



BIS TRIENNIAL SURVEY OF FOREIGN EXCHANGE AND OVER-THE-COUNTER INTEREST RATE DERIVATIVES MARKETS IN APRIL 2016 – UK DATA – RESULTS SUMMARY

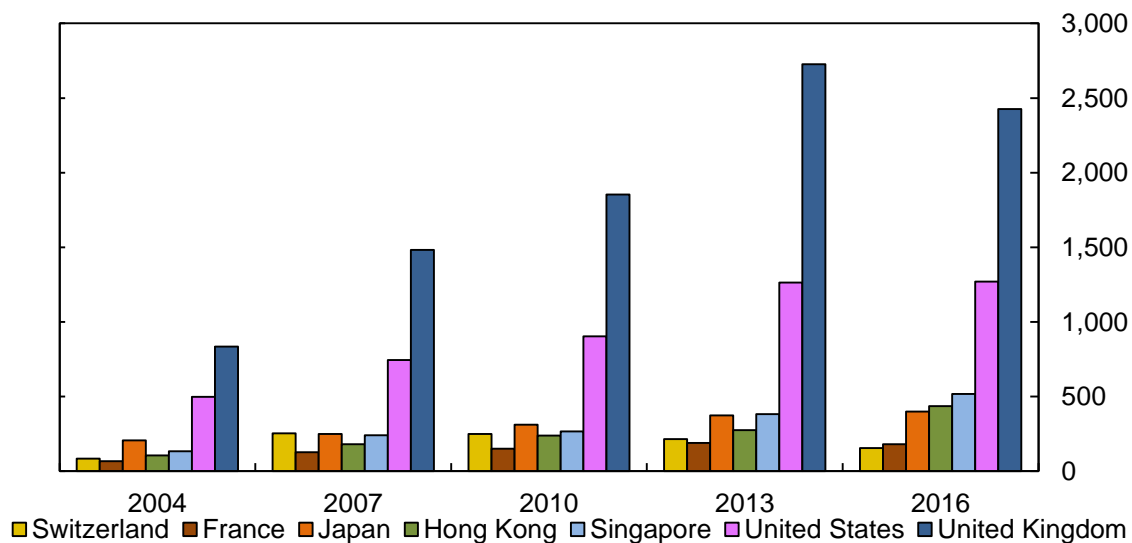
In April this year, central banks and monetary authorities in 52 countries, including the United Kingdom, conducted the latest triennial survey of turnover in the markets for foreign exchange (spot, forwards, foreign exchange swaps, currency swaps and options) and over-the-counter (OTC) interest rate derivatives. The survey is co-ordinated on a global basis by the Bank for International Settlements (BIS), with the aim of obtaining comprehensive and internationally consistent information on the size and structure of the corresponding global markets. The Bank of England conducted the UK survey, which covers the business of leading financial institutions located within the United Kingdom in these markets. The results of the UK survey are summarised below.

FOREIGN EXCHANGE

Daily turnover

Net average daily turnover during April 2016 in the UK foreign exchange market was \$2,426 billion, 11 per cent lower than the \$2,726 billion per day recorded in April 2013. The decrease is the first recorded since the fall seen between the April 1998 and April 2001 surveys. Despite the decrease in foreign exchange activity, the UK remains the single largest centre of foreign exchange activity with 37 per cent of global turnover, down from the high of 41 per cent in April 2013.

Chart 1: Foreign exchange turnover in the United Kingdom and other centres
Net average daily turnover in notional amounts, US\$ billions



Source: BIS and Bank of England

Market concentration

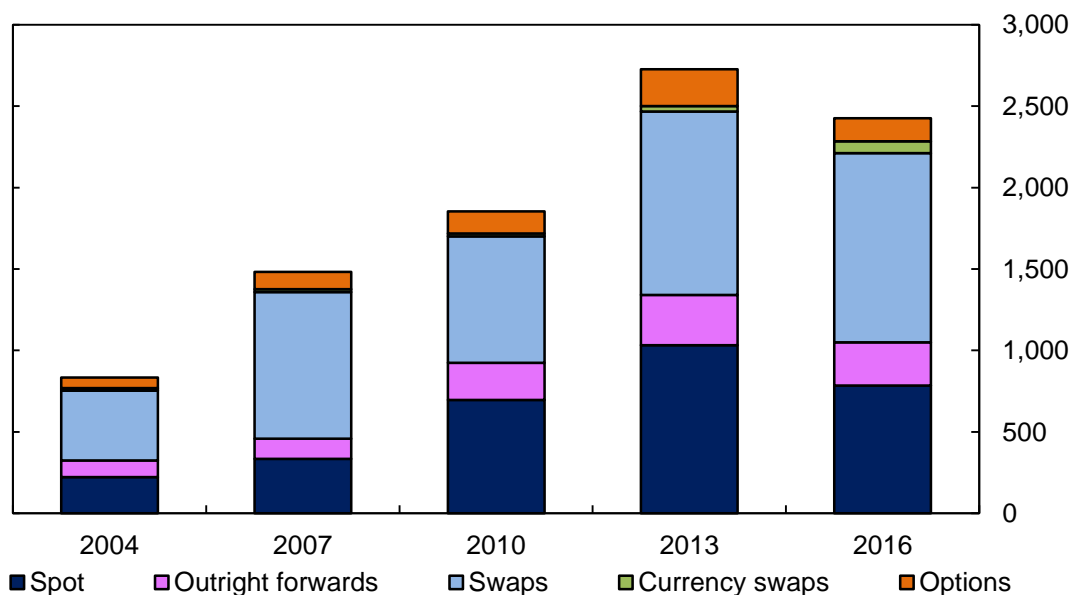
The UK foreign exchange market concentration has increased slightly since April 2013. The combined market share of the ten institutions with highest turnover increased from 76 per cent to 77 per cent while the share of the top twenty institutions increased slightly from 94 per cent in April 2013 to 95 per cent in April 2016. In total, 20 firms accounted for one per cent or more of total turnover in April 2016.

Average daily turnover by instrument

Turnover in foreign exchange spot activity decreased from \$1,032 billion per day in April 2013 to \$784 billion per day in April 2016, a fall of 24 per cent, and accounted for 83 per cent of the overall decrease in foreign exchange market activity. Foreign exchange spot turnover now accounts for 32 per cent of total turnover. In contrast, turnover in foreign exchange swaps increased by 3 per cent from \$1,127 billion per day in April 2013 to \$1,161 billion per day in April 2016, meaning foreign exchange swaps transactions now account for 48 per cent of total turnover.

Average daily turnover in foreign exchange options decreased from \$227 billion in April 2013 to \$142 billion in April 2016, and forward transactions fell from \$309 billion to \$266 billion over the same period. While turnover in currency swaps increased by 125 per cent to stand at \$72 billion per day in April 2016, this instrument only accounted for 3 per cent of total turnover.

Chart 2: Foreign exchange turnover by instrument
Net average daily turnover in notional amounts, US\$ billions



Average daily turnover by counterparty

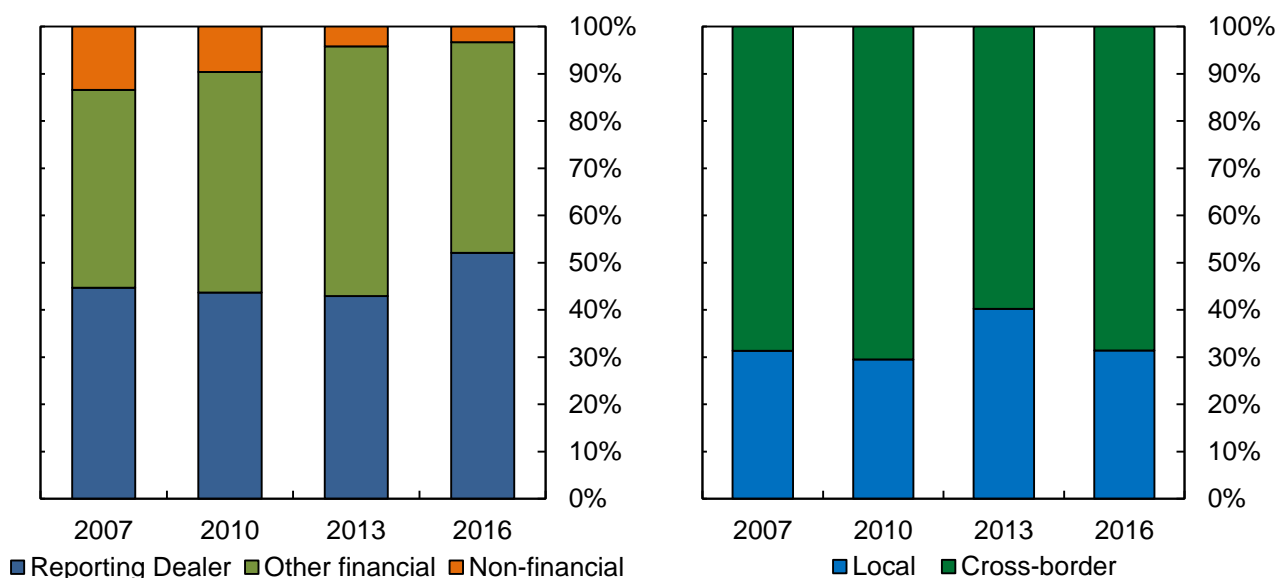
The fall in turnover was primarily seen with 'other financial institutions' – a counterparty category that includes non-reporting banks, security dealers, hedge funds, pension funds, mutual funds, insurance companies and central banks. Turnover with this category fell to \$1,081 billion per day, a decrease of 25 per cent compared with April 2013, resulting in business with 'other financial institutions' accounting for 45 per cent of total turnover. Within this counterparty category, institutional investors¹ accounted for 41 per cent of turnover, up from 24 per cent in April 2013. In contrast, the percentage share of turnover with 'other financial institutions' conducted with the sub-category of hedge funds and proprietary trading firms decreased from 23 per cent in April 2013 to 15 per cent in April 2016.

Business with 'non-financial institutions' decreased by 29 per cent to \$81 billion per day. Turnover with 'non-financial institutions' has decreased consistently since April 2007 and now accounts for just 3 per cent of total turnover.

In contrast, activity with other reporting dealers increased from \$1,170 billion per day in April 2013 to \$1,264 billion per day in April 2016. Business with other reporting dealers now accounts for 52 per cent of total turnover, meaning that for the first time since April 2004 over half of total turnover in the foreign exchange market has occurred with other reporting dealers.

Average daily turnover with non-residents rose by 2 per cent between April 2013 and April 2016, rising from \$1,631 billion to \$1,665 billion, and now accounts for 69 per cent of total turnover. In contrast, local business decreased by 31 per cent, from \$1,095 billion per day in April 2013 to \$761 billion per day in April 2016.

Chart 3: Foreign exchange turnover by counterparty
Percentage share of net average daily turnover in notional amounts



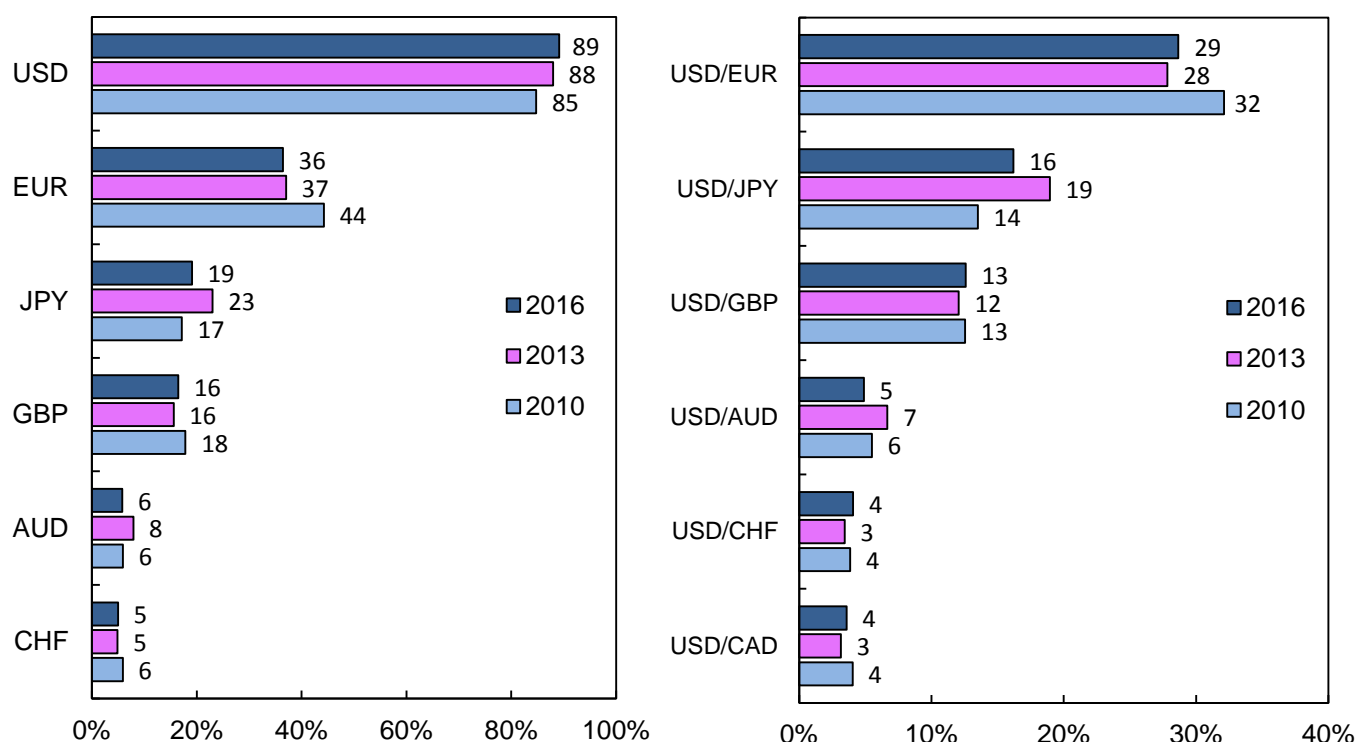
¹ The institutional investors sub-category includes mutual funds, pension funds, insurance and reinsurance companies and endowments.

Average daily turnover by currency composition

The US dollar continued to be the most traded currency in the UK market, with 89 per cent of all trades having one side denominated in US dollar². The proportion of turnover involving the Japanese yen decreased from 23 per cent to 19 per cent whilst the proportion of turnover involving the euro remained largely unchanged falling just 1 per cent to a level of 36 per cent of total turnover.

By currency pair, average daily turnover in US dollar/Japanese yen showed the largest decrease, down 24 per cent, to \$393 billion per day. US dollar/euro remained the most traded currency pair comprising 29 per cent, \$695 billion, of the total foreign exchange market turnover.

Chart 4: Foreign exchange turnover by currency² and currency pairs
Percentage share of net average daily turnover in notional amounts



Average daily turnover by execution method

The average daily turnover of trades executed directly over the phone decreased from \$709 billion in April 2013 to \$566 billion in April 2016, now accounting for 23 per cent of all trades. Trades executed by a voice broker comprised 20 per cent of all trades, up slightly from the 19 per cent recorded in April 2013. Business conducted via an electronic medium was the most common method of trade execution, accounting for 56 per cent of total turnover at \$1,370 billion per day.

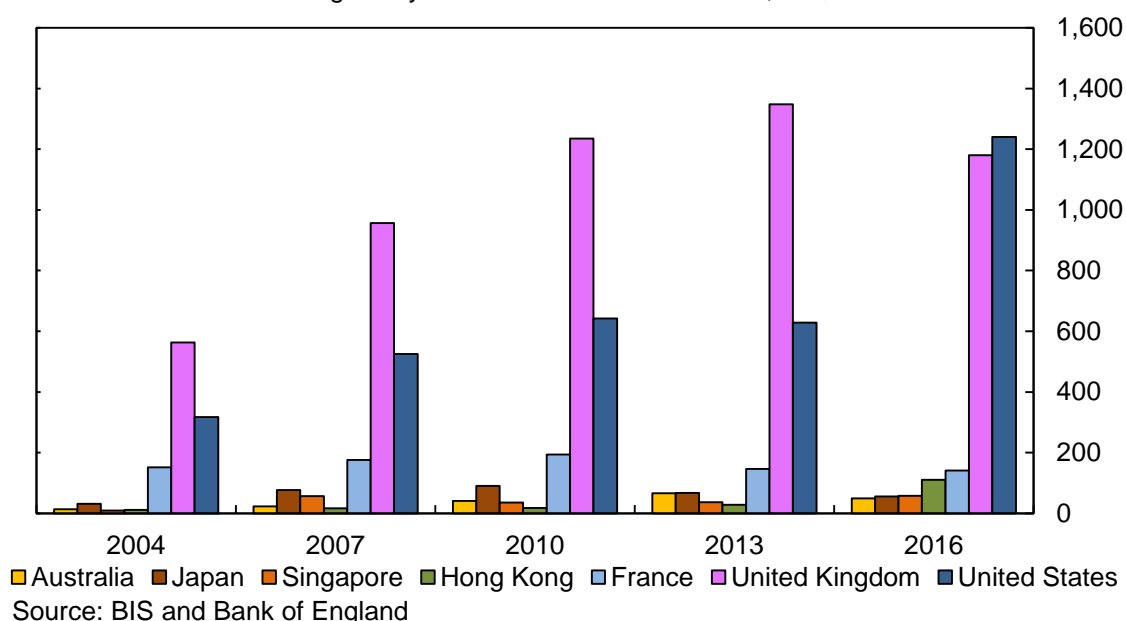
² For foreign exchange turnover, the sum of the percentage shares of individual currencies totals 200 instead of 100 percent because two currencies are involved in each transaction.

OTC INTEREST RATE DERIVATIVES

Total average daily turnover

In the UK, average daily turnover in OTC interest rate derivatives decreased by 12 per cent between April 2013 and April 2016, falling from \$1,348 billion to \$1,181 billion. For the first time since the inception of the triennial survey the UK is not the largest centre for OTC interest rate derivatives activity³. The market share of the UK has fallen from 50 per cent in April 2013 to 39 per cent in April 2016. In contrast, 41 per cent of all OTC interest rate derivatives activity now takes place in the US, up from 23 per cent in April 2013.

Chart 5: Interest rate derivatives turnover in the United Kingdom and other centres
Net average daily turnover in notional amounts, US\$ billions



Market concentration

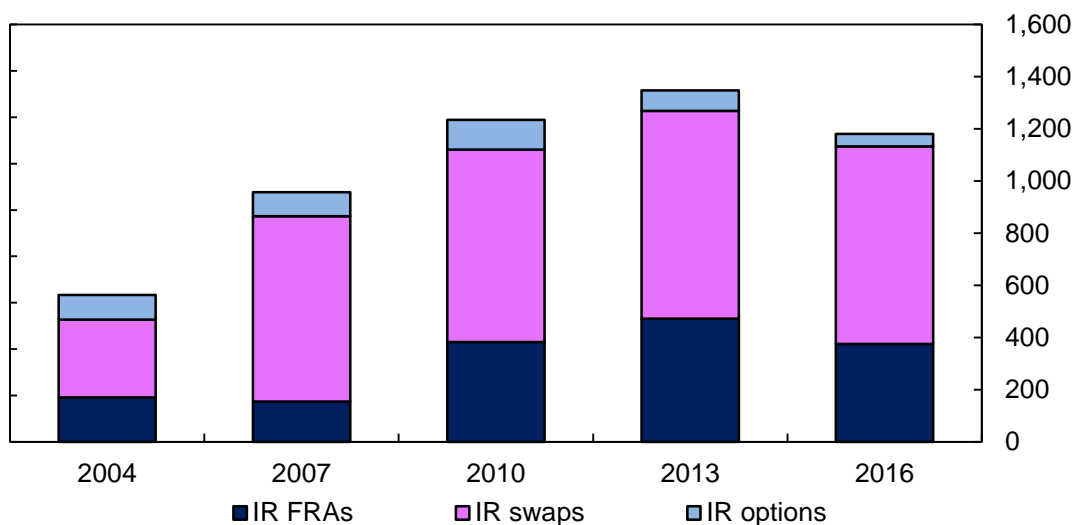
Market concentration in the OTC derivatives market remained unchanged from April 2013 with the top ten institutions with the highest derivatives trading volumes still accounting for 85 per cent of total turnover. Of the 43 reporting dealers in the April 2016 survey, 35 were undertaking business in the OTC interest rate derivatives markets.

Average daily turnover by instrument

Average daily turnover in forward rate agreements (FRAs) decreased by 21 per cent to \$375 billion and comprise 32 per cent of the interest rate derivatives market in April 2016. Interest rate swaps decreased by 5 per cent to \$757 billion per day and still account for over half (64 per cent) of the OTC interest rate derivatives market in April 2016. Turnover in interest rate options also declined, down by 39 per cent to \$48 billion per day in April 2016.

³ OTC interest rate derivatives activity was first collected on the triennial survey in 1995

Chart 6: Interest rate derivatives turnover by instrument
 Net average daily turnover in notional amounts, US\$ billions

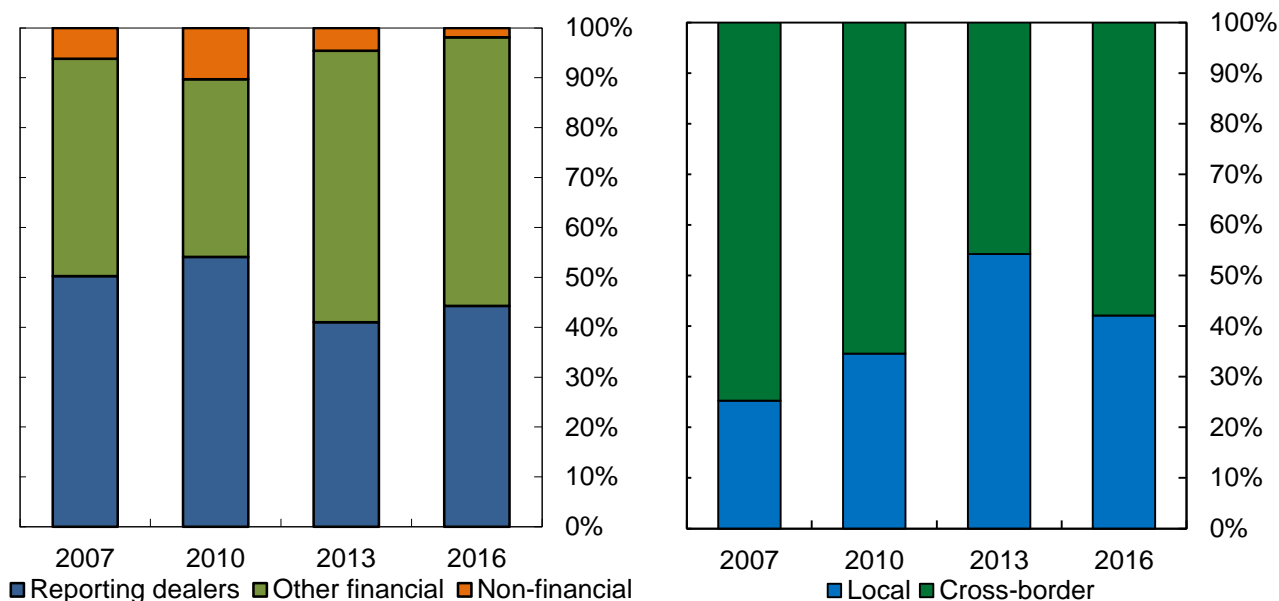


Average daily turnover by counterparty

Customer business has decreased in percentage terms, and now accounts for 56 per cent of total OTC interest rate derivatives turnover in April 2016, down from 59 per cent in April 2013. Daily turnover with ‘other financial institutions’ decreased to \$635 billion but maintained the same 54 per cent share of total turnover as in April 2013. Business with reporting dealers and non-financial institutions also fell, down by 5 and 63 per cent between 2013 and 2016, and now account for 44 and 2 per cent of the total OTC interest rate derivatives activity in the UK respectively.

Cross-border business increased by 11 per cent since April 2013 to \$684 billion per day in April 2016 and now accounts for 58 per cent of total turnover. In contrast, local business fell 32 per cent, from \$731 billion per day in April 2013 to \$497 billion per day in April 2016.

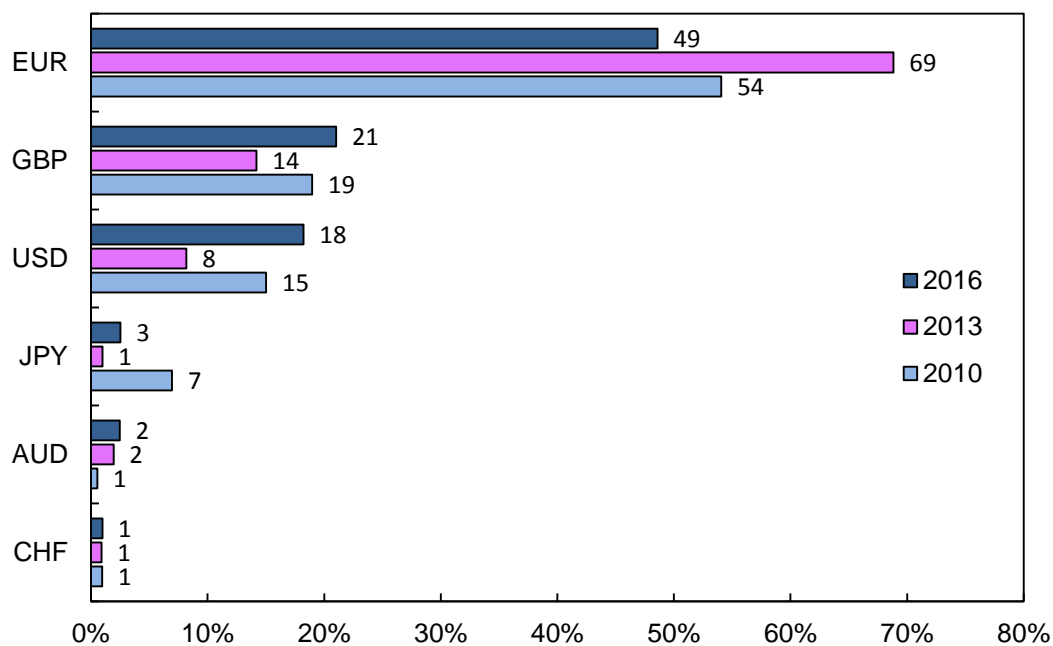
Chart 7: Interest rate derivatives turnover by counterparty
 Percentage share of net average daily turnover in notional amounts



Average daily turnover by currency composition

The proportion of OTC interest rate derivatives denominated in euro fell in 2016, down from 69 per cent of total turnover in April 2013 to 49 per cent in April 2016. In contrast, the proportion of OTC interest rate derivatives turnover attributable to sterling and the US dollar increased from 14 and 8 per cent to 21 and 18 per cent in April 2016 respectively.

Chart 8: Interest rate derivatives turnover by currency
Percentage share of net average daily turnover in notional amounts



Tables showing the UK results in more detail are attached. These data are consistent with the global survey results released by the BIS⁴. Totals may not sum due to rounding. Definitions of the different instruments and counterparty sectors collected in the survey are also attached.

⁴ Preliminary global results can be found on the BIS website here <http://www.bis.org/publ/rpfx16.htm>

Table 1**Foreign exchange market turnover by instrument¹**

Average daily turnover in April, in billions of US dollars

Instrument	2004	2007	2010	2013	2016
Foreign exchange instruments	835	1,483	1,854	2,726	2,426
Spot transactions	223	335	697	1,032	784
Outright forwards	103	124	228	309	266
Foreign exchange swaps	428	899	775	1,127	1,161
Currency swaps	16	18	18	32	72
Options and other instruments	67	106	135	227	142
<i>Memo:</i>					
<i>Turnover at April 2016 exchange rates²</i>	<i>807</i>	<i>1,393</i>	<i>1,730</i>	<i>2,558</i>	<i>2,426</i>

1 Adjusted for local double-counting. 2 Non-US dollar legs of foreign currency transactions were converted into original currency amounts at average exchange rates for April of each survey year and then reconverted into US dollar amounts at average April 2016 exchange rates.

Table 2
Foreign exchange market turnover by instrument, counterparty and maturity¹
Daily averages in April, in billions of US dollars and percentages

Instrument/counterparty	2007		2010		2013		2016	
	Amount	%	Amount	%	Amount	%	Amount	%
Spot	335	23	697	38	1,032	38	784	32
with reporting dealers	158	11	293	16	385	14	341	14
with other financial institutions	135	9	344	19	614	23	423	17
with non-financial customers	43	3	60	3	32	1	20	1
Outright forwards	124	8	228	12	309	11	266	11
with reporting dealers	37	2	63	3	114	4	119	5
with other financial institutions	62	4	124	7	173	6	134	6
with non-financial customers	26	2	40	2	21	1	13	1
Foreign exchange swaps	899	61	775	42	1,127	41	1,161	48
with reporting dealers	419	28	399	22	574	21	709	29
with other financial institutions	375	25	309	17	503	18	409	17
with non-financial customers	105	7	67	4	50	2	43	2
Currency swaps	18	1	18	1	32	1	72	3
with reporting dealers	9	1	7	0	21	1	44	2
with other financial institutions	6	0	11	1	10	0	27	1
with non-financial customers	2	0	1	0	1	0	1	0
Options and other instruments²	106	7	135	7	227	8	142	6
with reporting dealers	39	3	47	3	76	3	51	2
with other financial institutions	44	3	79	4	141	5	88	4
with non-financial customers	23	2	10	1	9	0	3	0
Total	1,483	100	1,854	100	2,726	100	2,426	100
with reporting dealers	663	45	809	44	1,170	43	1,264	52
with other financial institutions	622	42	866	47	1,442	53	1,081	45
with non-financial customers	199	13	178	10	113	4	81	3
Local	465	31	547	29	1,095	40	761	31
Cross-border	1,019	69	1,307	71	1,631	60	1,665	69
Outright forwards³	126	100	241	100	329	100	307	100
Up to 7 days	61	49	144	60	167	51	120	39
Over 7 days and up to 1 year	62	49	94	39	138	42	178	58
Over 1 year	3	2	3	1	24	7	9	3
Foreign exchange swaps³	966	100	873	100	1,318	100	1,355	100
Up to 7 days	792	82	653	75	932	71	941	69
Over 7 days and up to 1 year	167	17	215	25	302	23	402	30
Over 1 year	7	1	6	1	84	6	12	1

1 Adjusted for local double-counting. 2 The category "other instruments" covers highly leveraged transactions and/or trades whose notional amount is variable and where a decomposition into individual plain vanilla components was impractical or impossible. 3 Data for maturity breakdown cannot be adjusted for local reporting dealers, so maturity values will not be equal to product totals.

Table 3
Currency distribution of foreign exchange market turnover¹
 Percentage shares of average daily turnover in April

Currency	2004	2007	2010	2013	2016
US dollar	88	88	85	88	89
Euro	43	42	44	37	36
Japanese yen	16	15	17	23	19
Pound sterling	27	21	18	16	16
Australian dollar	4	4	6	8	6
Swiss franc	6	6	6	5	5
Canadian dollar	3	3	4	4	4
Other currencies ²	13	21	20	20	24
All currencies	200	200	200	200	200

1 Because two currencies are involved in each transaction, the sum of the percentage shares of individual currencies totals 200 instead of 100 percent. The figures relate to reported "net-gross" turnover, i.e. they are adjusted for local double counting.

2 Comprises currencies that are no greater than 3 per cent of total foreign exchange turnover.

Table 4
Foreign exchange market turnover by currency pair¹
Daily averages in April, in billions of US dollars and percentages

Currency pair	2004		2007		2010		2013		2016	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
USD/EUR	275	33	472	32	595	32	758	28	695	29
USD/Other	87	10	240	16	244	13	433	16	464	19
USD/JPY	104	12	175	12	250	14	516	19	393	16
USD/GBP	183	22	254	17	233	13	329	12	306	13
USD/AUD	31	4	60	4	102	6	182	7	119	5
USD/CHF	33	4	58	4	71	4	94	3	99	4
USD/CAD	24	3	40	3	75	4	86	3	87	4
EUR/GBP	30	4	43	3	75	4	67	2	63	3
EUR/Other	10	1	34	2	50	3	62	2	59	2
EUR/JPY	26	3	31	2	56	3	68	3	35	1
EUR/CHF	13	2	30	2	35	2	36	1	19	1
EUR/AUD	2	0	3	0	5	0	11	0	8	0
EUR/CAD	1	0	3	0	4	0	7	0	6	0
Other pairs	17	2	40	3	58	3	78	3	74	3
All currency pairs	835	100	1,483	100	1,854	100	2,726	100	2,426	100

¹ Adjusted for local double-counting.

Table 5
OTC interest rate derivatives market turnover by instrument¹
Average daily turnover in April, in billions of US dollars

Instrument	2004	2007	2010	2013	2016
Interest rate instruments²	563	957	1,235	1,348	1,181
FRAs	170	154	382	473	375
Swaps	299	710	739	796	757
Options and other instruments	94	93	114	80	48
<i>Memo:</i>					
<i>Turnover at April 2016 exchange rates³</i>	530	829	1,099	1,199	1,181

1 Adjusted for local double-counting. 2 Single-currency interest rate contracts only. 3 Non-US dollar transactions were converted into original currency amounts at average exchange rates for April of each survey year and then reconverted into US dollar amounts at average April 2016 exchange rates.

Table 6
OTC interest rate derivatives turnover by instrument, counterparty¹

Daily averages in April, in billions of US dollars and percentages

Instrument/counterparty	2007		2010		2013		2016	
	Amount	%	Amount	%	Amount	%	Amount	%
FRAs	154	16	382	31	473	35	375	32
with reporting dealers	100	10	233	19	203	15	169	14
with other financial institutions	36	4	125	10	263	20	204	17
with non-financial customers	18	2	25	2	7	1	2	0
Swaps	710	74	739	60	796	59	757	64
with reporting dealers	329	34	377	31	314	23	338	29
with other financial institutions	347	36	268	22	431	32	399	34
with non-financial customers	34	4	93	8	50	4	20	2
Options and other instruments²	93	10	114	9	80	6	48	4
with reporting dealers	52	5	57	5	36	3	16	1
with other financial institutions	33	3	47	4	40	3	31	3
with non-financial customers	7	1	10	1	4	0	1	0
Total	957	100	1,235	100	1,348	100	1,181	100
with reporting dealers	481	50	668	54	552	41	523	44
with other financial institutions	417	44	440	36	734	54	635	54
with non-financial customers	59	6	127	10	61	5	23	2
Local	242	25	427	35	731	54	497	42
Cross-border	715	75	808	65	617	46	684	58

1 Adjusted for local double-counting. Single-currency interest rate contracts only. 2 The category "other instruments" covers highly leveraged transactions and/or trades whose notional amount is variable and where a decomposition into individual plain vanilla components was impractical or impossible.

Table 7
OTC interest rate derivatives turnover by currency¹
Daily averages in April, in billions of US dollars

Currency	2004	2007	2010	2013	2016
FRAs	170	154	382	473	375
US dollar	28	43	99	54	112
Euro	104	40	197	290	140
Japanese yen	0	1	1	0	0
Pound sterling	24	44	59	87	94
Swiss franc	1	2	7	8	4
Canadian dollar	0	0	1	0	0
Australian dollar	1	1	2	1	1
Swedish krona	0	0	7	13	6
Other	11	23	10	19	18
Swaps	299	710	739	796	757
US dollar	58	76	67	47	90
Euro	168	391	405	582	411
Japanese yen	11	62	82	11	27
Pound sterling	48	119	154	97	146
Swiss franc	4	4	5	4	8
Canadian dollar	1	0	5	1	4
Australian dollar	3	2	4	24	28
Swedish krona	0	0	2	11	5
Other	7	56	15	20	38
Options	94	93	114	77	45
US dollar	31	25	20	10	12
Euro	53	56	65	56	23
Japanese yen	2	3	3	2	2
Pound sterling	6	6	21	6	7
Swiss franc	1	0	0	0	0
Canadian dollar	0	0	0	0	0
Australian dollar	1	0	0	1	1
Swedish krona	0	0	0	0	0
Other	1	2	3	1	1
Other products	0	0	0	3	3
Total	563	957	1,235	1,348	1,181
US dollar	116	144	186	110	215
Euro	325	487	668	928	574
Japanese yen	13	66	86	13	30
Pound sterling	78	169	234	190	248
Swiss franc	6	6	12	12	11
Canadian dollar	2	1	6	1	4
Australian dollar	4	3	7	26	29
Swedish krona	0	0	9	24	10
Other ²	18	81	29	43	59

1 Adjusted for local double-counting. Single-currency interest rate contracts only. 2 Includes 'other products' where a currency breakdown is not available.

INSTRUMENT DEFINITIONS AND CATEGORISATION

Details of turnover in the following instruments were collected:

Foreign Exchange Transactions

Spot Transaction

Single outright transaction involving the exchange of two currencies at a rate agreed on the date of the contract for value or delivery (cash settlement) within two business days. The spot legs of swaps, and swaps that were for settlement within two days (i.e. overnight swaps, spot next swaps, and “tomorrow/next day” swap transactions) were excluded from this category.

Outright Forward

Transaction involving the exchange of two currencies at a rate agreed on the date of the contract for value or delivery (cash settlement) at some time in the future (more than two business days later). Also included in this category were forward foreign exchange agreement transactions (FXA), non-deliverable forwards, and other forward contracts for differences.

Foreign Exchange Swap

Transaction which involves the actual exchange of two currencies (principal amount only) on a specific date at a rate agreed at the time of the conclusion of the contract (the short leg), and a reverse exchange of the same two currencies at a date further in the future at a rate (generally different from the rate applied to the short leg) agreed at the time of the conclusion of the contract (the long leg). Short-term swaps carried out as “tomorrow/next day” transactions are included in this category.

Currency Swap

Transaction which involves the actual exchange of two currencies on a specific date at a rate agreed at the time of the conclusion of the contract and an agreement to exchange streams of interest payments in the currencies for an agreed period of time, followed by a reverse exchange at a pre-agreed exchange rate at maturity.

Option

Option contract that gives the right to buy or sell a currency with another currency at a specified exchange rate during a specified period. This category also includes currency swaptions, currency warrants, plain vanilla contracts and exotic foreign exchange options such as average rate options and barrier options.

OTC Interest Rate Derivatives

Interest rate contracts are contracts related to an interest-bearing financial instrument whose cash flows are determined by referencing interest rates or another interest rate contract (e.g. an option on a futures contract to purchase a Treasury bill).

This category is limited to those deals where all the legs are exposed to only one currency's interest rate. Thus it excludes contracts involving the exchange of one or more foreign currencies (e.g. cross-currency swaps and currency options) and other contracts whose predominant risk characteristic is foreign exchange risk.

Forward Rate Agreement (FRA)

Interest rate forward contract in which the rate to be paid or received on a specific obligation for a set period of time, beginning at some time in the future, is determined at contract initiation.

Interest Rate Swap

Agreement to exchange periodic payments related to interest rates on a single currency. Interest rate swaps can be fixed for floating, or floating for floating based on different indices. This category includes those swaps whose notional principal is amortised according to a fixed schedule independent of interest rates.

Interest Rate Option

Option contract that gives the right to pay or receive a specific interest rate on a predetermined principal for a set period of time. Included in this category are interest rate caps, floors, collars, corridors, swaptions and warrants.

COUNTERPARTY DEFINITIONS AND CATEGORISATION

Reporting dealers

Reporting dealers refer to financial institutions that are participating in the globally co-ordinated survey. These firms actively participate in local and global foreign exchange and derivatives markets.

Other financial institutions

This category covers the financial institutions that are not reporting dealers. Thus, it will include smaller commercial banks, investment banks and securities houses, and in addition mutual funds, pension funds, hedge funds, currency funds, money market funds, building societies, leasing companies, insurance companies, other financial subsidiaries of corporate firms and central banks.

Non-financial customers

This category covers any counterparty other than those described above, i.e. mainly non-financial end-users, such as corporates and non-financial government entities.