

Activity in the Norwegian foreign exchange and derivatives markets in April 2016

Every three years since 1989, Norges Bank has conducted a survey of activity in the Norwegian foreign exchange market in cooperation with the Bank for International Settlements (BIS). The 2016 survey is the tenth in the series. According to figures from April 2016, average daily turnover in the Norwegian foreign exchange market¹ nearly doubled to just over USD 40bn compared with April 2013. In NOK terms, average daily turnover rose from NOK 124bn to NOK 333bn in the same period. Preliminary figures from the BIS indicate that the market share of reporting dealers in the Norwegian survey was 0.6% of the global foreign exchange market in April 2016, up from 0.3% in April 2013.

Average daily turnover in the Norwegian OTC interest rate derivatives market was USD 4bn in April 2016, against USD 6bn in April 2013, a decrease of 36%. Turnover in forward rate agreements (FRAs) fell by 53.4%, while turnover in interest rate swaps was approximately unchanged between April 2013 and April 2016. No turnover in interest rate options was recorded in April 2016. In NOK terms, average daily turnover fell from NOK 33bn to NOK 30bn in the same period. Preliminary figures from the BIS indicate that the market share of reporting dealers in the Norwegian survey was 0.1% of the global OTC interest rate derivatives market in April 2016, down from 0.2% in April 2013.

Background to the survey

Participation in the BIS survey is voluntary. In 2016, seven out of nine invited banks took part, and it is estimated that approximately 80% of the activity in the Norwegian market is covered. By comparison, eight banks took part in the 2013 survey. An important aspect of the survey is that all trades should be reported in the country in which the sales desk is located, regardless of whether deals are entered into in the name of the head office outside Norway or in the reporting dealer's own name. Parallel with the Norges Bank survey, similar surveys were carried out in 51 different countries coordinated by the Bank for International Settlements (BIS). Turnover figures from these surveys will be published simultaneously on the BIS website and by the participating central banks. It is estimated that over 1200 financial institutions took part globally. The object of the survey is to obtain comprehensive and consistent information on activity in the foreign exchange and derivatives markets. The information will enable central banks, authorities and market participants to monitor changing patterns in market activity over time.

The first surveys (1989, 1992 and 1995) were confined to turnover in the foreign exchange market. Over-the-counter (OTC) derivatives were included from 1998. Exchange-trade derivatives are not covered.

In addition to the turnover survey in April 2016, a separate survey coordinated by the BIS of outstanding contracts took place at the end of June 2016. The BIS plans to publish a more detailed report on these surveys in November 2016.

¹ Turnover in the spot market, outright forwards, foreign exchange swaps, currency swaps (basis swaps) and currency options.

In the survey, reporting dealers were asked about trends in turnover. The perception was that turnover in the foreign exchange and derivatives markets was stable in the six months prior to the survey. Turnover in April 2016 was also reported as being normal.

As from 2010, the BIS has included currency options and currency swaps (also referred to as basis swaps) in the survey of foreign exchange market turnover. The historical tables in this report have been adjusted accordingly.

Turnover in the Norwegian foreign exchange market²

1. Turnover by instrument

Table 1 shows the turnover in foreign exchange contracts in the six most recent BIS surveys from the period April 2001 to April 2016. After declining in recent surveys, average daily turnover in the Norwegian foreign exchange market rose by 87.4%, from USD 21.6bn in April 2013 to USD 40.5bn in April 2016. Total turnover in the spot and forward markets increased by 393.9% and 43.6%, respectively, between April 2013 and April 2016, while turnover in currency swaps (basis swaps) fell by 53.9% in the same period. The substantial increase in foreign exchange market turnover is partly due to improvements in one reporting dealer's processing of data. As a share of total turnover, spot transactions increased from 12.8% to 33.7%, while the share of forwards fell from 85.9% to 65.8% between April 2013 and April 2016 (Chart 1). As in previous surveys, currency swaps (basis swaps) and currency options account for only a small share of total turnover.

By comparison, preliminary figures from the BIS show that daily turnover in the global foreign exchange market fell by approximately 5% between April 2013 and April 2016. Average daily turnover fell in this period from USD 5.4tn to USD 5.1tn. The market share of transactions involving the Norwegian krone increased from 1.4% of global turnover to 1.7%.

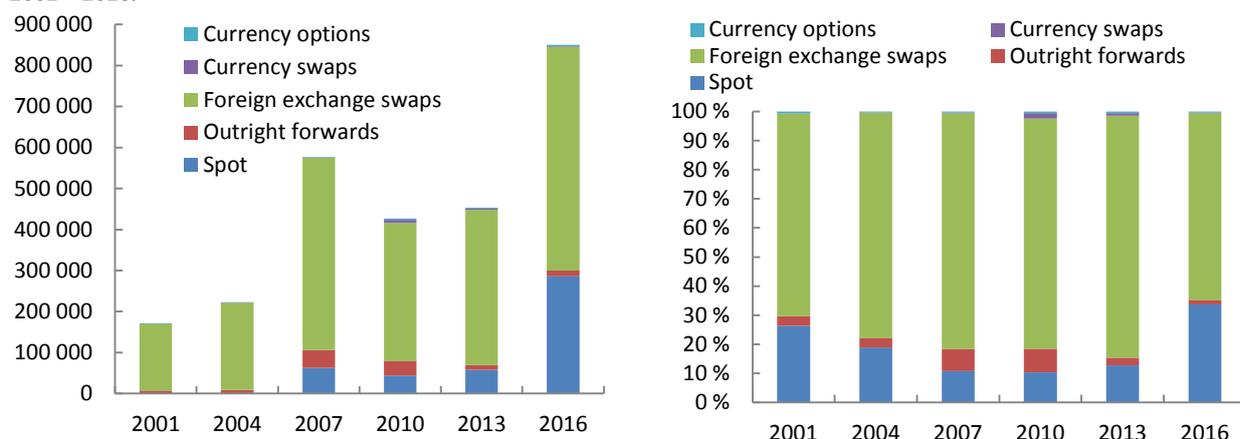
Table 1: Total turnover in the foreign exchange market in April, by instrument. In millions of USD and NOK.

Instrument	2001	2004	2007	2010	2013	2016
Spot	61 541	51 920	62 291	44 050	57 956	286 233
Forwards	169 893	221 492	512 242	372 017	389 616	559 546
- <i>Outright forwards</i>	7 454	8 720	43 544	34 652	11 668	13 747
- <i>Foreign exchange swaps</i>	162 439	212 772	468 698	337 365	377 948	545 799
Currency swaps (basis swaps)	300	312	969	7 771	3 423	1 578
Currency options	1 726	938	1 966	2 717	2 700	2 674
Total in millions of USD	233 460	274 662	577 468	426 555	453 694	850 032
Banking days in April	18	19	18	19	21	21
Daily average in mill. USD	12 970	14 456	32 081	22 450	21 605	40 478
Monthly average USD/NOK	9.09	6.92	6.00	5.92	5.79	8.22
Total in millions of NOK	2 103 735	1 892 011	3 447 198	2 434 026	2 611 173	6 987 263
Daily average in mill. NOK	117 897	100 035	192 489	131 369	124 342	332 726

Transactions between local reporting dealers are counted only once. Turnover figures for the foreign exchange market cover spot, outright forwards, foreign exchange swaps, currency swaps (basis swaps) and currency options. The figures for the forward market prior to 2001 include currency swaps.

² Supplementary tables appear in the annex.

Chart 1: Total turnover in the foreign exchange market, by instrument. In millions of USD (left) and percentages (right). 2001 – 2016.

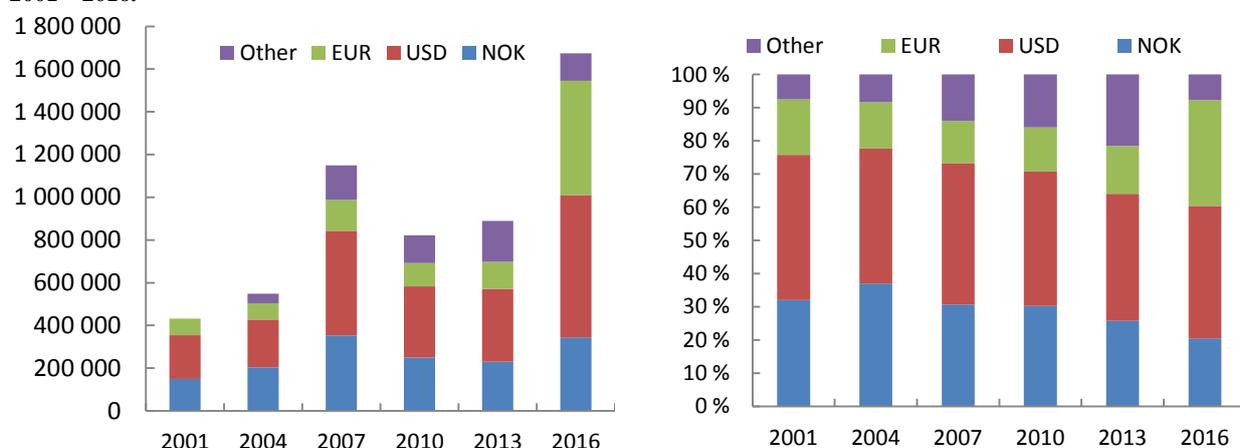


The substantial increase in turnover in the spot and forward markets has largely resulted in a doubling of daily foreign exchange turnover in the Norwegian market. Average daily turnover in the spot market rose to USD 13.6bn in April 2016, from USD 2.8bn in April 2013.³ By comparison, figures from the BIS show that global spot market turnover fell by around 19%. Average daily turnover in the Norwegian forward market was USD 26.6bn in April 2016, up from USD 18.6bn in April 2013. The increase in the forward market largely reflects higher turnover in foreign exchange swaps, which continue to account for the largest share by far of total forward transactions. According to figures from the BIS, there was also an increase in global forward market turnover.

2. Currency distribution in the Norwegian foreign exchange market

The US dollar share of turnover in the Norwegian foreign exchange market rose from 38.3% in April 2013 to 39.9% in April 2016 (Chart 2). The Norwegian krone share fell from 25.8% to 20.5% in the same period, while the percentage share for the euro showed a marked increase from 14.4% to 31.9%. The percentage share for “other currencies” fell in the period from 21.5% to 7.7%. The most important currencies in this category were the Swedish krona and the Swiss franc, with a share of total turnover of 2.5% and 2.1%, respectively.

Chart 2: Total turnover in the foreign exchange market, by currency. In millions of USD (left) and percentages (right). 2001 – 2016.

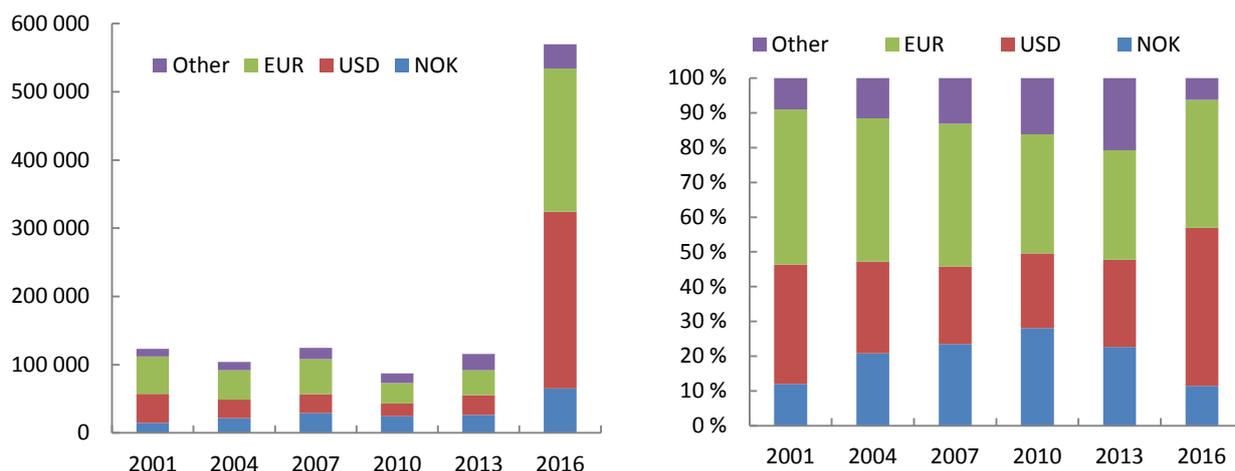


³ See Annex, Table A1

3. Currency distribution in the spot market

In the spot market, the percentage share for the Norwegian krone declined from 22.6% in April 2013 to 11.5% in April 2016, while the US dollar share rose from 25.1% to 45.4% (Chart 3). The euro share had been declining in recent surveys, but it increased from 31.5% in April 2013 to 36.9% in April 2016. The percentage share for “other currencies” had showed a rising trend from April 2001, but fell from 20.7% in 2013 to 6.2% in April 2016.

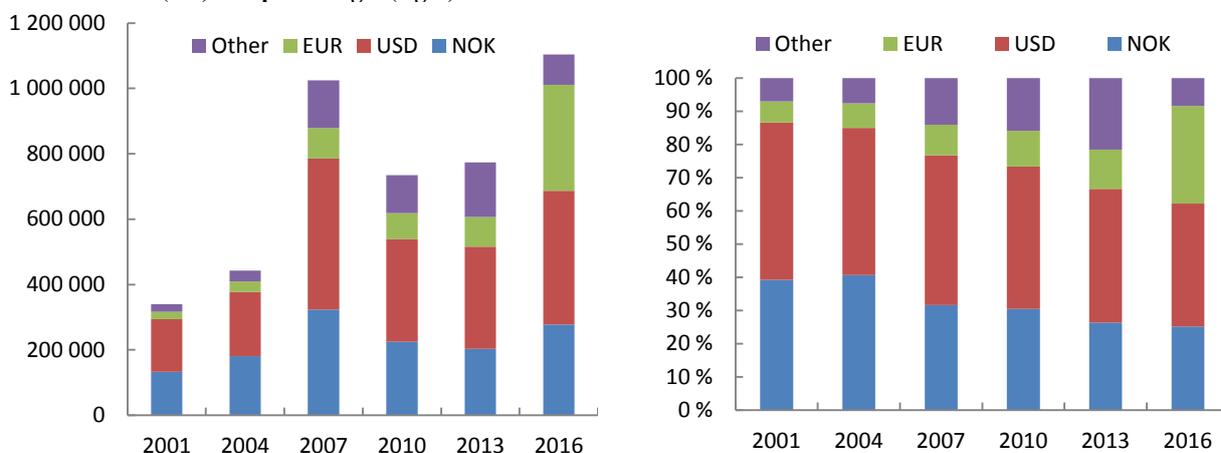
Chart 3: Turnover in the foreign exchange spot market, by currency. In millions of USD (left) and percentages (right). 2001 – 2016.



4. Currency distribution in the forward market

In the forward market, which includes foreign exchange swaps and outright forwards, the US dollar was involved in 37.1% of trades in April 2016 (Chart 4). The US dollar has a high market share, since pricing in the foreign exchange swap market is largely based on US dollar money market rates. However, since 2007, the US dollar share has shown a falling trend, and the euro share has shown a rising trend. Transactions involving the euro rose from 11.8% in 2013 to 29.4% in 2016. The market share of the Norwegian krone has fallen since April 2004. Between April 2013 and April 2016, the Norwegian krone’s share of turnover fell from 26.3% to 25.2%. The share of turnover of “other currencies” fell markedly in the same period.

Chart 4: Currency distribution in forward market turnover, including outright forwards and foreign exchange swaps. In millions of USD (left) and percentages (right). 2001 – 2016.



5. Counterparties in the foreign exchange market

In the survey, reporting dealers are asked to categorise counterparties as “reporting dealers”, “other financial institutions” and “other counterparties” as well as whether the counterparty is local or cross-border. Trading with reporting dealers as a share of total turnover had fallen in recent surveys, but rose from 56.4% in April 2013 to 64.1% in April 2016. The share of trading with other financial institutions had long been rising, but fell from 26.0% in April 2013 to 24.9% in April 2016 (Chart 5b).⁴ The share of cross-border trading by reporting dealers in the Norwegian foreign exchange market had showed a falling trend from 2001, but rose in April 2016 to 82.6% from 70.9% in April 2013 (Chart 5a).

Chart 5a: Foreign exchange turnover in April, by counterparty. Percentages. 2001 – 2016.

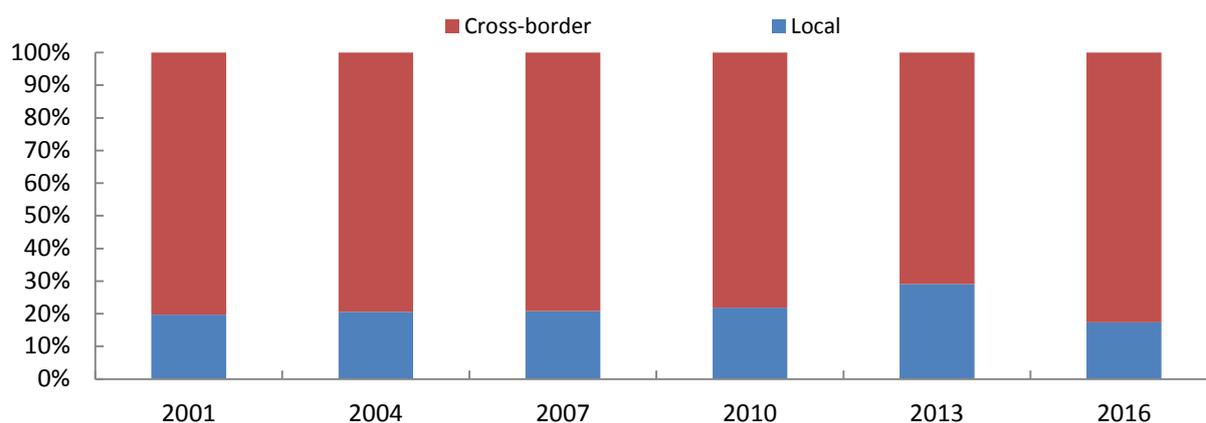
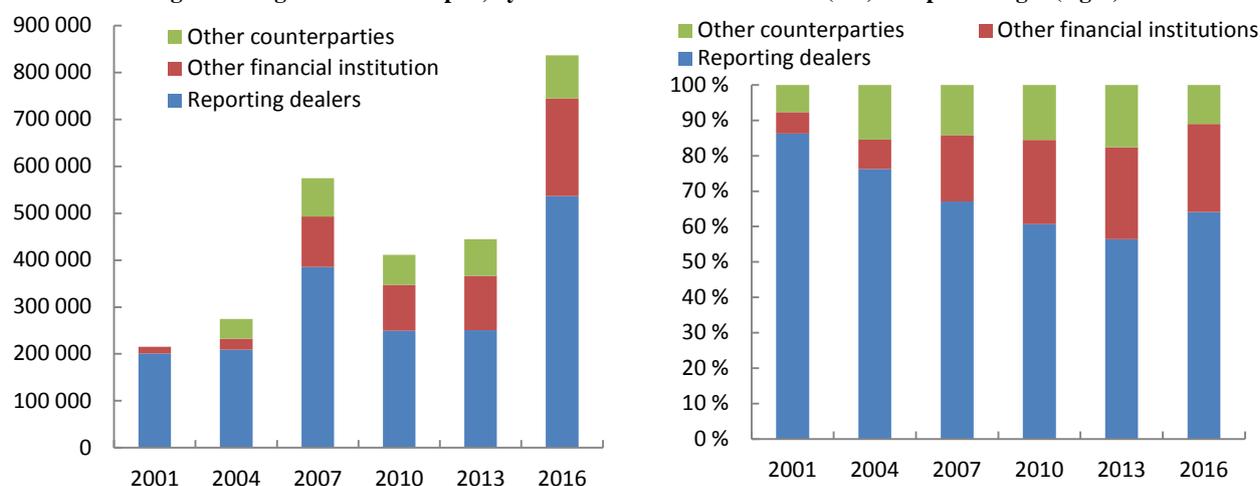


Chart 5b: Foreign exchange turnover in April, by turnover. In millions of USD (left) and percentages (right). 2001 – 2016.



Reporting dealers were asked for the first time in April 2013 to specify the category “other financial institutions” in more detail. Table 2 shows that of other financial institutions, “non-reporting dealers” (both local and cross-border) accounted for by far the largest share. Between April 2013 and April 2016, the share rose from 17.7% to 20.9%.⁵ On the other hand, institutional investors’ foreign exchange trading fell from 7.8% to 3.6% in the same period. “Hedge funds and proprietary trading firms” and “public sector financial institutions” accounted for a very small share of turnover.

⁴ In Chart 5b, no distinction is made between local and cross-border participants.

⁵ The percentage share is calculated as a share of total turnover.

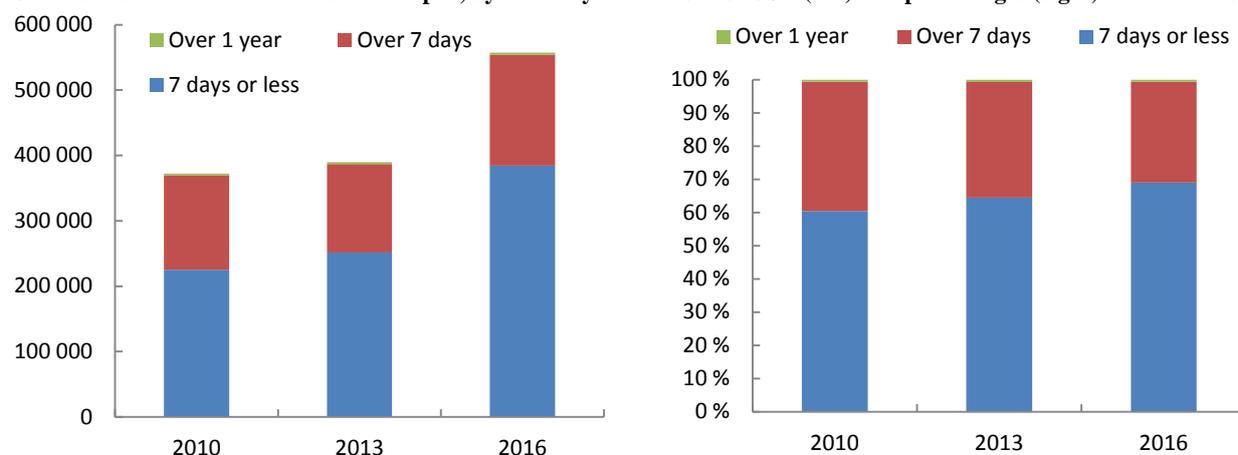
Table 2: Foreign exchange turnover in April – specification of “Other financial institutions”. In millions of USD and percentages.

Counterparty	2013	Percentage	2016	Percentage
Other financial institution	115 777	26.0%	208 394	24.9%
- Non-reporting dealers	78 526	17.7%	174 486	20.9%
- Institutional investors	34 685	7.8%	29 756	3.6%
- Hedge funds and proprietary trading firms	1	0.0%	2 618	0.3%
- Public sector financial institutions	2 394	0.5%	955	0.1%
- Other	1	0.0%	576	0.1%
- Undistributed	170	0.0%	0	0.0%

6. Maturity distribution in the forward market

The bulk of the forward contracts have a maturity of seven days or less. Between April 2013 and April 2016, their share rose from 64.5% to 69.0% (Chart 6). The share of contracts with a maturity between seven days and one year fell from 34.8% to 30.4%, while the share of contracts with a maturity of over one year remained marginally above zero.

Chart 6: Forward market turnover in April, by maturity. In millions of USD (left) and percentages (right). 2010 – 2016.



7. Currency distribution in the market for currency options and currency swaps (basis swaps)

The Norwegian krone was involved in 41.4% of the turnover in currency options in April 2016, against 34.4% of the turnover in April 2013 (Chart 7a). The US dollar share rose markedly from 16.0% to 30.4% in the same period. The euro share fell from 34.4% to 21.1%. The share of “other currencies” also fell, from 15.1% to 7.1%.

In the currency swap (basis swap) market, the shares for the Norwegian krone and euro rose between April 2013 and April 2016, to 44.4% and 36.0%, respectively (Chart 7b). In the same period, the shares for the US dollar and “other currencies” fell to 17.4% and 2.1%, respectively.

Chart 7a: Turnover in currency options in April, by currency. In millions of USD (left) and percentages (right). 2001 – 2016.

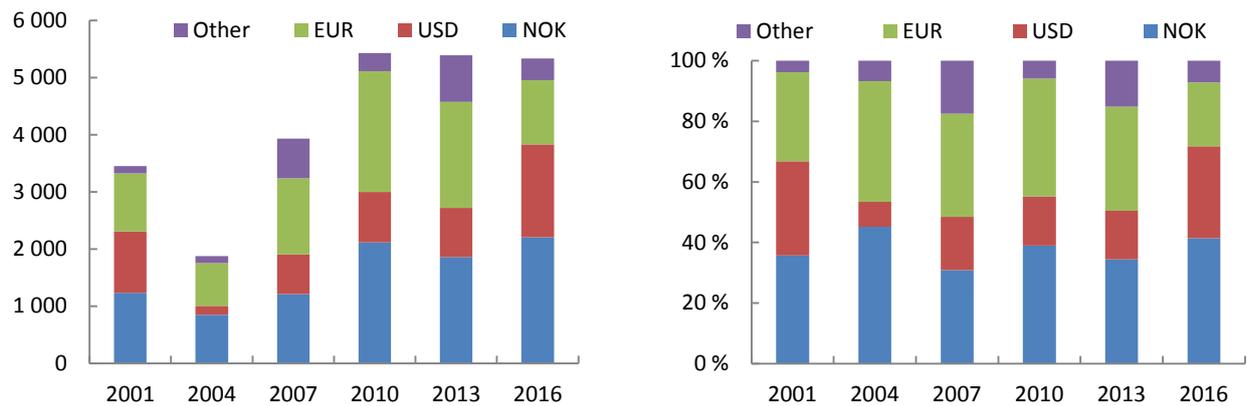
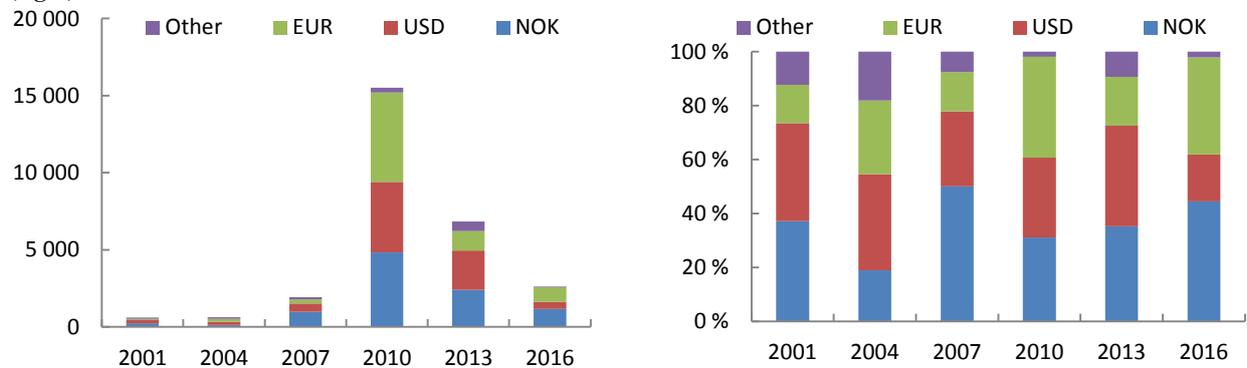


Chart 7b: Turnover in currency swaps (basis swaps) in April, by currency. In millions of USD (left) and percentages (right). 2001 – 2016.

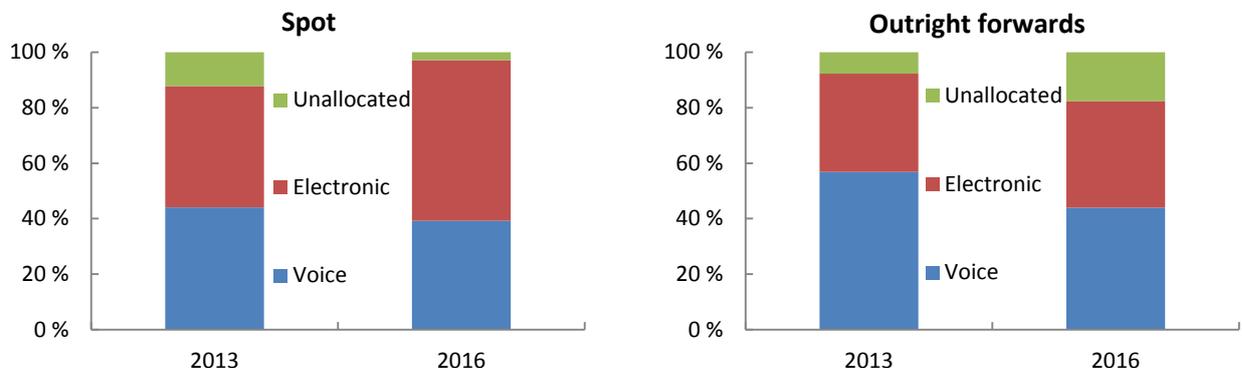


8. Execution methods

In April 2013, the categorisation of execution methods was revised to some extent compared with previous surveys. Consequently, comparisons with figures from surveys prior to April 2013 are difficult.

The share of spot market transactions executed on electronic trading systems rose from 43.7% in April 2013 to 57.8% in 2016 (Chart 8). The share of outright forwards executed electronically also rose, from 35.5% to 38.4%. The share of turnover executed over the phone (voice) fell for both spot trades and outright forwards, to 39.3% and 44.0%, respectively.

Chart 8: Foreign exchange market transactions in April, by execution method.¹⁾ Percentages. 2013 – 2016.



1) Voice includes transactions executed over the phone. Indirect voice transactions refer to transactions executed over the phone, intermediated by a third party (eg. via a voice broker), while direct voice transactions are not intermediated by a third party.

Turnover in the Norwegian OTC interest rate derivatives market

1. Turnover by instrument

Total turnover in the Norwegian OTC interest rate derivatives market in April 2016 was USD 76bn, against USD 119bn in April 2013, a decrease of 35.7%. The decrease was driven especially by lower turnover in forward rate agreements (FRAs). Turnover in interest rate swaps is approximately at the same level as in 2013, after being driven higher by increased trading between one of the reporting dealers and a wholly owned subsidiary in 2010. Average daily turnover was USD 3.6bn, down from USD 5.7bn in 2013. This is the lowest daily turnover for OTC interest rate derivatives since 2001. For both FRAs and interest rate swaps, average daily turnover was under USD 2bn in April 2016.

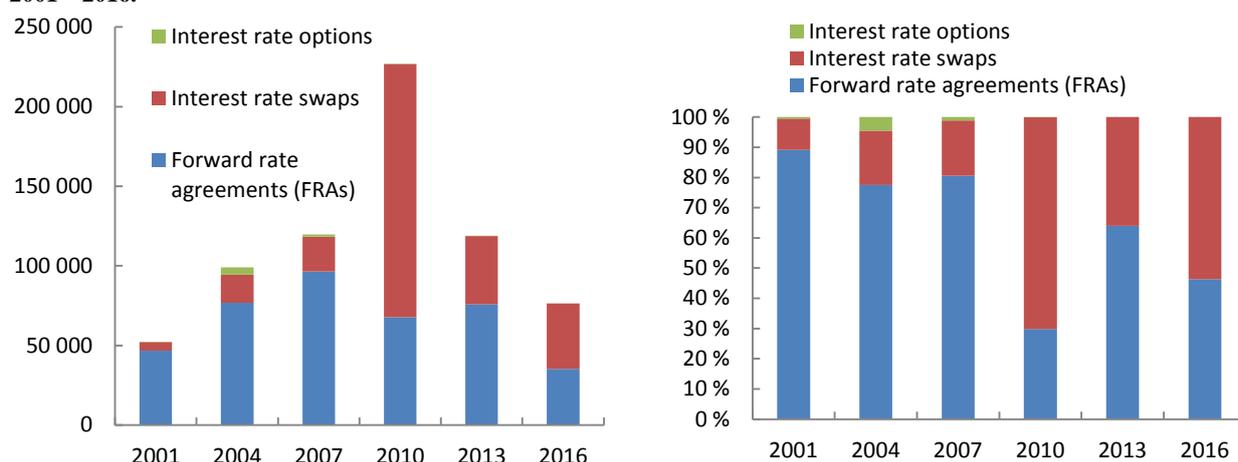
As a share of total turnover, FRAs fell markedly from 63.9% in April 2013 to 46.3% in April 2016, while the share of interest rate swaps increased from 36.0% to 53.7% in the same period (Chart 9). While turnover in FRAs and interest rate swaps each accounts for around half of total turnover, no turnover in interest rate options was reported in April 2016. This is in line with previous years' surveys, where turnover in interest rate options has been steadily decreasing since 2004.

Table 3: Turnover in interest rate derivatives in April, by instrument. In millions of USD and NOK

Instrument	2001	2004	2007	2010	2013	2016
Forward rate agreements (FRAs)	46 629	76 708	96 425	67 845	75 874	35 354
Interest rate swaps	5 422	17 800	21 896	158 855	42 754	41 007
Interest rate options	277	4 513	1 324	348	50	0
Total in millions of USD	52 328	99 021	119 645	227 048	118 679	76 361
Average per banking day in millions of USD	2 907	5 212	6 736	11 950	5 651	3 636
Total in millions of NOK	475 662	685 225	717 870	1 344 124	687 150	627 689
Average per banking day in millions of NOK	26 426	36 064	39 882	70 743	32 721	29 890

Transactions between local reporting dealers are counted only once.

Chart 9: Turnover in interest rate derivatives in April, by instrument. In millions of USD (left) and percentages (right). 2001 – 2016.



2. Currency distribution

The Norwegian krone was involved in 61.1% of the turnover in interest rate derivatives in April 2016, against 80.3% in April 2013 (Table 4). The decline for the Norwegian krone has been especially pronounced for interest rate swaps. The total share for the Norwegian krone has fallen in the past three surveys, while the US dollar share has risen. The share of turnover in interest rate derivatives for the Norwegian krone and US dollar together remained approximately unchanged between April 2013 and April 2016, so that the share of turnover for euro and “other currencies” together was also the approximately the same in April 2016 as it was in April 2013.

Table 4: Turnover in interest rate derivatives in April, by instrument and currency. In millions of USD and percentages.

Forward rate agreements (FRAs)	2010	Percentage	2013	Percentage	2016	Percentage
NOK	66 595	98.2%	73 296	96.6%	33 864	95.8%
USD	1 250	1.8%	-	0.0%	-	0.0%
EUR	-	-	594	0.8%	-	0.0%
Other currencies	-	-	1 985	2.6%	1 490	4.2%
Total	67 845	100.0%	75 874	100.0%	35 354	100.0%
Interest rate swaps	2010	Percentage	2013	Percentage	2016	Percentage
NOK	148 259	93.3%	21 941	51.3%	12 811	31.2%
USD	6 930	4.4%	13 308	31.1%	24 132	58.8%
EUR	2 871	1.8%	6 307	14.8%	3 463	8.4%
Other currencies	795	0.5%	1 198	2.8%	602	1.5%
Total	158 855	100.0%	42 754	100.0%	41 007	100.0%
Options	2010	Percentage	2013	Percentage	2016	Percentage
NOK	348	100.0%	28	56.0%	-	0.0%
USD	-	-	-	-	-	0.0%
EUR	-	-	22	44.0%	-	0.0%
Other currencies	-	-	-	-	-	0.0%
Total	348	100.0%	50	100.0%	-	0.0%
Total	2010	Percentage	2013	Percentage	2016	Percentage
NOK	215 202	94.8%	95 265	80.3%	46 674	61.1%
USD	8 180	3.6%	13 308	11.2%	24 132	31.6%
EUR	2 871	1.3%	6 923	5.8%	3 463	4.5%
Other currencies	795	0.3%	3 183	2.7%	2 092	2.7%
Total	227 048	100.0%	118 679	100.0%	76 361	100.0%

Transactions between local reporting dealers are counted only once.

3. Turnover in the OTC interest rate derivatives market by counterparty

Norwegian counterparties have reduced their share of turnover in the interest rate derivatives market from 44.1% in April 2013 to 9.9% in April 2016 (Chart 10). In April 2010, the share was 70.6%. The decline among Norwegian counterparties includes both reporting dealers and “other financial institutions”, while the share for “other counterparties” has risen slightly. The share of trades with cross-border counterparties rose from 55.9% in April 2013 to 90.1% in April 2016. In April 2016, 2.0% of the total transaction volume for interest rate derivatives was related to trades with non-financial sector counterparties, against 1.4% in 2013.

Chart 10a: Turnover in interest rate derivatives in April, by counterparty. Percentages. 2010 – 2016.

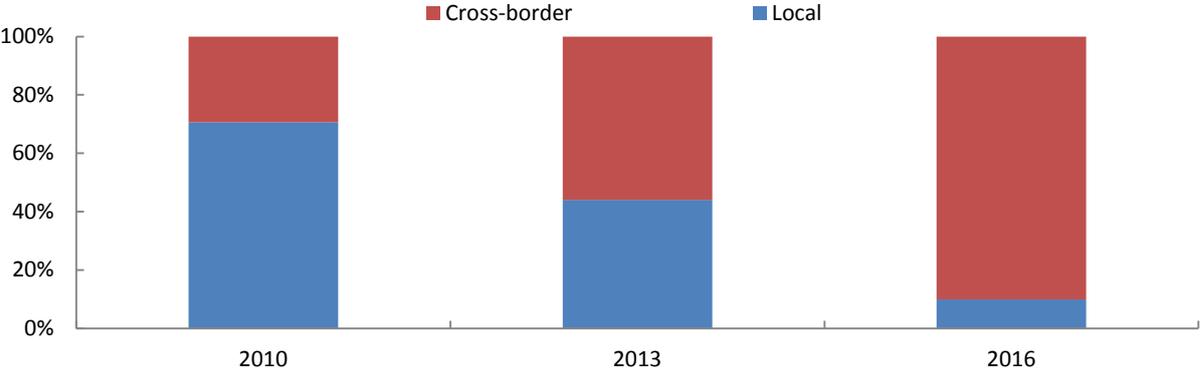
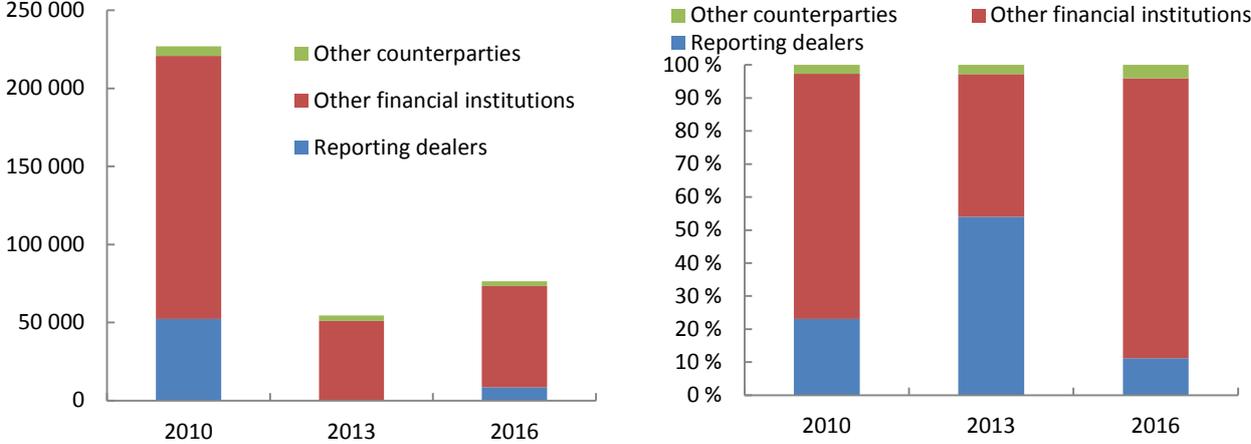


Chart 10b: Turnover in interest rate derivatives in April, by counterparty. In millions of USD (left) and percentages (right). 2010 – 2016.



Annex

Foreign exchange market

Table A.1: Foreign exchange turnover in April, by instrument. In millions of USD and percentages

Instrument	2001	2004	2007	2010	2013	2016
Spot	3 419	2 733	3 460	2 318	2 760	13 630
Forwards	9 438	11 658	28 458	19 580	18 553	26 645
- <i>Outright forwards</i>	414	459	2 419	1 823	556	655
- <i>Foreign exchange swaps</i>	9 024	11 199	26 039	17 756	17 998	25 990
Currency swaps (basis swaps)	17	16	54	409	163	75
Currency options	96	49	109	143	129	127
Total	12 970	14 456	32 081	22 450	21 605	40 478
Instrument	2001	2004	2007	2010	2013	2016
Spot	26.4%	18.9%	10.8%	10.3%	12.8%	33.7%
Forwards	72.8%	80.7%	88.7%	87.2%	85.9%	65.8%
- <i>Outright forwards</i>	3.2%	3.2%	7.5%	8.1%	2.6%	1.6%
- <i>Foreign exchange swaps</i>	69.6%	77.5%	81.2%	79.1%	83.3%	64.2%
Currency swaps (basis swaps)	0.1%	0.1%	0.2%	1.8%	0.8%	0.2%
Currency options	0.7%	0.3%	0.3%	0.6%	0.6%	0.3%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Transactions between local reporting dealers are counted only once. Turnover figures for the foreign exchange market cover spot, outright forwards, foreign exchange swaps, currency swaps (basis swaps) and currency options. The figures for the forward market prior to 2001 include currency swaps.

Table A.2: Foreign exchange turnover in April, by currency. In millions of USD and percentages

Currency	2001	2004	2007	2010	2013	2016
NOK	149 231	202 772	353 115	248 995	229 703	343 183
USD	204 358	224 011	489 567	333 222	340 881	667 797
EUR	77 880	76 198	145 295	109 462	127 835	534 160
Other currencies	34 832	45 720	161 089	130 627	191 314	128 215
Total	466 301	548 701	1 149 066	822 306	889 733	1 673 355
Currency	2001	2004	2007	2010	2013	2016
NOK	32.0%	37.0%	30.7%	30.3%	25.8%	20.5%
USD	43.8%	40.8%	42.6%	40.5%	38.3%	39.9%
EUR	16.7%	13.9%	12.7%	13.3%	14.4%	31.9%
Other currencies	7.5%	8.3%	14.0%	15.9%	21.5%	7.7%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Transactions between local reporting dealers are counted only once.

Table A.3: Turnover in the foreign exchange spot market, by currency. In millions of USD and percentages

Currency	2001	2004	2007	2010	2013	2016
NOK	14 740	21 556	29 263	24 551	26 191	65 362
USD	42 309	27 400	27 745	18 786	29 019	258 827
EUR	55 009	42 791	51 212	29 788	36 467	210 057
Other currencies	11 025	12 094	16 362	14 123	23 995	35 494
Total	123 083	103 841	124 582	87 248	115 671	569 741
Currency	2001	2004	2007	2010	2013	2016
NOK	12.0%	20.8%	23.5%	28.1%	22.6%	11.5%
USD	34.4%	26.4%	22.3%	21.5%	25.1%	45.4%
EUR	44.7%	41.2%	41.1%	34.2%	31.5%	36.9%
Other currencies	9.0%	11.6%	13.1%	16.2%	20.7%	6.2%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Transactions between local reporting dealers are counted only once.

Table A.4: Currency distribution in forward market turnover, including outright forwards and foreign exchange swaps. In millions of USD and percentages

Currency	2001	2004	2007	2010	2013	2016
NOK	133 267	180 369	323 852	224 444	203 512	277 821
USD	160 975	196 456	461 646	314 436	311 862	408 969
EUR	21 857	32 658	94 084	79 674	91 368	324 103
Other currencies	23 687	33 501	144 902	116 504	167 319	92 721
Total	339 786	442 985	1 024 484	735 058	774 062	1 103 614
Currency	2001	2004	2007	2010	2013	2016
NOK	39.2%	40.7%	31.6%	30.5%	26.3%	25.2%
USD	47.4%	44.3%	45.1%	42.8%	40.3%	37.1%
EUR	6.4%	7.4%	9.2%	10.8%	11.8%	29.4%
Other currencies	7.0%	7.6%	14.1%	15.9%	21.6%	8.4%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Transactions between local reporting dealers are counted only once. Pre-2004 figures include currency swaps (basis swaps).

Table A.5: Foreign exchange turnover in April, by counterparty. In millions of USD and percentages

Counterparty	2001	2004	2007	2010	2013	2016
Reporting dealers	201 207	209 279	385 625	249 543	250 728	536 616
- Local	19 242	6 376	3 103	4 914	2 705	6 365
- Cross-border	181 965	202 903	382 522	244 629	248 023	530 251
Other financial institutions	14 087	22 713	107 648	97 667	115 777	208 394
- Local	9 880	15 089	43 202	29 032	64 247	79 678
- Cross-border	4 207	7 624	64 446	68 635	51 530	128 715
Other counterparties	17 859	42 360	81 260	63 942	78 361	91 668
- Local	16 834	35 092	73 326	56 117	65 562	59 783
- Cross-border	1 024	7 268	7 934	7 825	15 799	31 886
Total	233 152	274 352	574 533	411 152	444 866	836 678
- Local	45 956	56 558	119 631	90 063	129 514	145 826
- Cross-border	187 196	217 794	454 902	321 089	315 352	690 853
Counterparty	2001	2004	2007	2010	2013	2016
Reporting dealers	86.3%	76.3%	67.1%	60.7%	56.4%	64.1%
- Local	8.3%	2.3%	0.5%	1.2%	0.6%	0.8%
- Cross-border	78.0%	74.0%	66.6%	59.5%	55.8%	63.4%
Other financial institutions	6.0%	8.3%	18.7%	23.8%	26.0%	24.9%
- Local	4.2%	5.5%	7.5%	7.1%	14.4%	9.4%
- Cross-border	1.8%	2.8%	11.2%	16.7%	11.6%	15.4%
Other counterparties	7.7%	15.4%	14.2%	15.5%	17.6%	11.0%
- Local	7.2%	12.8%	12.8%	13.6%	14.1%	7.1%
- Cross-border	0.4%	2.6%	1.4%	1.9%	3.6%	3.8%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
- Local	19.7%	20.6%	20.8%	21.9%	29.1%	17.4%
- Cross-border	80.3%	79.4%	79.2%	78.1%	70.9%	82.6%

Transactions between local reporting dealers are counted only once. Pre-2004 figures include currency swaps (basis swaps).

Table A.6: Forward market turnover in April, by maturity. In millions of USD and percentages

Maturity	2010	Percentage	2013	Percentage	2016	Percentage
7 days or less	225 091	60.5%	251 382	64.5%	384 352	69.0%
Over 7 days	144 832	38.9%	135 412	34.8%	169 662	30.4%
Over 1 year	2 050	0.6%	2 820	0.7%	3 281	0.6%
Total	371 973	100.0%	389 614	100.0%	557 295	100.0%

Not adjusted for local double-counting.

Table A.7.a: Turnover in currency options in April, by currency. In millions of USD and percentages

Currency	2001	2004	2007	2010	2013	2016
NOK	1 234	848	1 213	2 119	1 857	2 207
USD	1 075	155	691	881	862	1 624
EUR	1 014	749	1 338	2 114	1 858	1 124
Other currencies	130	125	690	320	817	380
Total	3 453	1 876	3 932	5 434	5 393	5 334
Currency	2001	2004	2007	2010	2013	2016
NOK	35.7%	45.2%	30.9%	39.0%	34.4%	41.4%
USD	31.1%	8.2%	17.6%	16.2%	16.0%	30.4%
EUR	29.4%	39.9%	34.0%	38.9%	34.4%	21.1%
Other currencies	3.8%	6.7%	17.5%	5.9%	15.1%	7.1%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table A.7.b: Turnover in currency swaps (basis swaps) in April, by currency. In millions of USD and percentages

Currency	2001	2004	2007	2010	2013	2016
NOK	223	118	969	4 827	2 411	1 165
USD	218	223	541	4 585	2 549	457
EUR	85	170	280	5 798	1 246	943
Other currencies	74	113	148	300	633	55
Total	600	624	1 938	15 510	6 833	2 620
Currency	2001	2004	2007	2010	2013	2016
NOK	37.2%	18.9%	50.0%	31.1%	35.2%	44.4%
USD	36.3%	35.7%	27.9%	29.6%	37.3%	17.4%
EUR	14.2%	27.3%	14.5%	37.4%	18.2%	36.0%
Other currencies	12.3%	18.1%	7.6%	1.9%	9.3%	2.1%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Transactions between local reporting dealers are counted only once.

Table A.8: Foreign exchange turnover in April 2016, by execution method. In millions of USD and percentages

	Voice ¹		Electronic ²					Undistributed
	Direct	Indirect	Direct		Indirect			
	Direct	Indirect	Single-bank proprietary trading system ³	Other	Reuters Matching/EBS	“Dark pools”	Other comm. network	
Spot	81 753	30 578	6 912	805	154 688	0	414	8 305
Outright forwards	5 999	44	668	2 488	0	0	2 123	2 420
Foreign exchange swaps	184 983	52 836	17 355	3 547	142 729	0	1	130 670
Currency swaps (basis swaps)	282	1 196	100	0	0	0	0	0
Currency options	324	1 783	341	227	0	0	0	0
Total	273 341	86 436	25 376	7 067	297 417	0	18 988	141 395
	Voice ¹		Electronic ²					Undistributed
	Direct	Indirect	Direct		Indirect			
	Direct	Indirect	Single-bank proprietary trading system ³	Other	Reuters Matching/EBS	“Dark pools”	Other comm. network	
Spot	28.6%	10.7%	2.4%	0.3%	54.0%	0.0%	1.1%	2.9%
Outright forwards	43.7%	0.3%	4.9%	18.1%	0.0%	0.0%	15.4%	17.6%
Foreign exchange swaps	33.9%	9.7%	3.2%	0.6%	26.2%	0.0%	2.5%	23.9%
Currency swaps (basis swaps)	17.9%	75.8%	6.3%	0.0%	0.0%	0.0%	0.0%	3.3%
Currency options	12.1%	66.7%	12.7%	8.5%	0.0%	0.0%	0.0%	27.5%
Total	32.2%	10.2%	3.0%	0.8%	35.0%	0.0%	2.2%	16.6%

¹⁾ Voice includes transactions executed over the phone. *Indirect voice transactions* refer to transactions executed over the phone, intermediated by a third party (eg. via a voice broker), while *direct voice transactions* are not intermediated by a third party.

²⁾ *Indirect electronic transactions* are executed over an electronic medium, intermediated by a third party electronic platform, while *direct electronic transactions* are not intermediated by a third party.

³⁾ *Single-bank proprietary trading system* refers to an electronic trading system owned and operated by a bank

Interest rate derivatives

Table A.9: Turnover in interest rate derivatives in April, by instrument. In millions of USD and percentages

Instrument	2001	2004	2007	2010	2013	2016
Forward rate agreements (FRAs)	2 591	4 037	5 357	3 571	3 613	1 684
Interest rate swaps	301	937	1 216	8 361	2 036	1 953
Interest rate swaps	15	238	74	18	2	0
Total	2 907	5 212	6 647	11 950	5 651	3 636
Instrument	2001	2004	2007	2010	2013	2016
Forward rate agreements (FRAs)	89.1%	77.5%	80.6%	29.9%	63.9%	46.3%
Interest rate swaps	10.4%	18.0%	18.3%	70.0%	36.0%	53.7%
Interest rate swaps	0.5%	4.5%	1.1%	0.1%	0.0%	0.0%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Transactions between local reporting dealers are counted only once.

Table A.10: Turnover in interest rate derivatives in April, by counterparty. In millions of USD and percentages

Counterparty	2010	Percentage	2013	Percentage	2016	Percentage
Reporting dealers	52 353	23.1%	64 090	27.0%	8 544	5.6%
- Local	5 399	2.4%	23 636	10.0%	1 632	1.1%
- Cross-border	46 954	20.7%	40 454	17.0%	6 913	4.5%
Other financial institutions	168 494	74.4%	51 157	21.6%	64 808	42.4%
- Local	148 949	65.6%	26 695	11.2%	3 024	2.0%
- Cross-border	19 545	8.6%	24 461	10.3%	61 784	40.5%
Other counterparties	6 201	2.7%	3 432	1.4%	3 009	2.0%
- Local	5 863	2.6%	2 049	0.9%	2 912	1.9%
- Cross-border	338	0.1%	1 383	0.6%	98	0.1%
Total	227 048	100.0%	237 358	100.0%	152 722	100.0%
- Local	160 211	70.6%	104 761	44.1%	15 135	9.9%
- Cross-border	66 837	29.4%	132 597	55.9%	137 588	90.1%

Transactions between local reporting dealers are counted only once.