

Exchange-traded futures and options, by location of exchange

Notional principal, in billions of US dollars

Table D1

Instrument / location of exchange / market risk category / maturity	Open interest			Daily average turnover						
	Dec 2018	Jun 2019	Sep 2019	2017	2018	May 2019	Jun 2019	Jul 2019	Aug 2019	Sep 2019
Futures										
All markets	39,113	39,406	36,988	5,877	7,128	8,062	10,007	7,084	8,312	7,641
Interest rate	38,856	39,139	36,729	5,762	6,982	7,938	9,856	6,980	8,175	7,497
Short-term	35,984	36,167	33,904	5,065	6,135	6,842	8,952	6,325	7,028	6,632
Long-term	2,872	2,971	2,826	697	847	1,095	904	655	1,147	866
Foreign exchange	257	267	258	115	146	124	150	104	136	144
North America	26,752	27,099	25,993	3,952	4,879	6,220	7,562	5,145	6,383	5,561
Interest rate	26,584	26,930	25,828	3,871	4,788	6,152	7,464	5,087	6,311	5,468
Short-term	24,821	25,030	23,951	3,501	4,317	5,390	6,990	4,717	5,488	5,022
Long-term	1,763	1,900	1,877	370	471	762	474	370	823	446
Foreign exchange	168	168	165	81	91	69	98	58	72	93
Europe	9,785	8,980	8,118	1,636	1,926	1,454	1,978	1,630	1,571	1,682
Interest rate	9,780	8,973	8,113	1,633	1,923	1,453	1,976	1,628	1,568	1,680
Short-term	8,989	8,252	7,487	1,388	1,639	1,193	1,677	1,409	1,331	1,396
Long-term	791	721	626	245	284	259	300	220	237	283
Foreign exchange	5	7	6	3	3	2	2	2	3	2
Asia and Pacific	1,731	2,467	1,926	208	226	290	357	210	237	310
Interest rate	1,713	2,440	1,901	199	212	274	341	196	218	293
Short-term	1,400	2,096	1,584	118	121	200	210	131	131	158
Long-term	313	344	316	81	91	74	130	65	87	136
Foreign exchange	17	27	25	9	14	16	16	14	19	16
Other markets	846	861	950	81	98	97	109	99	121	89
Interest rate	779	795	888	58	59	60	75	69	79	56
Short-term	773	789	882	58	59	59	75	68	78	56
Long-term	6	6	6	0	0	0	0	1	0	0
Foreign exchange	67	65	63	23	39	38	34	31	42	33
Options										
All markets	55,724	80,867	72,843	1,696	1,829	2,404	3,688	1,889	2,312	2,110
Interest rate	55,585	80,746	72,714	1,682	1,813	2,391	3,675	1,877	2,296	2,097
Short-term	54,663	79,679	71,746	1,571	1,675	2,241	3,536	1,751	2,134	1,932
Long-term	923	1,066	968	110	138	150	138	126	162	165
Foreign exchange	139	121	129	14	15	13	14	12	15	14
North America	42,090	66,130	55,518	1,413	1,491	2,173	3,299	1,566	1,972	1,595
Interest rate	42,022	66,067	55,445	1,405	1,482	2,167	3,293	1,561	1,965	1,589
Short-term	41,361	65,223	54,764	1,330	1,383	2,045	3,181	1,466	1,839	1,470
Long-term	661	844	681	74	99	122	112	94	126	119
Foreign exchange	68	64	73	9	8	6	6	5	6	6
Europe	13,116	13,730	16,415	260	316	199	333	285	310	487
Interest rate	13,115	13,728	16,414	259	316	199	333	285	310	487
Short-term	12,861	13,515	16,138	227	280	173	309	255	277	444
Long-term	253	213	277	33	36	25	24	30	33	42
Foreign exchange	1	2	1	0	0	0	0	0	0	0
Asia and Pacific	10	11	13	6	8	7	7	7	9	10
Interest rate	7	8	9	3	3	2	2	2	3	4
Short-term	0	0	0	0	0	0	0	0	0	0
Long-term	7	8	9	3	3	2	2	2	3	4
Foreign exchange	3	3	3	3	4	5	5	5	6	6
Other markets	508	996	897	17	14	26	49	32	21	19
Interest rate	441	943	845	14	12	23	47	30	18	17
Short-term	440	942	844	14	12	23	47	30	18	17
Long-term	1	1	1	0	0	0	0	0	0	0
Foreign exchange	67	53	51	3	2	2	2	2	3	2