%	0.1	3.0%	98.7%
All currencies	2.6	100%	2.4	100%	8.4%

Notes: Average daily net turnover has been adjusted for local inter-dealer double reporting.
Figures may not add up to total due to rounding.

be explained by the growing role of electronic brokers in the interbank market. For the OTC derivatives market, contracts concluded with reporting dealers also made up the bulk of turnover both in Hong Kong (82.4%) and in the global market (63.7%) (Table 7).

Reflecting Hong Kong's status as an international financial centre, the majority of the trades were cross-border in nature as in previous surveys. Of all foreign exchange and OTC derivatives trades, 73.5% were concluded with overseas counterparties.

The share of total gross foreign exchange transactions conducted through brokers (including electronic brokers) rose to 42.4% from 36.7% in 1998. The remainder were transactions conducted bilaterally between counterparties. Deals conducted through electronic-based systems (EBS)⁶ accounted for 75.1% of turnover in foreign exchange transactions⁷ and 3.2% of turnover in interest rate derivatives. This reflects the importance of EBS in foreign exchange trading. In April 2001, EBS handled 44.7% of spot transactions and almost one-third (30.4%) of foreign exchange swaps.

Market Concentration

Market concentration increased between 1998 and 2001. The combined market share of gross foreign exchange and OTC derivatives turnover of the top ten market players rose to 67.8% from 52.6% in 1998 and for the top thirty market players to 88.7% from 79.3%. The trend is consistent with other major foreign exchange and derivatives markets such as Japan and the United Kingdom, where a considerable proportion of the net daily turnover was concentrated in the top ten market players and the concentration level also saw an increase over the three-year period.

Overseas incorporated Authorized Institutions (AIs) participating in the survey accounted for 64.9% (72.8% in 1998) of all foreign exchange and derivatives trades. Locally incorporated AIs made up 21.9% (22.0% in 1998) and securities houses accounted for the remaining 13.2% (5.2% in 1998) (Chart 3).

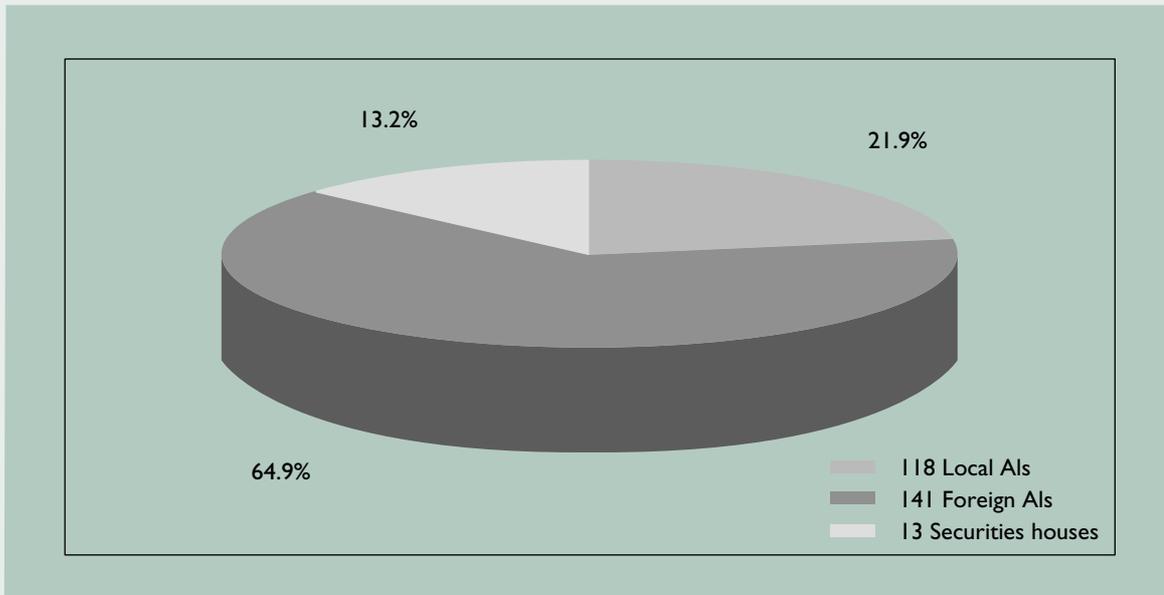
Conclusion

Structural changes in the foreign exchange market arising from consolidation in the banking

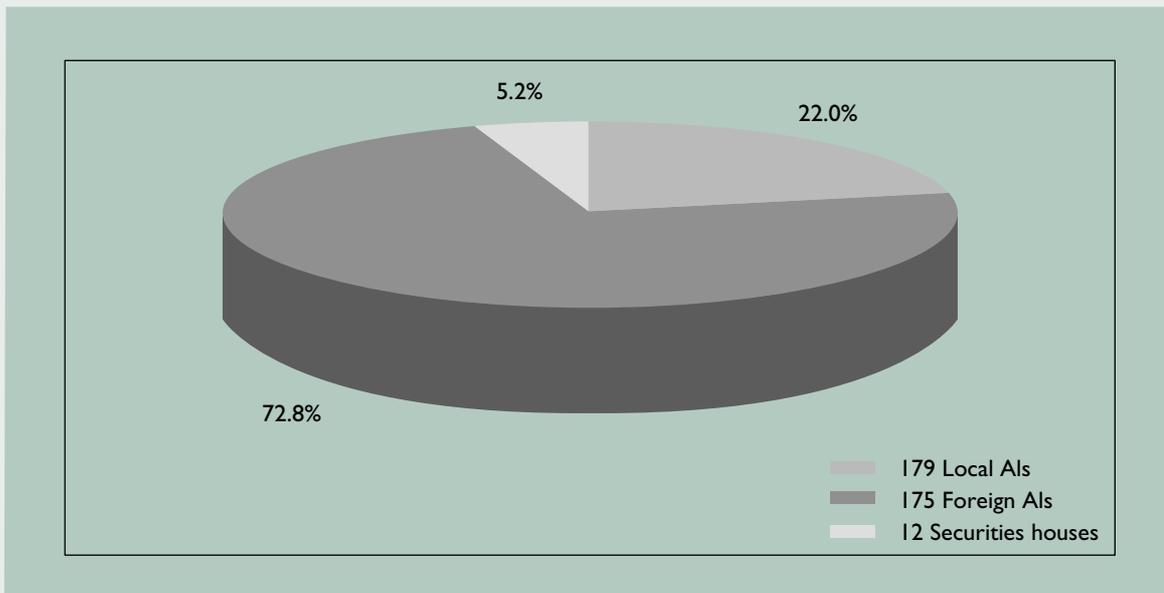
6 Automated electronic order matching systems and other screen based systems.

7 Comprised spot transactions and foreign exchange swaps only, i.e. outright forwards are excluded.

Chart 3
**Relative Shares of Average Daily Gross Turnover of
 Foreign Exchange and OTC Derivatives by Reporting Dealer
 (a) (2001)**



(b) (1998)



Note: Average daily gross turnover has not been adjusted for local inter-dealer double reporting.

Table 7
Average Daily Net Turnover of Foreign Exchange and OTC Derivatives by Counterparty

US\$ million

	Average daily net turnover			% share	
	April 2001	April 1998	% change	April 2001	April 1998
<i>Foreign exchange</i>					
With reporting dealers	56,703	66,796	-15.1%	84.9%	85.0%
Local	13,185	12,902	2.2%	19.7%	16.4%
Cross-border	43,519	53,894	-19.3%	65.1%	68.6%
With "other" financial institutions	6,179	2,977	107.5%	9.2%	3.8%
Local	1,722	1,536	12.1%	2.6%	2.0%
Cross-border	4,457	1,441	209.2%	6.7%	1.8%
With non-financial customers	3,941	8,781	-55.1%	5.9%	11.2%
Local	2,888	7,822	-63.1%	4.3%	10.0%
Cross-border	1,053	959	9.7%	1.6%	1.2%
Total foreign exchange turnover	66,823	78,555	-14.9%	100%	100%
<i>OTC derivatives</i>					
With reporting dealers	3,437	3,085	11.4%	82.4%	80.9%
Local	690	368	87.6%	16.5%	9.6%
Cross-border	2,747	2,717	1.1%	65.8%	71.2%
With "other" financial institutions	387	234	65.4%	9.3%	6.1%
Local	91	82	11.1%	2.2%	2.1%
Cross-border	296	152	94.9%	7.1%	4.0%
With non-financial customers	345	452	-23.7%	8.3%	11.8%
Local	214	359	-40.3%	5.1%	9.4%
Cross-border	130	93	39.9%	3.1%	2.4%
<i>"Other" OTC derivatives products</i>	4	44	-90.9%	0.1%	1.2%
Total OTC derivatives turnover	4,173	3,815	9.4%	100%	100%

Notes: Average daily net turnover has been adjusted for local inter-dealer double reporting.

Figures may not add up to total due to rounding.

Reporting dealers are all AIs and major securities houses that participated in the survey.

"Other" financial institutions are financial institutions other than reporting dealers.

"Other" OTC derivatives products are residual OTC derivatives products not categorised in the survey and are recorded on a gross basis, i.e. not adjusted for inter-dealer double counting.

industry, the replacement of major European currencies with the euro and increased use of electronic broking coupled with a slowing global economy appear to be the main factors contributing to the decline in foreign exchange turnover in Hong Kong. Hong Kong's experience is however no different from global trends, as

can be seen from the results of the global survey. Hong Kong, with its sound financial infrastructure, remains a key centre for foreign exchange activities. 

- Prepared by the Banking Policy Department