

Bank of Canada
Triennial Central Bank Surveys
of Foreign Exchange and Over-the-Counter (OTC)
Derivatives Markets
Turnover for April, 2016
and
Amounts Outstanding as at June 30, 2016

December 2016

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Table 1: Foreign exchange turnover in Canada
Summary of surveys
 Billions of U.S. Dollars in April

	Foreign exchange turnover ¹						Number of business days	Average daily turnover	Per cent change
	Spot	Outright forwards	FX swaps	Currency swaps	Options	Total			
1983	44.3	5.2	53.7			103.2	20	5.2	
1986	81.5	11.2	98.5			191.2	20	9.6	84.6
1989	123.9	14.1	161.9			299.9	20	15.0	56.3
1992	162.1	17.6	281.2			460.9	21	21.9	46.0
1995	228.5	47.9	290.1	1.0	15.0	582.5	19	30.7	40.2
1998	226.5	30.0	516.2	5.8	18.2	796.7	21	37.9	23.5
2001	217.3	45.0	570.6	7.1	44.9	884.9	20	44.2	16.6
2004	385.7	83.4	663.4	12.6	100.4	1245.5	21	59.3	34.2
2007	273.1	86.1	837.3	32.1	52.0	1280.6	20	64.0	7.9
2010	383.9	132.0	710.9	26.0	46.9	1299.7	21	61.9	-3.3
2013	329.0	221.2	782.1	26.8	67.5	1426.5	22	64.8	4.7
2016	355.0	270.2	1009.8	60.2	101.0	1796.3	21	85.5	31.9

¹Currency swaps and options were not included in the survey until 1995.

Table 2: Single-currency interest rate derivatives turnover in Canada
Summary of surveys
 Billions of U.S. Dollars in April

	Single-currency interest rate derivatives				Number of business days	Average daily turnover	Per cent change
	Forward rate agreements	Interest rate swaps	Options	Total			
1995	56.7	20.2	5.6	82.5	19	4.3	
1998	51.0	61.4	22.0	134.4	21	6.4	48.8
2001	57.7	121.5	19.2	198.4	20	9.9	54.7
2004	71.5	152.6	30.4	254.5	21	12.1	22.2
2007	123.8	215.5	72.3	411.6	20	20.6	70.2
2010	137.3	725.6	12.6	875.5	21	41.7	102.4
2013	149.0	554.1	44.4	747.4	22	34.0	-18.5
2016	54.4	616.2	17.9	688.6	21	32.8	-3.5

Table 3: Reported foreign exchange turnover in Canada by instrument and by counterparty
Summary of surveys
 Billions of U.S. dollars (and percent shares)

	Instrument ¹										Counterparty ²					
	Spot		Outright forwards		Foreign exchange swaps		Currency swaps		Options		Reporting dealers		Customers			
													Financial ³		Non-financial	
1983	44	(43)	5	(5)	54	(52)					75	(73)	8	(8)	19	(19)
1986	82	(43)	11	(6)	98	(51)					131	(69)	24	(12)	36	(19)
1989	124	(41)	14	(5)	162	(54)					217	(72)	25	(8)	58	(20)
1992	162	(35)	18	(4)	281	(61)					360	(76)	32	(7)	79	(17)
1995	229	(39)	48	(8)	290	(50)	1	(0)	15	(3)	347	(61)	141	(25)	79	(14)
1998	227	(28)	30	(4)	516	(65)	6	(1)	18	(2)	550	(71)	123	(16)	100	(13)
2001	217	(25)	45	(5)	571	(64)	7	(1)	45	(5)	534	(64)	198	(24)	101	(12)
2004	386	(31)	83	(7)	663	(53)	13	(1)	100	(8)	704	(62)	318	(28)	110	(10)
2007	273	(21)	86	(7)	837	(65)	32	(3)	52	(4)	661	(55)	422	(35)	113	(9)
2010	384	(29)	132	(10)	711	(55)	26	(2)	47	(4)	660	(54)	465	(38)	102	(8)
2013	329	(23)	221	(16)	782	(55)	27	(2)	67	(5)	892	(63)	365	(26)	169	(12)
2016	355	(20)	270	(15)	1010	(56)	60	(3)	101	(6)	1142	(64)	452	(25)	203	(11)

¹Currency swaps and options were not included in the survey until 1995.

²Beginning in 2013, the counterparty breakdown is based on all five foreign exchange products, not just traditional foreign exchange turnover (spot, outright forwards and foreign exchange swaps).

³A more detailed breakdown of financial customers or other financial institutions is provided in Table 3a.

Table 3a: Breakdown of the other financial institutions counterparty category

April 2016

Billions of U.S. dollars (and percent shares)

	Spot		Outright forwards		Foreign exchange swaps		Currency swaps		Options		Total	
Total Other Financial Institutions	98.7	(100)	149.1	(100)	188.7	(100)	9.7	(100)	5.3	(100)	451.5	(100)
Non-reporting banks	32.6	(33)	6.3	(4)	66.2	(35)	1.5	(16)	0.4	(7)	107.0	(24)
Institutional investors	51.4	(52)	115.1	(77)	96.4	(51)	5.2	(54)	4.7	(89)	272.9	(60)
Hedge funds & proprietary trading firms	6.1	(6)	19.7	(13)	8.2	(4)	0.6	(6)	0.1	(1)	34.6	(8)
Official sector financial institutions	0.8	(1)	0.7	(0)	7.0	(4)	1.8	(19)	0.0	(0)	10.4	(2)
Others	7.7	(8)	7.2	(5)	10.9	(6)	0.6	(6)	0.1	(2)	26.6	(6)

**Table 4: Reported foreign exchange turnover in Canada by currency
Summary of surveys ¹**

Percent shares

Currency	April 1983	March 1986	April 1989	April 1992	April 1995	April 1998	April 2001	April 2004	April 2007	April 2010	April 2013	April 2016
U.S. dollar	99.0	99.4	99.2	96.3	96.6	96.8	96.0	95.3	95.6	94.2	92.5	94.3
Canadian dollar	75.7	68.2	66.2	65.2	69.6	70.2	61.8	55.5	67.8	69.7	61.2	60.1
Euro ²	--	--	--	--	--	--	15.7	17.7	11.7	12.8	17.3	14.4
German mark ²	10.7	13.4	12.9	17.0	16.0	14.9	--	--	--	--	--	--
U.K. pound	6.8	8.3	6.3	6.9	4.4	4.6	7.8	7.8	6.9	4.3	7.9	12.6
Japanese yen	2.9	4.2	7.3	5.8	6.0	7.3	8.7	9.4	5.4	4.5	6.2	6.0
Australian dollar ³	--	--	--	--	--	1.0	2.3	4.2	3.5	2.8	3.7	2.9
Mexican peso ³	--	--	--	--	--	--	0.5	1.9	3.9	2.6	3.1	2.5
Swedish krona ³	--	--	--	--	--	--	--	--	--	--	1.4	2.3
Swiss franc	2.9	4.7	5.6	5.0	4.4	2.3	4.2	4.5	2.6	1.1	1.5	1.3
Hong Kong dollar ³	--	--	--	--	--	--	0.2	1.4	0.5	0.4	0.2	0.4
Other currencies	2.0	1.8	2.5	3.8	3.0	2.9	2.8	2.3	2.0	7.4	4.8	3.2
All currencies ⁴	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0

¹ Beginning in 2013, the currency breakdown is based on all five foreign exchange products, not just traditional foreign exchange turnover (spot, outright forwards and foreign exchange swaps).

² On 1 January 1999, the Euro replaced 11 European currencies including the German mark.

³ "--" indicates the currency was not broken out and reported separately.

⁴ Since every foreign exchange transaction involves two currencies, the reporting of all currencies necessarily sums to 200 per cent.

Table 5: Total reported foreign exchange turnover in Canada

Millions of U.S. dollars

Instrument and counterparty	Canadian dollar against U.S. dollar			U.S. dollar against other currencies			Canadian dollar against currencies other than the U.S. dollar			All other currency pairs			All currencies		
	April 2013	April 2016	Per cent growth	April 2013	April 2016	Per cent growth	April 2013	April 2016	Per cent growth	April 2013	April 2016	Per cent growth	April 2013	April 2016	Per cent growth
Spot	184,502	172,535	-6.5	111,277	142,584	28.1	22,683	30,203	33.2	10,512	9,724	-7.5	328,973	355,045	7.9
Reporting dealers	131,254	113,318	-13.7	74,906	101,635	35.7	9,876	6,557	-33.6	7,177	7,254	1.1	223,212	228,763	2.5
Financial customers	27,399	38,895	42.0	33,052	36,565	10.6	9,838	20,915	112.6	3,181	2,333	-26.7	73,470	98,708	34.4
Non-financial customers	25,849	20,322	-21.4	3,319	4,384	32.1	2,969	2,731	-8.0	154	137	-11.0	32,291	27,574	-14.6
Outright forwards	110,752	135,916	22.7	78,442	97,485	24.3	27,665	32,812	18.6	4,328	4,026	-7.0	221,186	270,238	22.2
Reporting dealers	46,097	34,796	-24.5	39,156	53,825	37.5	2,986	2,970	-0.6	2,405	1,754	-27.1	90,643	93,344	3.0
Financial customers	47,329	82,423	74.1	35,404	38,330	8.3	23,090	26,636	15.4	1,699	1,706	0.4	107,522	149,095	38.7
Non-financial customers	17,326	18,697	7.9	3,882	5,330	37.3	1,589	3,206	101.8	224	566	152.7	23,021	27,799	20.8
o/w Non-deliverable forwards	--	--		27,290	21,771		777	339		149	176		28,216	22,286	
FX swaps	420,482	580,083	38.0	315,502	401,511	27.3	42,547	23,949	-43.7	3,596	4,215	17.2	782,127	1,009,758	29.1
Reporting dealers	262,755	379,841	44.6	247,243	311,506	26.0	8,540	5,020	-41.2	288	689	139.2	518,826	697,056	34.4
Financial customers	106,640	127,986	20.0	38,028	42,881	12.8	20,206	16,822	-16.7	2,584	997	-61.4	167,458	188,686	12.7
Non-financial customers	51,087	72,256	41.4	30,231	47,124	55.9	13,801	2,107	-84.7	724	2,529	249.3	95,843	124,016	29.4
Currency swaps	21,927	44,942	105.0	4,756	9,841	106.9	51	5,432	10551.0	24	20	-16.7	26,758	60,235	125.1
Reporting dealers	13,998	24,292	73.5	3,758	8,294	120.7	37	5,222	14013.5	24	8	-66.7	17,817	37,816	112.2
Financial customers	1,856	8,957	382.6	871	509	-41.6	0	208		0	12		2,727	9,686	255.2
Non-financial customers	6,073	11,693	92.5	127	1,038	717.3	14	2	-85.7	0	0		6,214	12,733	104.9
OTC options	35,749	45,741	27.9	29,318	52,504	79.1	1,752	999	-43.0	633	1,778	180.8	67,452	101,020	49.8
Reporting dealers	27,112	36,171	33.4	13,159	46,247	251.4	940	662	-29.6	553	1,599	189.1	41,764	84,677	102.8
Financial customers	1,415	2,231	57.7	12,620	3,074	-75.6	31	0	-100.0	0	0		14,129	5,332	-62.3
Non-financial customers	7,222	7,339	1.6	3,539	3,183	-10.1	781	337	-56.9	17	152	794.1	11,559	11,011	-4.7
Total reporting dealers	481,216	588,417	22.3	378,222	521,506	37.9	22,378	20,429	-8.7	10,447	11,303	8.2	892,262	1,141,655	28.0
Total customers	292,196	390,799	33.7	161,073	182,418	13.3	69,350	70,234	1.3	8,583	8,432	-1.8	534,234	654,641	22.5
Financial	184,639	260,492	41.1	119,975	121,359	1.2	53,165	64,581	21.5	7,464	5,048	-32.4	365,306	451,507	23.6
Non-financial	107,557	130,307	21.2	41,098	61,059	48.6	16,185	5,653	-65.1	1,119	3,384	202.4	168,928	203,134	20.2
Local	355,008	463,664	30.6	81,340	104,759	28.8	66,655	75,882	13.8	1,246	7,424	495.8	504,248	651,729	29.2
Cross border	418,404	515,552	23.2	457,955	599,165	30.8	28,042	17,512	-37.6	17,847	12,338	-30.9	922,248	1,144,567	24.1
Total turnover	773,412	979,216	26.6	539,295	703,924	30.5	94,697	93,394	-1.4	19,093	19,762	3.5	1,426,496	1,796,296	25.9

Table 6: Reported foreign exchange turnover in Canada in April 2016 by currency pair
Millions of U.S. dollars

Instrument and counterparty	Directly against the U.S. dollar					All other currency pairs	Total
	Canadian dollar	Euro	U.K. pound	Japanese yen	Other		
Spot							
With reporting dealers	113,318	32,507	22,842	12,254	34,033	13,810	228,763
Local	26,777	7,865	10,532	2,509	5,347	4,665	57,694
Cross-border	86,541	24,642	12,310	9,745	28,686	9,145	171,069
With financial customers	38,895	11,823	7,864	5,336	11,542	23,248	98,708
Local	27,517	1,153	1,017	234	1,437	20,140	51,498
Cross-border	11,378	10,670	6,847	5,102	10,105	3,108	47,210
With non-financial customers	20,322	1,351	596	502	1,935	2,868	27,574
Local	18,368	646	383	85	665	2,761	22,908
Cross-border	1,954	705	213	417	1,270	107	4,666
Outright forwards and FX swaps							
With reporting dealers	414,637	87,666	113,393	48,916	115,357	10,432	790,399
Local	109,343	7,037	5,445	4,242	12,201	3,646	141,913
Cross-border	305,294	80,629	107,948	44,674	103,156	6,786	648,487
With financial customers	210,409	26,482	15,768	13,706	25,255	46,161	337,781
Local	156,427	4,811	3,425	3,298	5,271	42,177	215,409
Cross-border	53,982	21,671	12,343	10,408	19,984	3,984	122,372
With non-financial customers	90,953	11,160	31,359	2,329	7,606	8,409	151,816
Local	86,472	2,892	8,119	1,154	5,847	7,630	112,114
Cross-border	4,481	8,268	23,240	1,175	1,759	779	39,702
Currency swaps and Options							
With reporting dealers	60,463	21,198	6,686	15,976	10,681	7,490	122,493
Local	14,761	2,052	295	869	1,985	1,997	21,958
Cross-border	45,702	19,146	6,391	15,107	8,696	5,493	100,535
With financial customers	11,188	1,252	583	315	1,433	247	15,018
Local	8,494	937	102	136	1,098	237	11,004
Cross-border	2,694	315	481	179	335	10	4,014
With non-financial customers	19,032	1,922	794	405	1,100	491	23,744
Local	15,506	497	209	20	947	53	17,232
Cross-border	3,526	1,425	585	385	153	438	6,512
Summary by instruments							
Total spot	172,535	45,681	31,302	18,092	47,510	39,926	355,045
(Currency share, per cent)	(48.6)	(12.9)	(8.8)	(5.1)	(13.4)	(11.2)	(100.0)
Total outright forwards and FX swaps	715,999	125,308	160,520	64,951	148,218	65,001	1,279,996
(Currency share, per cent)	(55.9)	(9.8)	(12.5)	(5.1)	(11.6)	(5.1)	(100.0)
Total currency swaps and options	90,683	24,372	8,063	16,696	13,214	8,228	161,255
(Currency share, per cent)	(56.2)	(15.1)	(5.0)	(10.4)	(8.2)	(5.1)	(100.0)
Summary by counterparty							
Reporting dealers							
Spot	113,318	32,507	22,842	12,254	34,033	13,810	228,763
Outright forwards and FX swaps	414,637	87,666	113,393	48,916	115,357	10,432	790,399
Currency swaps and options	60,463	21,198	6,686	15,976	10,681	7,490	122,493
Total reporting dealers	588,417	141,371	142,921	77,145	160,070	31,732	1,141,655
(Currency share, per cent)	(51.5)	(12.4)	(12.5)	(6.8)	(14.0)	(2.8)	(100.0)
Customers							
Spot	59,217	13,174	8,460	5,838	13,477	26,116	126,282
Outright forwards and FX swaps	301,362	37,642	47,127	16,035	32,861	54,570	489,597
Currency swaps and options	30,220	3,174	1,377	720	2,533	738	38,762
Total customer	390,799	53,990	56,964	22,593	48,871	81,424	654,641
(Currency share, per cent)	(59.7)	(8.2)	(8.7)	(3.5)	(7.5)	(12.4)	(100.0)
Total turnover	979,216	195,361	199,885	99,738	208,941	113,155	1,796,296
(Currency share, per cent)	(54.5)	(10.9)	(11.1)	(5.6)	(11.6)	(6.3)	(100.0)

Table 7: Reported foreign exchange market turnover in Canada by maturity¹

Millions of U.S. dollars

Instrument	1998		2001		2004		2007		2010		2013		2016	
	Amounts	% share	Amounts	% share	Amounts	% share	Amounts	% share	Amounts	% share	Amounts	% share	Amounts	% share
Outright forwards														
Up to 7 days	10,045	30.5	18,103	38.4	28,679	33.7	35,172	37.1	46,297	32.8	101,660	40	100,026	33.4
Over 7 days and up to 1 year	20,224	61.4	27,675	58.8	52,377	61.6	57,853	61.0	91,290	64.6	148,571	59	194,696	65.0
Over one year	2,656	8.1	1,306	2.8	3,995	4.7	1,851	2.0	3,677	2.6	3,215	1	5,003	1.7
Total	32,925	100.0	47,084	100.0	85,051	100.0	94,876	100.0	141,264	100.0	253,446	100	299,725	100.0
Foreign exchange swaps														
Up to 7 days	458,098	72.2	445,261	70.1	548,093	76.6	699,368	74.8	573,787	70.6	566,641	65	706,236	62.9
Over 7 days and up to 1 year	168,461	26.6	177,050	27.9	160,716	22.5	231,368	24.8	232,868	28.7	288,801	33	402,469	35.9
Over one year	7,668	1.2	12,793	2.0	6,605	0.9	4,042	0.4	5,847	0.7	15,467	2	13,478	1.2
Total	634,227	100.0	635,104	100.0	715,414	100.0	934,778	100.0	812,502	100.0	870,909	100	1,122,183	100.0

¹ Not adjusted for local double counting.

Table 8: Foreign exchange transactions in Canada in April 2016 involving the Canadian dollar against all currencies other than the U.S. dollar

Millions of U.S. dollars

Instrument	Euro	Swedish Krona	U.K. pound	Japanese yen	Australian dollar	Swiss franc	Other	Total
Spot	14,994	8,873	2,653	944	694	740	1,305	30,203
Outright forwards	13,944	7,891	4,946	2,221	1,157	818	1,836	32,812
FX swaps	10,993	3,893	5,074	1,443	632	265	1,650	23,949
Currency swaps	3,555	1,729	67	47	0	0	34	5,432
OTC options	982	0	0	0	17	0	0	999
Total turnover	44,467	22,386	12,740	4,655	2,500	1,823	4,824	93,394
Currency share (per cent)	(47.6)	(24.0)	(13.6)	(5.0)	(2.7)	(2.0)	(5.2)	(100.0)

Table 9: Execution methods for foreign exchange contracts
Percentage share of total transactions, April 2016

	Voice		Electronic					Total
	Direct ¹	Indirect ²	Direct ¹		Indirect ²			
			Single-bank proprietary trading systems	Other	Reuters Matching/ EBS	Dark Pools ³	Other electronic comm. networks ⁴	
Spot - Total	32	5	21	10	15	6	10	100
with reporting dealers	33	6	23	5	20	3	9	100
local	57	2	13	1	16	0	11	100
cross-border	17	10	29	9	22	5	8	100
with other financial institutions	23	2	18	21	7	16	14	100
with non-financial customers	54	4	16	20	1	2	3	100
Outright forwards - Total	40	4	14	8	1	0	34	100
with reporting dealers	48	7	15	5	1	0	24	100
local	56	3	19	6	0	0	16	100
cross-border	41	10	12	4	1	0	31	100
with other financial institutions	28	2	15	9	1	0	45	100
with non-financial customers	64	1	4	13	1	0	17	100
FX swaps - Total	40	10	16	10	19	0	5	100
with reporting dealers	32	9	21	10	25	0	4	100
local	48	13	6	9	18	0	6	100
cross-border	25	8	27	10	27	0	3	100
with other financial institutions	42	18	5	13	8	0	14	100
with non-financial customers	92	0	1	5	0	0	1	100
Currency swaps - Total	56	26	7	2	2	0	7	100
with reporting dealers	46	35	7	3	2	0	7	100
local	50	32	5	5	2	0	6	100
cross-border	40	39	10	0	2	0	10	100
with other financial institutions	87	8	2	0	1	0	2	100
with non-financial customers	72	6	10	1	4	0	7	100
OTC options - Total	16	63	14	2	0	0	5	100
with reporting dealers	14	64	15	3	0	0	4	100
local	21	60	13	4	0	0	2	100
cross-border	13	65	15	2	0	0	4	100
with other financial institutions	52	27	14	1	0	0	6	100
with non-financial customers	17	69	6	1	0	0	8	100
Total	38	11	16	9	14	1	11	100

¹ Direct means not intermediated by a third party.

² Indirect means intermediated by a third party.

³ Private platforms for trading securities (especially for large trade sizes), where access is restricted and quotes are not revealed.

⁴ Multi-bank dealing systems in which various banks provide liquidity to the system.

Table 10: Geographical distribution of global foreign exchange market turnover¹

Daily averages in billions of U.S. dollars and percent shares

Country	April 2004		April 2007		April 2010		April 2013		April 2016		Per cent growth 2016/2013
	Amount	% Share	Amount	% Share	Amount	% Share	Amount	% Share	Amount	% Share	
Canada	59	2	64	1	62	1	65	1	86	1	32
United Kingdom	835	32	1483	35	1854	37	2726	41	2406	37	-12
United States	499	19	745	17	904	18	1263	19	1272	20	1
Singapore	134	5	242	6	266	5	383	6	517	8	35
Hong Kong	106	4	181	4	238	5	275	4	437	7	59
Japan	207	8	250	6	312	6	374	6	399	6	7
France	67	3	127	3	152	3	190	3	181	3	-5
Switzerland	85	3	254	6	249	5	216	3	156	2	-28
Australia	107	4	176	4	192	4	182	3	121	2	-34
Germany	120	5	101	2	109	2	111	2	116	2	5
Denmark	42	2	88	2	120	2	103	2	101	2	-2
Netherlands	52	2	25	1	18	0	112	2	85	1	-24
China	1	0	9	0	20	0	44	1	73	1	66
Korea	21	1	35	1	44	1	48	1	48	1	0
Russia	30	1	50	1	42	1	61	1	45	1	-26
Sweden	32	1	44	1	45	1	44	1	42	1	-5
Norway	14	1	32	1	22	0	21	0	40	1	90
Luxembourg	15	1	44	1	33	1	51	1	37	1	-27
India	7	0	38	1	27	1	31	0	34	1	10
Spain	14	1	17	0	29	1	43	1	33	1	-23
Chinese Taipei	9	0	16	0	18	0	26	0	27	0	4
Belgium	21	1	50	1	33	1	22	0	23	0	5
Turkey	3	0	4	0	17	0	27	0	22	0	-19
South Africa	10	0	14	0	14	0	21	0	21	0	0
Mexico	15	1	15	0	17	0	32	0	20	0	-38
Brazil	4	0	6	0	14	0	17	0	20	0	18
Austria	15	1	19	0	20	0	17	0	19	0	12
Italy	23	1	38	1	29	1	24	0	18	0	-25
Finland	2	0	8	0	31	1	15	0	14	0	-7
Other countries	59	2	106	2	112	2	127	2	101	2	-20
Total	2,608	100	4,281	100	5,043	100	6,671	100	6,514	100	-2

Source: Bank for International Settlements, Triennial Central Bank Survey, Foreign exchange turnover in April 2016: September 2016, Annex tables revised on 11 December 2016, Table 6.

The data are adjusted for local (but not cross-border) double-counting arising from business between reporting dealers.

¹ Foreign exchange turnover includes spot transactions, outright forwards, foreign exchange swaps, currency swaps and options.

Table 11: Currency distribution of global foreign exchange market turnover¹
 Percent shares of average daily turnover

Currency	April 2001	April 2004	April 2007	April 2010	April 2013	April 2016
U.S. dollar	89.9	88.0	85.6	84.9	87.0	87.6
Euro	37.9	37.4	37.0	39	33.4	31.4
Japanese yen	23.5	20.8	17.2	19.0	23.0	21.6
U.K. pound	13.0	16.5	14.9	12.9	11.8	12.8
Australian dollar	4.3	6.0	6.6	7.6	8.6	6.9
Canadian dollar	4.5	4.2	4.3	5.3	4.6	5.1
Swiss franc	6.0	6.0	6.8	6.3	5.2	4.8
Chinese yuan (renminbi) ²	0.0	0.1	0.5	0.9	2.2	4.0
Swedish krona	2.5	2.2	2.7	2.2	1.8	2.2
New Zealand dollar ²	0.6	1.1	1.9	1.6	2.0	2.1
Mexican peso ²	0.8	1.1	1.3	1.3	2.5	1.9
Singapore dollar ²	1.1	0.9	1.2	1.4	1.4	1.8
Hong Kong dollar ²	2.2	1.8	2.7	2.4	1.4	1.7
Norwegian krona ²	1.5	1.4	2.1	1.3	1.4	1.7
Korean won ²	0.8	1.1	1.2	1.5	1.2	1.7
Other currencies	11.4	11.4	14.0	12.4	12.5	12.7
All currencies⁴	200.0	200.0	200.0	200.0	200.0	200.0

Source: Bank for International Settlements, Triennial Central Bank Survey, Foreign exchange turnover in April 2016: September 2016, Annex tables revised on 11 December 2016, Table 2.

¹ Foreign exchange turnover includes spot transactions, outright forwards, foreign exchange swaps, currency swaps and options.

² According to the BIS, turnover for years prior to 2013 may be underestimated owing to incomplete reporting of offshore trading in previous surveys. Methodological changes in the 2013 survey ensured more complete coverage of activity in emerging market and other currencies.

³ Since every foreign exchange transaction involves two currencies, the reporting of all currencies necessarily sums to 200 per cent.

Table 12: Global trading of the Canadian dollar¹

Percent share of total

Country	April 1995	April 1998	April 2001	April 2004	April 2007	April 2010	April 2013	April 2016
Canada	41.3	37.7	35.4	30.0	24.5	16.4	13.0	15.4
United States	18.6	18.8	25.4	29.2	28.5	32.0	34.4	36.3
United Kingdom	22.4	23.3	25.9	23.2	25.6	33.2	34.0	30.8
Singapore	5.5	7.8	3.5	2.2	4.5	3.9	3.1	3.7
Hong Kong	2.9	2.0	0.9	1.4	1.3	1.4	2.1	2.5
Japan	2.4	1.9	1.3	3.7	3.5	2.3	2	2.2
France	0.7	0.5	1.7	1.7	2.9	2.1	2.1	1.7
Switzerland	2.6	1.9	0.6	1.3	2.8	3.0	1.9	1.4
Australia	0.7	0.5	1.9	2.8	2.4	2.3	1.9	1.3
Netherlands	0.3	0.2	0.2	0.9	0.3	0.1	2.2	1.1
Germany	1.4	0.8	0.8	1.1	0.7	0.6	1	0.7
Denmark	0.1	0.2	0.3	0.3	0.2	0.6	0.5	0.7
Other	1.1	4.4	2.1	2.2	2.8	2.1	1.8	2.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Calculated from Bank for International Settlements, Triennial Central Bank Surveys, various reports.

Data are adjusted for local inter-dealer double-counting.

¹ As of April 2010 includes all five foreign exchange products. Prior years are based on the three traditional foreign exchange products.

Table 13: Total single-currency interest rate derivatives turnover in Canada

Millions of U.S. dollars

Instrument and counterparty	Canadian dollar			U.S. Dollar			All other currencies			All currencies		
	April 2013	April 2016	Per cent growth	April 2013	April 2016	Per cent growth	April 2013	April 2016	Per cent growth	April 2013	April 2016	Per cent growth
Forward rate agreements	22,380	4,766	-78.7	101,090	46,315	-54.2	25,525	3,361	-86.8	148,995	54,441	-63.5
Reporting dealers	20,990	4,376	-79.2	22,039	30,686	39.2	11,370	0	-100.0	54,399	35,061	-35.5
Financial customers	993	191	-80.8	79,051	15,629	-80.2	14,155	3,361	-76.3	94,199	19,181	-79.6
Non-financial customers	397	199	-49.9	0	0		0	0		397	199	-49.9
Interest rate swaps	305,922	450,659	47.3	165,683	136,182	-17.8	82,482	29,374	-64.4	554,087	616,215	11.2
Reporting dealers	110,733	246,804	122.9	95,506	105,260	10.2	10,785	22,289	106.7	217,024	374,353	72.5
Financial customers	176,457	146,401	-17.0	68,148	13,892	-79.6	71,339	6,208	-91.3	315,944	166,501	-47.3
Non-financial customers	18,732	57,455	206.7	2,029	17,030	739.3	358	877	145.0	21,119	75,362	256.8
OTC options	31,119	8,940	-71.3	13,168	8,328	-36.8	82	638	678.0	44,368	17,906	-59.6
Reporting dealers	26,448	5,353	-79.8	11,611	5,751	-50.5	82	574	600.0	38,140	11,678	-69.4
Financial customers	2,962	2,446	-17.4	70	1,053	1404.3	0	0		3,032	3,499	15.4
Non-financial customers	1,709	1,141	-33.2	1,487	1,524	2.5	0	64		3,196	2,729	-14.6
Total reporting dealers	158,171	256,532	62.2	129,155	141,697	9.7	22,237	22,863	2.8	309,563	421,092	36.0
Total customers	201,250	207,833	3.3	150,785	49,128	-67.4	85,852	10,510	-87.8	437,887	267,471	-38.9
Financial	180,412	149,038	-17.4	147,269	30,574	-79.2	85,494	9,569	-88.8	413,175	189,181	-54.2
Non-financial	20,838	58,795	182.2	3,516	18,554	427.7	358	941	162.8	24,712	78,290	216.8
Local	128,737	113,018	-12.2	23,237	25,345	9.1	570	7,323	1184.7	152,544	145,686	-4.5
Cross border	230,684	351,347	52.3	256,703	165,480	-35.5	107,519	26,050	-75.8	594,906	542,877	-8.7
Total turnover	359,421	464,365	29.2	279,940	190,825	-31.8	108,089	33,373	-69.1	747,450	688,563	-7.9

Table 14: Geographical distribution of global interest rate derivatives turnover¹
Daily averages in billions of U.S. dollars and percent shares

Country	April 2004		April 2007		April 2010		April 2013		April 2016		Per cent growth 2016/2013
	Amount	% Share	Amount	% Share	Amount	% Share	Amount	% Share	Amount	% Share	
Canada	12.1	0.9	20.6	0.9	41.7	1.6	34.0	1.2	32.8	1.1	-3.5
United States	317.4	23.9	525.0	24.2	641.8	24.2	628.2	22.8	1,240.8	40.9	97.5
United Kingdom	563.0	42.3	957.1	44.0	1,234.9	46.6	1,347.7	48.9	1,180.3	38.8	-12.4
France	151.3	11.4	176.1	8.1	193.3	7.3	202.2	7.3	141.2	4.6	-30.2
Hong Kong	11.3	0.8	17.3	0.8	18.5	0.7	27.9	1.0	109.8	3.6	293.5
Singapore	8.6	0.6	57.4	2.6	34.6	1.3	37.1	1.3	58.0	1.9	56.3
Australia	12.8	1.0	22.7	1.0	40.6	1.5	66.2	2.4	56.4	1.9	-14.8
Japan	30.9	2.3	76.4	3.5	89.9	3.4	67.1	2.4	55.9	1.8	-16.7
Germany	42.8	3.2	90.2	4.2	48.5	1.8	101.3	3.7	31.3	1.0	-69.1
Netherlands	18.8	1.4	27.0	1.2	61.3	2.3	28.7	1.0	21.5	0.7	-25.1
Belgium	31	2.3	22.0	1.0	10.0	0.4	9.0	0.3	17.0	0.5	88.9
Italy	37.9	2.8	29.8	1.4	27.3	1.0	24.0	0.9	14.1	0.5	-41.3
Sweden	7.4	0.6	12.3	0.6	18.2	0.7	17.0	0.6	13.7	0.5	-19.4
Denmark	10.8	0.8	10.0	0.5	16.4	0.6	59.4	2.2	9.9	0.3	-83.3
South Africa	3.0	0.2	4.5	0.2	6.0	0.2	10.6	0.4	9.2	0.3	-13.2
Switzerland	12.0	0.9	60.7	2.8	74.9	2.8	32.6	1.2	8.2	0.3	-74.8
Other Countries	58.9	4.4	63.9	2.9	91.1	3.4	9.0	1.7	38.9	1.3	332.2
Total	1330.0	100.0	2,173.0	100.0	2,649.0	100.0	2,702.0	100.0	3,039.0	100.0	12.5

Source: Bank for International Settlements, Triennial Central Bank Survey, OTC interest rate derivatives in April 2016

September 2016, Annex tables revised 11 December 2016, Table 5. The data are adjusted for local (but not cross-border) double counting arising from business between reporting dealers.

¹ Interest rate derivatives include forward rate agreements, interest rate swaps and options.

Table 15: OTC derivatives reported by Canadian financial institutions
Principal amounts outstanding and gross market values
as at June 30, 2016¹
Billions of U.S. dollars

Instrument	Principal amounts outstanding		Gross markets values	
	End-June 2013	End-June 2016	End-June 2013	End-June 2016
Foreign exchange derivatives				
Outright forwards & FX swaps	2,208.3	3,325.1		
Currency swaps	1,328.2	1,798.0		
Options	141.4	263.0		
Total	3,677.9	5,386.1	141.0	251.8
Interest rate derivatives				
FRAs	1,366.3	1,513.0		
Swaps	12,556.5	15,675.5		
Options	392.6	483.1		
Total	14,315.4	17,671.7	343.5	595.7
Equity and stock index derivatives				
Forwards and swaps	191.2	156.7		
Options	108.2	143.7		
Total	299.3	300.4	33.7	16.3
Commodity and precious metal derivatives (excluding Gold)	90.1	59.7	5.6	7.0
Credit derivatives	121.6	61.7	3.0	1.4
Other derivatives	0.0	50.8	0.0	0.0
Total derivatives	18,504.4	23,530.3	526.8	872.2

¹ Not adjusted for inter-dealer double-counting.

Table 16: Foreign exchange derivatives reported by Canadian financial institutions
Principal amounts outstanding and gross market values
as at June 30, 2016¹
Billions of U.S. dollars

Currency	Principal amounts outstanding				Gross market values
	Outright forwards and FX swaps	Currency swaps	OTC options	Total	
Canadian dollar	1,180.5	708.2	89.5	1,978.2	95.5
U.S. dollar	3,127.7	1,655.4	272.8	5,055.8	227.7
Euro	677.3	584.4	60.0	1,321.6	49.4
Japanese yen	522.5	82.1	46.0	650.6	32.8
U.K. pound	517.9	250.0	28.2	796.1	58.3
Swiss franc	124.5	13.9	0.2	138.6	2.8
Swedish krona	16.9	11.1	0.1	28.2	1.2
Australian dollar	117.7	206.5	11.2	335.4	15.2
Mexican peso	60.5	7.7	5.1	73.4	4.2
Other	304.7	76.8	12.8	394.3	16.4
Total²	3,325.1	1,798.0	263.0	5,386.1	251.8
By maturity:					
Up to 1 year	3,274.1		225.8	3,499.8	
Over 1 year to 5 years	1,290.4		30.0	1,320.4	
Over 5 years	558.7		7.1	565.8	

¹ Not adjusted for inter-dealer double-counting.

² Each foreign exchange contract was reported twice, according to the currencies making up the two "legs" of the contract. The totals were halved to correct for this double-counting.

**Table 17: Single-currency interest rate derivatives reported
by Canadian financial institutions
Principal amounts outstanding and gross market values
as at June 30, 2016¹
Billions of U.S. dollars**

Currency	Principal amounts outstanding				Gross market values
	Forward rate agreements	Interest rate swaps	OTC options	Total	
Canadian dollar	6.9	6,162.3	41.0	6,210.3	160.6
U.S. dollar	1,032.5	6,360.2	299.0	7,691.7	196.7
Euro	289.0	1,547.4	105.9	1,942.3	121.4
Japanese yen	0.0	29.8	1.3	31.1	1.5
U.K. pound	56.9	834.0	32.8	923.7	82.5
Swiss franc	0.0	9.2	0.0	9.2	0.3
Swedish krona	41.0	19.9	0.0	60.9	1.1
Australian dollar	0.2	444.0	0.1	444.2	16.2
Other	86.6	268.8	2.9	358.3	15.4
Total	1,513.0	15,675.5	483.1	17,671.7	595.7
By maturity:					
Up to 1 year		6,460.6	236.5	6,697.1	
Over 1 year to 5 years		7,344.9	168.6	7,513.5	
Over 5 years		3,383.1	78.0	3,461.1	

¹ Not adjusted for inter-dealer double-counting.

Table 18: Equity and stock index derivatives reported by Canadian financial institutions
Principal amounts outstanding and gross market values
as at June 30, 2016¹
Billions of U.S. dollars

Nationality of issuer	Principal amounts outstanding			Gross market values
	Forwards and swaps	OTC options	Total	
Canadian	103.1	35.3	138.4	6.3
American (U.S.)	37.5	93.6	131.1	8.3
European	14.8	11.1	25.9	1.3
Japanese	0.4	0.8	1.3	0.1
Other	0.9	2.9	3.8	0.3
Total	156.7	143.7	300.4	16.3
By maturity:				
Up to 1 year	115.0	55.8	170.8	
Over 1 year to 5 years	39.8	77.9	117.6	
Over 5 years	2.0	10.0	12.0	

¹ Not adjusted for inter-dealer double-counting.

Table 19: All other derivatives reported by Canadian financial institutions
Principal amounts outstanding and gross market values
as at June 30, 2016¹
 Billions of U.S. dollars

Instrument	Principal amounts outstanding			Gross market values
	Forwards and swaps	OTC options	Total	
Commodities and precious metals (excluding Gold)	43.1	16.6	59.7	7.0
Credit	61.7	0.0	61.7	1.4
Other	50.8	0.0	50.8	0.0

¹ Not adjusted for inter-dealer double-counting.

Table 20: Credit default swaps reported by Canadian financial institutions
Principal amounts outstanding and gross market values
as at June 30, 2016¹
Billions of U.S. dollars

Instruments	Notional amounts						Gross market values
	Total		Sovereigns		Non-Sovereigns		
	Bought	Sold	Bought	Sold	Bought	Sold	
Single - name							
With reporting dealers	14.9	10.3	1.5	1.7	13.3	8.6	0.7
With other financial institutions	6.5	2.2	0.3	0.3	6.3	1.8	0.3
With central counterparties	5.0	1.6	0.2	0.3	4.8	1.2	0.2
Banks and securities firms	1.2	0.3	0.1	0.0	1.1	0.3	0.0
Insurance firms (including pension funds)	0.1	0.0	0.0	0.0	0.1	0.0	0.0
SPVs, SPCs, or SPEs	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hedge funds	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other	0.2	0.3	0.0	0.0	0.2	0.3	0.0
With non-financial customers	0.3	0.3	0.0	0.0	0.3	0.3	0.0
Total	21.7	12.7	1.8	2.1	19.9	10.7	0.9
Multi - name							
With reporting dealers	4.7	6.2	0.2	0.2	4.5	6.1	0.3
With other financial institutions	8.4	2.1	0.0	0.0	8.4	2.1	0.2
With central counterparties	3.5	1.4	0.0	0.0	3.5	1.4	0.1
Banks and securities firms	0.3	0.4	0.0	0.0	0.3	0.4	0.0
Insurance firms (including pension funds)	0.8	0.0	0.0	0.0	0.8	0.0	0.1
SPVs, SPCs, or SPEs	3.8	0.0	0.0	0.0	3.8	0.0	0.0
Hedge funds	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other	0.1	0.3	0.0	0.0	0.1	0.3	0.0
With non-financial customers	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	13.1	8.4	0.2	0.2	13.0	8.2	0.5
Total all contracts	34.9	21.1	2.0	2.2	32.9	18.9	1.4

¹ Not adjusted for inter-dealer double-counting.