

The Foreign Exchange and Derivatives Markets in Hong Kong

by the Banking Supervision Department

Hong Kong was the third largest over-the-counter (OTC) interest rate derivatives market and the fourth largest foreign exchange (FX) market globally, according to the latest Triennial Central Bank Survey of Foreign Exchange and Derivatives Market Turnover¹ conducted by the Bank for International Settlements (BIS) in April 2019 (Exhibit 1).

The survey results indicated that the average daily turnover of FX transactions in Hong Kong increased by 44.8% from US\$436.6 billion in April 2016 to US\$632.1 billion in April 2019. For OTC interest rate derivatives, the average daily turnover in Hong Kong increased nearly threefold from US\$109.8 billion in April 2016 to US\$435.9 billion in April 2019.

In addition, Hong Kong maintained its lead as the largest offshore renminbi FX and interest rate derivatives market. The average daily turnover of renminbi FX transactions increased by 39.6% from US\$77.1 billion in April 2016 to US\$107.6 billion in April 2019. The average daily turnover of renminbi OTC interest rate derivatives transactions doubled from US\$6.2 billion in April 2016 to US\$12.7 billion in April 2019.

The major results for Hong Kong are presented in the form of tables and charts (see Exhibits 2 to 11).

Globally, the average daily turnover of FX transactions increased by about 30% to US\$6.6 trillion in April 2019 from US\$5.1 trillion in April 2016. FX swaps (US\$3.2 trillion per day) continued to be the most actively traded FX instruments, followed by spot transactions (US\$2.0 trillion per day). The US dollar remained the dominant trading currency in the global FX market.

For global OTC interest rate derivatives, the average daily turnover increased by 143% from US\$2.7 trillion in April 2016 to US\$6.5 trillion in April 2019. Interest rate swaps remained the most actively traded interest rate instruments, with an average daily turnover of US\$4.1 trillion.

Detailed global results are available on the BIS website (<http://www.bis.org>).

¹ A total of 53 central banks and monetary authorities (including the Hong Kong Monetary Authority) participated in the global triennial survey, which is a comprehensive source of information on the size and structure of the global FX and OTC interest rate derivatives markets. The triennial survey collected turnover data in FX (spot, outright forwards, FX swaps, currency swaps and currency options) and OTC interest rate derivatives (forward rate agreements, interest rate swaps and interest rate options) markets.

BOX 1**BIS Triennial Survey of FX and Derivatives Market Turnover**

The BIS Triennial Survey of FX and Derivatives Market Turnover is a widely cited source for assessing FX markets. Participation in the survey is one of the recommendations of the G20 under the Data Gaps Initiative, and the survey results were referenced by the International Monetary Fund when considering inclusion of the renminbi into its Special Drawing Rights currency basket in 2015. The survey collects FX turnover data through central banks and other authorities in 53 jurisdictions around the world. The reporting institutions include large commercial and investment banks as well as securities dealers.

It calculates the average daily turnover using gross notional amounts² of new FX spot and OTC derivatives transactions (i.e., forwards, swaps, options, etc.) entered into during the survey period. The turnover is also adjusted to exclude the double counting of inter-dealer transactions reported by local dealers. The location of a trade is classified based on the location of the sales desk, regardless of where the trades are booked (some banks centralise the back-end booking of all derivatives trades in one single location). Therefore, the turnover data can be seen as a rough proxy for market liquidity.

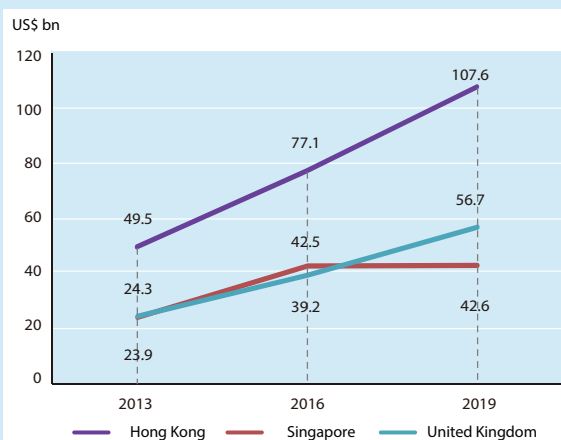
² Netting arrangements and offsets are ignored.

BOX 2**Hong Kong as the Leading Renminbi FX Centre**

The BIS Triennial Survey results show that Hong Kong continues to be the largest offshore renminbi FX market, with an average daily turnover of US\$107.6 billion in April 2019. In fact, Hong Kong has topped the league table since 2013 (see Chart B2.1), when the BIS Triennial Survey began collecting comprehensive data on renminbi FX transactions. This is mainly due to Hong Kong's deep offshore renminbi liquidity pool (roughly half the world's stock of offshore renminbi³) which is critical to efficient FX transactions. The average daily turnover of the renminbi Real Time Gross Settlement system of over RMB1,100 billion also demonstrates the huge volume of renminbi financial activities being supported by Hong Kong's offshore renminbi market.

Other alternative indicators?

In addition to the BIS Triennial Survey, there are other occasional sets of statistics providing some reference to renminbi business activities, such as those compiled by SWIFT (the SWIFT RMB Tracker). By tracking its MT 103 and MT 202 messages⁴, SWIFT compiles statistics on real money flow in different currencies. The results show that over 70% of global renminbi payments in recent years were consistently handled in Hong Kong. Another set of statistics compiled by SWIFT looks at the share of FX transactions for different locations by tracking data embedded in its MT 300 messages⁵, which are commonly used for FX confirmations (excluding options transactions). The location of a trade is determined by the SWIFT address (the 8-character Business Identifier Code (BIC8)) of the sender and receiver of the MT 300 message. However, it should be noted that the data collected does not necessarily reflect the geographical location where an FX transaction is arranged or executed.

Chart B2.1**OTC FX turnover in renminbi**

Source: BIS Triennial Survey

³ Data as at the end of 2018 according to the incomplete statistics cited in the *2019 RMB Internationalisation Report* published by the People's Bank of China.

⁴ MT 103 is sent by the financial institution on behalf of the ordering customer to instruct a fund transfer; MT 202 is used to request the movement of funds between financial institutions.

⁵ MT 300 is used to confirm information agreed to in the buying/selling of two currencies, including

- i) confirming the details of a new contract between the parties,
- ii) confirming an exercised foreign currency option,
- iii) confirming the details of a post-trade event,
- iv) confirming the details of an amendment to a previously sent confirmation,
- v) cancelling a previously sent confirmation, and
- vi) reporting to a trade repository.

EXHIBIT 1**Average daily turnover of the global FX and OTC interest rate derivatives markets (by geographical distribution)**

Hong Kong advanced one place to be ranked third globally for OTC interest rate derivatives turnover, and remained the fourth largest global FX market.

(US\$ billion)

Jurisdiction	Foreign exchange			Interest rate derivatives		
	April 2019		April 2016	April 2019		April 2016
	Rank	Amount	Amount	Rank	Amount	Amount
United Kingdom	1	3,576	2,406	1	3,670	1,180
United States	2	1,370	1,272	2	2,356	1,241
Singapore	3	640	517	7	116	58
Hong Kong SAR	4	632	437	3	436	110
Japan	5	376	399	4	135	56
Switzerland	6	276	156	10	32	8
France	7	167	181	6	120	141
China	8	136	73	14	16	4
Germany	9	124	116	9	56	31
Australia	10	119	121	8	97	56
Canada	11	109	86	5	123	33
The remaining 42 jurisdictions		775	749		166	120
Total turnover^{1&2}		8,301	6,514		7,324	3,039
Estimated global turnover³		6,595	5,066		6,505	2,677

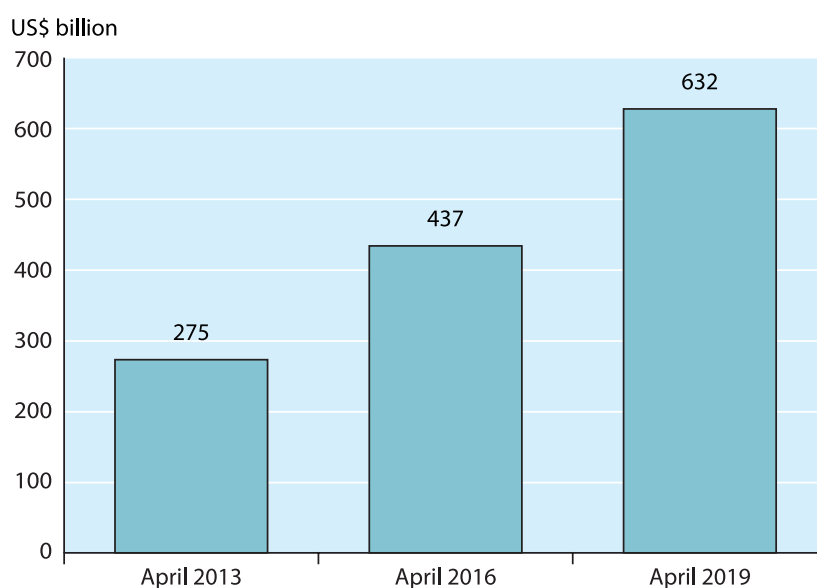
Notes:

1. Data have been adjusted to exclude double counting of inter-dealer transactions reported by local dealers.
2. Figures may not add up to total due to rounding.
3. Data have been adjusted to exclude double counting of inter-dealer transactions reported by local and cross-border dealers.

Source: BIS

EXHIBIT 2**Average daily turnover of the Hong Kong FX market**

The average daily FX turnover in Hong Kong in April 2019 was 45% higher than the same period three years ago.



Note: The average daily turnover has been adjusted to exclude double counting of inter-dealer transactions reported by local dealers.

Exhibit 3**Average daily turnover of the Hong Kong FX market (by instrument)**

Most of the increase in Hong Kong's FX turnover was due to growth in FX swaps and spot transactions.

(US\$ billion)

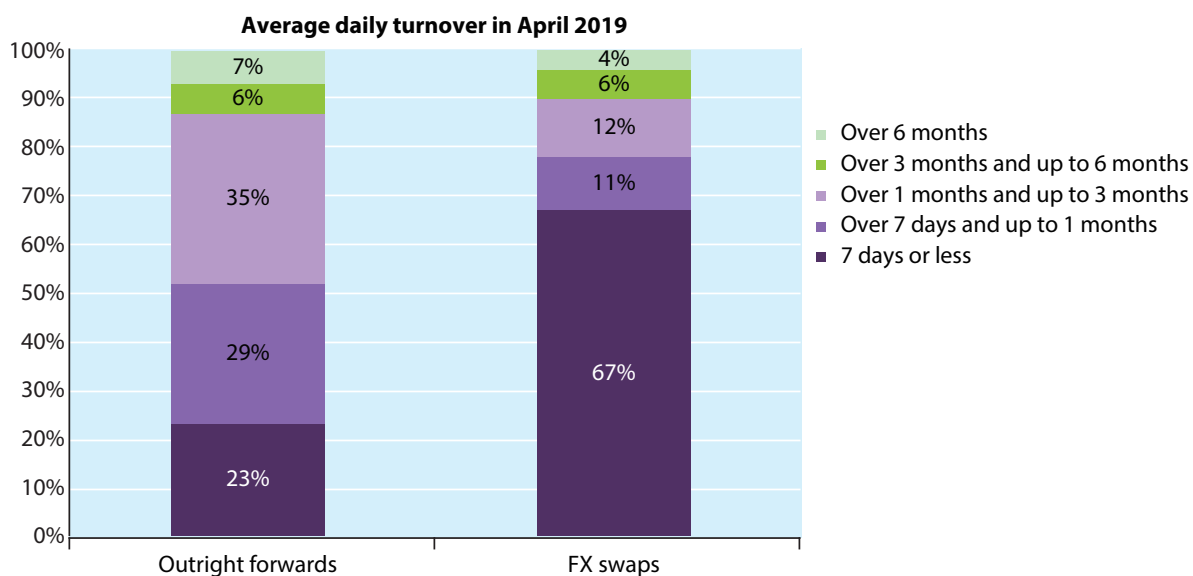
FX instruments	Average daily turnover in HK			Share (%)	
	April 2019	April 2016	Change (%)	April 2019	April 2016
Spot	111.7	91.6	22.0	17.7	21.0
Outright forwards	58.6	44.2	32.7	9.3	10.1
FX swaps	417.2	275.9	51.2	66.0	63.2
Currency swaps	21.7	12.1	78.9	3.4	2.8
OTC options	22.9	12.8	79.6	3.6	2.9
Other OTC products	0.0067	0.0001	6,556.6	0.0	0.0
Total FX transactions	632.1	436.6	44.8	100.0	100.0

Notes:

1. The average daily turnover has been adjusted to exclude double counting of inter-dealer transactions reported by local dealers.
2. Figures may not add up to total due to rounding.

Exhibit 4**Average daily turnover of the Hong Kong outright forwards and FX swaps (by maturity)**

A significant portion of outright forwards and FX swaps in Hong Kong was in tenors of up to 3 months.



Notes:

1. The average daily turnover was calculated on a gross basis.
2. Figures may not add up to total due to rounding.
3. Due to changes in the reporting requirements of the maturity breakdown in the 2019 survey, comparisons with previous survey results are not available.

Exhibit 5

Average daily turnover of the Hong Kong FX market (by currency pair)

The US dollar continued to be the most widely traded currency in the Hong Kong FX market.

(US\$ billion)

Currency pair	Average daily turnover				
	Apr 2019	Share (%)	Apr 2016	Share (%)	Change (%)
HKD/USD	142.3	22.5	53.8	12.3	164.6
HKD/RMB	1.2	0.2	0.7	0.2	55.6
of which: HKD/CNH	1.1	0.2	0.6	0.1	73.6
HKD/CNY	0.1	0.0	0.1	0.0	-40.3
HKD/EUR	0.7	0.1	0.5	0.1	60.9
HKD/JPY	0.4	0.1	0.3	0.1	21.8
HKD/AUD	0.3	0.1	0.2	0.0	58.7
HKD/GBP	0.2	0.0	0.2	0.1	-1.6
HKD/CAD	0.1	0.0	0.1	0.0	0.5
HKD/Other	0.2	0.0	0.2	0.0	7.1
Subtotal	145.4	23.0	56.0	12.8	159.6
USD/RMB	105.6	16.7	76.0	17.4	39.0
of which: USD/CNH	99.0	15.7	67.1	15.4	47.5
USD/CNY	6.6	1.0	8.8	2.0	-25.7
USD/JPY	91.1	14.4	92.5	21.2	-1.5
USD/EUR	80.5	12.7	57.5	13.2	40.1
USD/AUD	47.9	7.6	31.7	7.3	51.0
USD/GBP	26.1	4.1	20.9	4.8	24.6
USD/SGD	19.8	3.1	22.7	5.2	-13.0
USD/NZD	14.3	2.3	11.1	2.5	29.1
USD/KRW	12.9	2.0	15.7	3.6	-18.0
USD/INR	12.5	2.0	5.5	1.3	127.1
USD/CAD	11.1	1.8	7.4	1.7	49.5
USD/TWD	10.9	1.7	6.9	1.6	56.9
USD/CHF	5.6	0.9	3.6	0.8	52.6
USD/Other	30.1	4.8	17.3	4.0	74.1
Subtotal	468.3	74.1	368.9	84.5	26.9
EUR/JPY	4.7	0.7	2.6	0.6	76.2
EUR/GBP	1.0	0.2	0.8	0.2	28.1
EUR/CHF	0.9	0.1	0.2	0.0	403.0
EUR/Other	4.0	0.6	2.3	0.5	71.3
Subtotal	10.6	1.7	6.0	1.4	77.7
JPY/AUD	1.2	0.2	1.6	0.4	-20.1
JPY/CAD	0.3	0.1	0.2	0.1	52.1
JPY/NZD	0.2	0.0	0.2	0.0	48.5
JPY/Other	1.9	0.3	1.8	0.4	4.3
Subtotal	3.7	0.6	3.8	0.9	-1.1
Other currency pairs	4.0	0.6	1.9	0.4	115.2
All currency pairs	632.1	100.0	436.6	100.0	44.8
Other OTC products	0.0067		0.0001		6556.6
Total foreign exchange transactions	632.1		436.6		44.8

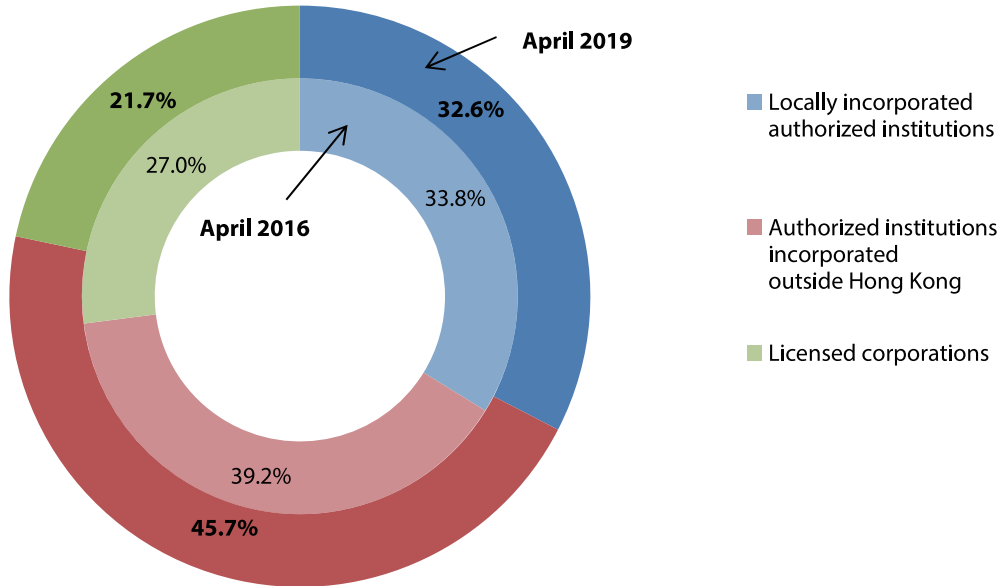
Notes:

1. The average daily turnover has been adjusted to exclude double counting of inter-dealer transactions reported by local dealers.
2. Includes spot transactions, outright forwards, FX swaps, currency swaps and OTC currency options.
3. Figures may not add up to total due to rounding.

Exhibit 6

Share of the average daily gross turnover in the Hong Kong FX market (by type of reporting dealers)

Authorized institutions incorporated outside Hong Kong had the largest share of FX trading in Hong Kong, increasing to 45.7% in April 2019.



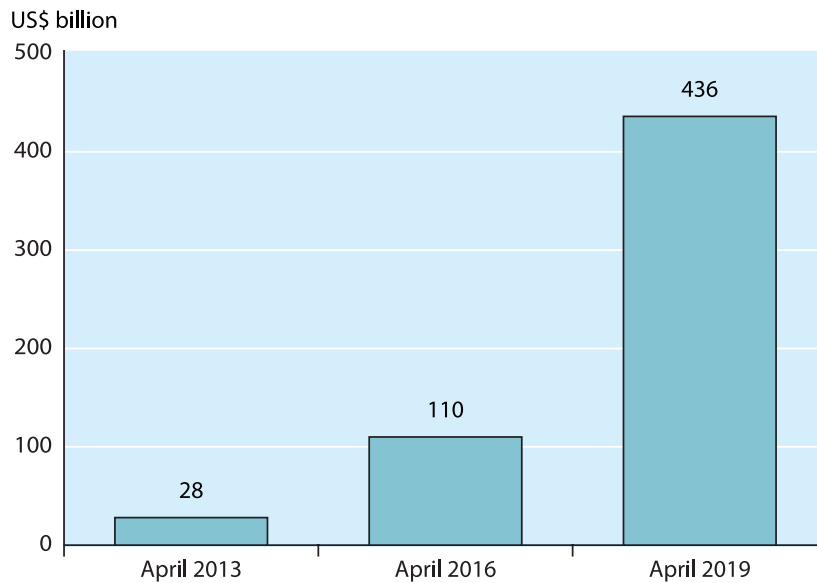
Notes:

1. The average daily gross turnover has not been adjusted to exclude double counting of inter-dealer transactions reported by local dealers.
2. Figures may not add up to 100% due to rounding.

Exhibit 7

Average daily turnover of the Hong Kong OTC interest rate derivatives market

The average daily turnover of the Hong Kong OTC interest rate derivatives in April 2019 was nearly three times higher than April 2016.



Note: The average daily turnover has been adjusted to exclude double counting of inter-dealer transactions reported by local dealers.

Exhibit 8**Average daily turnover of the Hong Kong OTC interest rate derivatives market (by instrument)**

Interest rate swap transactions were the main driver of growth in the average daily turnover of the Hong Kong OTC interest rate derivatives market.

(US\$ billion)

OTC interest rate derivatives instruments	Average daily turnover in HK			Share (%)	
	April 2019	April 2016	Change (%)	April 2019	April 2016
Forward rate agreements	58.2	3.4	1,598.6	13.4	3.1
Interest rate swaps	374.0	73.8	406.7	85.8	67.2
Interest rate options	3.0	32.5	-90.7	0.7	29.6
Other OTC products	0.7	0.1	913.5	0.2	0.1
Total OTC interest rate derivatives transactions	435.9	109.8	297.1	100.0	100.0

Notes:

1. The average daily turnover has been adjusted to exclude double counting of inter-dealer transactions reported by local dealers.
2. Figures may not add up to total due to rounding.

Exhibit 9**Average daily turnover of the Hong Kong OTC interest rate derivatives market (by currency)**

The average daily turnover of Hong Kong OTC interest rate derivatives contracts denominated in Australian dollar recorded a substantial increase.

(US\$ billion)

Currency	Average daily turnover				
	April 2019	Share (%)	April 2016	Share (%)	Change (%)
AUD	268.7	61.8	22.5	20.5	1092.1
USD	88.9	20.4	47.6	43.4	86.9
NZD	21.0	4.8	9.9	9.0	112.2
HKD	14.5	3.3	4.7	4.3	204.8
RMB	12.7	2.9	6.2	5.7	104.2
of which: CNH	0.2	0.0	0.1	0.0	218.5
CNY	12.5	2.9	6.2	5.6	103.3
JPY	6.6	1.5	3.0	2.7	121.8
KRW	6.2	1.4	5.7	5.2	8.8
EUR	5.1	1.2	1.1	1.0	347.4
SGD	3.9	0.9	3.0	2.7	32.3
THB	2.5	0.6	1.4	1.3	80.0
INR	2.3	0.5	1.8	1.6	28.1
TWD	1.2	0.3	0.8	0.7	52.8
GBP	0.7	0.2	0.3	0.3	140.9
MYR	0.7	0.2	1.6	1.5	-56.9
Other	0.1	0.0	0.0	0.0	137.8
All currencies	435.2	100.0	109.7	100.0	296.7
Other OTC products	0.7		0.1		
Total OTC interest-rate derivatives transactions	435.9		109.8		297.1

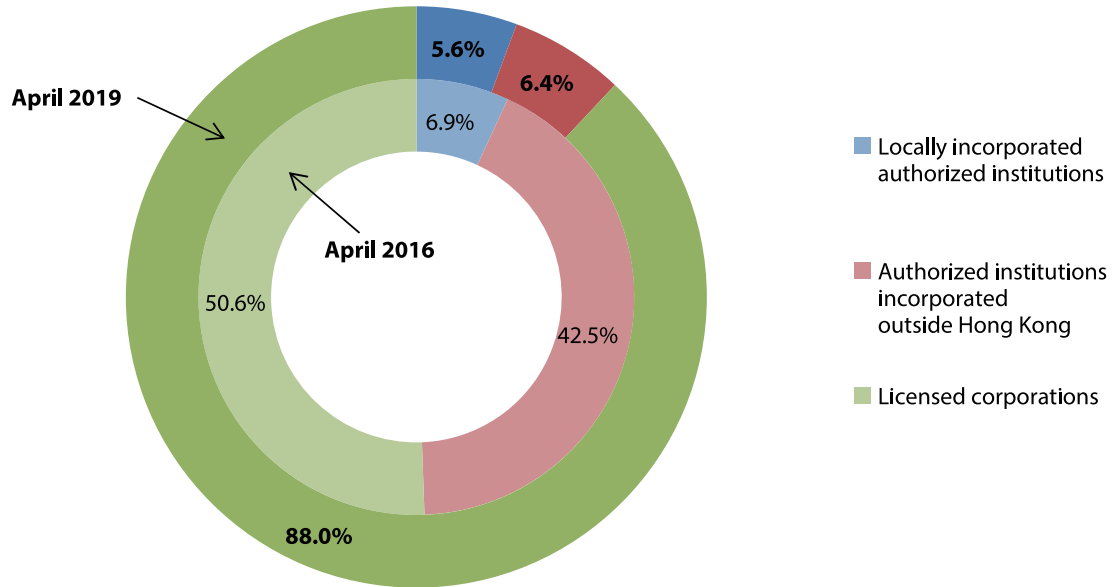
Notes:

1. The average daily turnover has been adjusted to exclude double counting of inter-dealer transactions reported by local dealers.
2. Includes forward rate agreements, interest rate swaps and OTC interest rate options.
3. Figures may not add up to total due to rounding.

Exhibit 10

Share of the average daily gross turnover in the Hong Kong OTC interest rate derivatives market (by type of reporting dealers)

Licensed corporations remained the most active players in the Hong Kong OTC derivatives market with its share surging to 88% in April 2019.



Note: The average daily gross turnover has not been adjusted to exclude double counting of inter-dealer transactions reported by local dealers.

Exhibit 11**Average daily turnover of renminbi FX and OTC interest rate derivatives in Hong Kong (by instrument)**

Hong Kong remains the leading offshore renminbi FX and OTC interest rate derivatives market.

(US\$ billion)

Instrument	Average daily turnover in HK		
	April 2019	April 2016	Change (%)
a. Spot			
Total renminbi transactions	24.8	18.1	37.2
of which: against Hong Kong dollar	0.6	0.5	
against US dollar	23.9	17.4	
against other currencies	0.3	0.1	
As % of total spot transactions	22.2%	19.7%	
b. Outright forwards			
Total renminbi transactions	9.3	8.1	14.2
of which: against Hong Kong dollar	0.2	0.1	
against US dollar	9.0	8.0	
against other currencies	0.2	0.1	
As % of total outright forward transactions	15.9%	18.4%	
c. FX swaps			
Total renminbi transactions	68.9	44.0	56.6
of which: against Hong Kong dollar	0.3	0.1	
against US dollar	68.3	43.8	
against other currencies	0.3	0.2	
As % of total FX swap transactions	16.5%	16.0%	
d. Other FX products	4.6	6.8	-33.1
As % of total currency swap & currency option transactions	10.3%	27.5%	
e. Total FX transactions (a+b+c+d)	107.6	77.1	39.6
f. OTC single currency interest rate derivatives	12.7	6.2	104.2
As % of total OTC single currency interest rate transactions	2.9%	5.7%	
Total renminbi denominated transactions (e+f)	120.3	83.3	44.4

Notes:

1. The average daily turnover has been adjusted to exclude double counting of inter-dealer transactions reported by local dealers.
2. Other FX products include currency swaps and currency options.
3. OTC single currency interest rate derivatives include forward rate agreements, interest rate swaps and interest rate options.
4. Figures may not add up to total due to rounding.