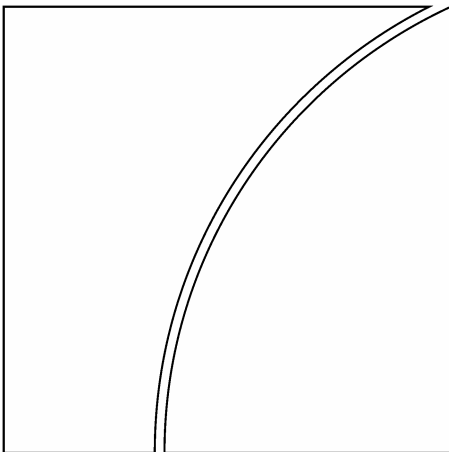




BANK FOR INTERNATIONAL SETTLEMENTS

Monetary and Economic
Department

OTC derivatives market activity in
the first half of 2005



November 2005

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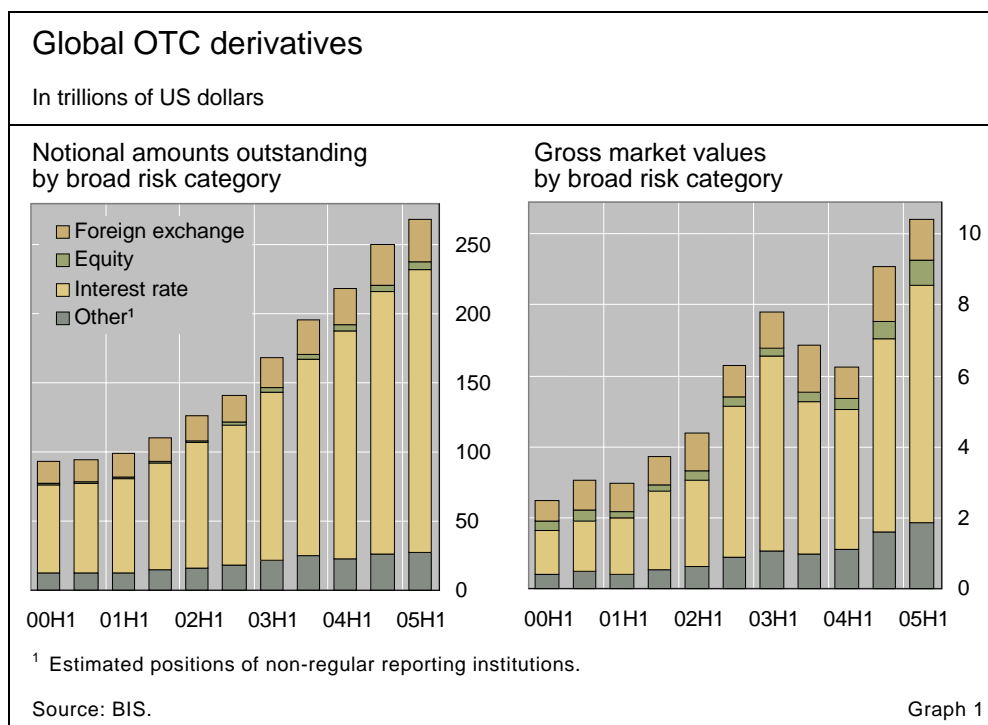
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I. Market developments in the first half of 2005

Activity in the over-the-counter derivatives markets continued to grow during the first half of 2005, albeit at a somewhat slower pace than in the preceding six months. Notional amounts outstanding rose by 7% to \$270 trillion at the end of June (Graph 1 and Table 1), after a 14% increase during the second half of 2004. Gross market values, which measure the cost of replacing all contracts and thus represent a better measure of risk at a given point in time than notional amounts, rose by 16% to \$11 trillion.



1. Sharp rise in notional amounts of equity and commodity contracts

Growth was particularly strong in equity and commodity contracts, whose notional amounts both increased by 17%. Nevertheless, at \$5.1 trillion and \$1.7 trillion, respectively, these risk categories represent only a small fraction of the overall market for OTC derivatives. However, this underestimates the amount of risk represented by these contracts as equity prices are more volatile than other risk factors, especially interest rates, on which derivatives are traded. When measured by gross market values, the share of equity derivatives as a percentage of the total OTC derivatives market is higher at 7%, although that of commodity derivatives remains negligible at below 3%.

2. Growing share of dollar-denominated interest rate products

Interest rate risk remains by far the dominant risk category traded over the counter, accounting for more than three quarters of the total market when measured by notional amounts and just under two thirds of total gross market value. Growth in the notional amounts of OTC interest rate derivatives slowed from 16% during the second half of 2004 to 7% during the first half of this year, considerably below the 26% rate of increase of exchange-traded interest rate derivatives. This discrepancy is explained by an increase in activity in futures and options on short-term interest rates (mainly traded on exchanges), which outpaced growth in products on longer-term rates (which dominate the over-the-counter market). The growth in gross market values of OTC interest rate products declined from 37% to 24%.

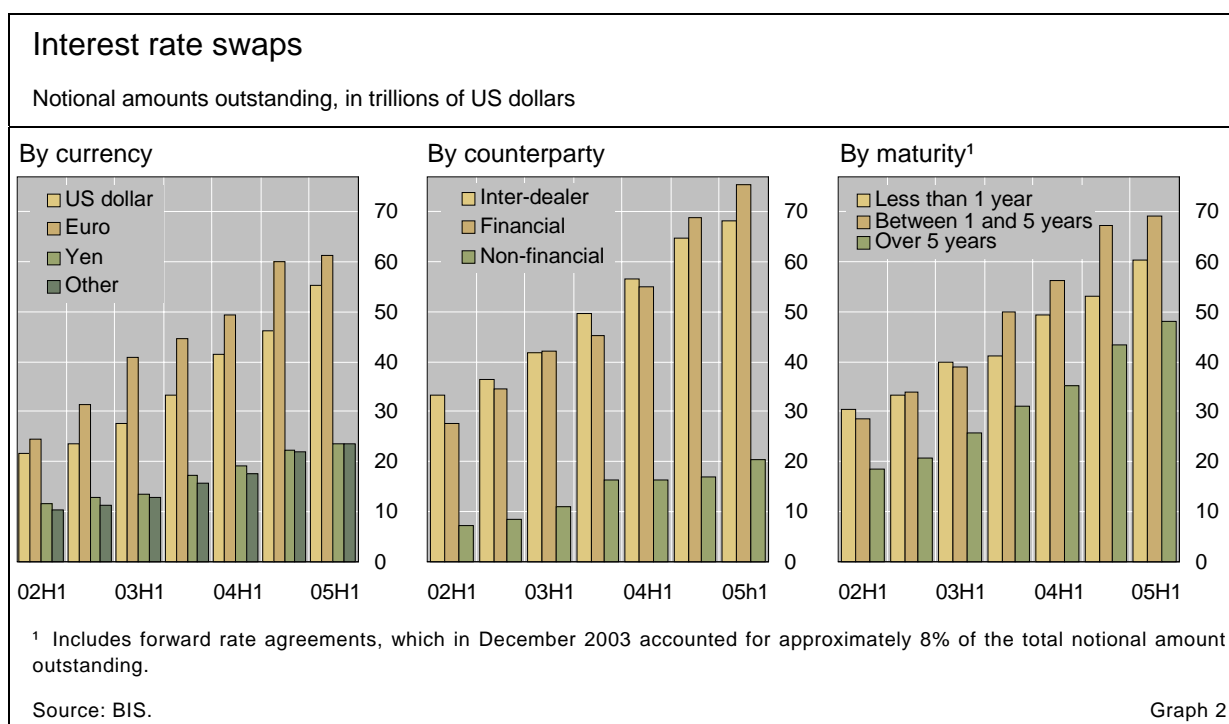
Within the interest rate segment, growth was particularly strong in contracts denominated in US dollars. Notional amounts of contracts on US dollar interest rates grew by 18% to \$72 trillion at the end

of June, slightly below the \$76 trillion denominated in euros (Table 3). This brought the market share of the dollar to the highest level since mid-2002, when it was overtaken by the euro as the largest currency in the market for OTC interest rate derivatives.

Interest rate swaps remained the dominant instrument in the fixed income segment of the OTC derivatives markets. Swaps between reporting dealers and non-financial institutions increased by 19%, outstripping growth in trades between reporting dealers (+5%) and between reporting dealers and other financial institutions (+9%). Even so, non-financial users account for only one eighth of all swaps transactions by reporting dealers.

Notional amounts of OTC interest rate options remained stable at \$27 trillion as growth in dollar-denominated contracts (+10%) was offset by a decline in other currencies, in particular the pound sterling (-10%) and Japanese yen (-12%). The notional amounts of options denominated in euros fell by 3%. This is in sharp contrast with developments in the market for structured notes, where issuance of paper linked to euro interest rates more than doubled, while issues linked to dollar rates declined slightly. Structured products bundle a debt security with derivatives and are an important channel through which smaller financial institutions and non-financial investors participate in the options market. The dealers in such issues tend to hedge their exposures in the inter-dealer derivatives market.¹

The low level of implied volatility during the first half of the year has led to a shifting of activity by traders seeking exposure to volatility into longer-dated options. Notional values of interest rate options with maturities of one year or less declined by 16% to \$8.1 trillion, while those of contracts with maturities over five years rose by 21% to \$7.8 trillion.



¹ Data on the issuance of structured products are provided by the commercial data provider mtn-i. The BIS OTC derivatives data contain the option component of structured notes issued by reporting dealers. They are reported according to the source of risk and type of counterparty involved.

3. Increasing sophistication of FX contracts on Mexican peso

Notional amounts of foreign exchange derivatives expanded by 5% to \$31 trillion, about half the rate of growth recorded during the previous period, while gross market values declined by one quarter. The US dollar continued to be the principal vehicle currency in the market, with almost 90% of all positions having one leg denominated in that currency (Table 2). The share of the euro remained stable at 40%, while those of the yen and the pound sterling fell to 22% and 14%, respectively. Activity in the Swedish krona and the Australian dollar expanded by over 10% in each case, but the shares of those currencies in the overall market have stayed relatively low.

Among the emerging market currencies, notional amounts of contracts on the Mexican peso rose by 55% to \$459 billion. The increasing sophistication of the peso FX derivatives market is indicated by the fact that activity has shifted from relatively simple instruments such as forwards to more complex contracts like options and currency swaps. The share of options rose from 12% in June 2002 to more than one half three years later. Currency swaps in pesos hardly existed three years ago but have since become the most rapidly growing part of the peso derivatives market. During the first half of 2005, their notional amounts more than trebled to \$53 billion. This reflects the increasing hedging needs of foreign investors in the Mexican bond market, which in recent years has seen a lengthening of the maturity of peso-denominated bonds. Foreign investors account for an increasing proportion of the investor base in these bonds, especially in longer-dated issues.

Similar to developments in the market for options on interest rate risk, the low level of exchange rate volatility has led to a shifting of FX options activity into longer maturities. Since mid-2004, growth in options with maturities of over one year and up to five years has outpaced growth in shorter-dated contracts. Even so, maturities on FX options remain shorter than those on interest rate products. This is reflected in the low share of longer-dated options in the market total; such contracts account for only 1% of the total options market. The corresponding figure for interest rate contracts is 29%.

4. Credit default swaps weather sell-off in credit markets

Notional amounts outstanding of credit default swaps rose by 60% during the first half of 2005 to \$10.2 trillion (Table 4),² weathering the sell-off in credit markets triggered by downgrades in the US auto industry in March.³ Growth was particularly strong in multi-name contracts, whose notional amount more than doubled to \$2.9 trillion. Single-name CDSs increased by 43% to \$7.3 trillion. The vast majority of contracts have maturities between one and five years.

5. Little change in market concentration

Concentration in the OTC derivatives markets did not change much during the first half of 2005. Concentration increased in the market for forward rate agreements on yen interest rates, mainly due to the higher concentration in trades between reporting dealers. In the equity segment, concentration declined in contracts on US stocks and in options on Asian equities. The Herfindahl index for options on Latin American shares doubled to over 9,000, just below the maximum value of 10,000 representing a perfectly concentrated market. However, the concentration measure in this type of derivative has been very volatile in the past, having recorded an even higher value only two years ago.

² The total notional amount outstanding is calculated as the sum of contracts bought and sold minus half of the sum of contracts bought and sold between reporting dealers.

³ See F Packer and P Wooldridge, "Overview: repricing in credit markets", *BIS Quarterly Review*, June 2005.

II. Statistical notes

1. Coverage

As of end-June 1998, the central banks of the G10 countries introduced the regular collection of statistics on derivatives markets through reporting by leading global dealers. The objective of the reporting exercise is to obtain reasonably comprehensive and internationally consistent information on the size and structure of over-the-counter (OTC) derivatives markets.

The semiannual OTC derivatives market statistics (Tables 1 to 3) provide data on notional amounts and gross market values outstanding of forwards, swaps and options of foreign exchange, interest rate, equity and commodity derivatives. All published figures are adjusted for double-counting resulting from positions between reporting institutions. Notional amounts outstanding are adjusted by halving positions vis-à-vis other reporting dealers. Gross market values are adjusted by adding the total gross positive market value of contracts to the gross negative market value of contracts with non-reporting counterparties only.

As of end-June 2004, the BIS started releasing statistics on concentration measures in the context of the semiannual OTC derivatives statistics. The central banks of the G10 countries provided the BIS with data back to June 1998, including concentration measures for foreign exchange, interest rate and equity-linked derivatives (Tables 5a to 5i).

In response to a request made by the Committee on the Global Financial System (CGFS), as of end-December 2004 the BIS started releasing semiannual statistics on credit default swaps (CDSs) (Table 4), which include notional amounts outstanding and gross market values for single- and multi-name instruments.

2. Definitions

Notional amounts outstanding: Nominal or notional amounts outstanding are defined as the gross nominal or notional value of all deals concluded and not yet settled on the reporting date. For contracts with *variable nominal or notional principal amounts*, the basis for reporting is the nominal or notional principal amounts at the time of reporting.

Nominal or notional amounts outstanding provide a measure of market size and a reference from which contractual payments are determined in derivatives markets. However, such amounts are generally not those truly at risk. The amounts at risk in derivatives contracts are a function of the price level and/or volatility of the financial reference index used in the determination of contract payments, the duration and liquidity of contracts, and the creditworthiness of counterparties. They are also a function of whether an exchange of notional principal takes place between counterparties. Gross market values provide a more accurate measure of the scale of financial risk transfer taking place in derivatives markets.

Gross positive and negative market values: Gross market values are defined as the sums of the absolute values of all open contracts with either positive or negative replacement values evaluated at market prices prevailing on the reporting date. Thus, the gross positive market value of a dealer's outstanding contracts is the sum of the replacement values of all contracts that are in a current gain position to the reporter at current market prices (and therefore, if they were settled immediately, would represent claims on counterparties). The gross negative market value is the sum of the values of all contracts that have a negative value on the reporting date (ie those that are in a current loss position and therefore, if they were settled immediately, would represent liabilities of the dealer to its counterparties).

The term "gross" is used to indicate that contracts with positive and negative replacement values with the same counterparty are not netted. Nor are the sums of positive and negative contract values within a market risk category such as foreign exchange, interest rate contracts, equities and commodities set off against one another.

As stated above, gross market values supply information about the potential scale of market risk in derivatives transactions. Furthermore, gross market value at current market prices provides a measure of economic significance that is readily comparable across markets and products.

Current credit exposure and liabilities: Current credit exposure represents the gross value of contracts that have a positive market value after taking account of legally enforceable bilateral netting agreements. Liabilities arising from OTC derivatives contracts represent the gross value of contracts that have a negative market value taking account of legally enforceable bilateral netting agreements.

3. Data availability

The aggregate data for OTC derivatives and their concentration measures from end-June 1998 onwards, as well as for CDSs from end-December 2004 onwards, are available, with their main breakdowns, on the BIS website under <http://www.bis.org/statistics/derstats.htm>

4. Next publication dates

The next OTC derivatives statistics, covering the second half of 2005, will be released no later than 31 May 2006.

III. Statistical tables

Table 1

The global OTC derivatives market¹

Amounts outstanding in billions of US dollars

	Notional amounts				Gross market values			
	End-Dec 2003	End-Jun 2004	End-Dec 2004	End-Jun 2005	End-Dec 2003	End-Jun 2004	End-Dec 2004	End-Jun 2005
GRAND TOTAL	197,167	220,058	251,823	270,100	6,987	6,395	9,243	10,694
A. Foreign exchange contracts	24,475	26,997	29,580	31,075	1,301	867	1,546	1,141
Outright forwards and forex swaps	12,387	13,926	15,242	16,031	607	308	643	464
Currency swaps	6,371	7,033	8,223	8,236	557	442	745	549
Options	5,717	6,038	6,115	6,809	136	116	158	129
<i>Memo: Exchange-traded contracts²</i>	118	98	164	170				
B. Interest rate contracts³	141,991	164,626	190,502	204,393	4,328	3,951	5,417	6,698
FRAs	10,769	13,144	12,788	13,573	19	29	22	29
Swaps	111,209	127,570	150,631	163,749	3,918	3,562	4,903	6,077
Options	20,012	23,912	27,082	27,071	391	360	492	592
<i>Memo: Exchange-traded contracts²</i>	33,917	49,385	42,769	53,794				
C. Equity-linked contracts	3,787	4,521	4,385	5,145	274	294	498	717
Forwards and swaps	601	691	756	1,176	57	63	76	89
Options	3,186	3,829	3,629	3,968	217	231	422	627
<i>Memo: Exchange-traded contracts²</i>	2,752	3,347	3,659	4,553				
D. Commodity contracts⁴	1,406	1,270	1,443	1,693	128	166	169	271
Gold	344	318	369	288	39	45	32	24
Other	1,062	952	1,074	1,406	88	121	137	247
Forwards and swaps	420	503	558	738	0	0	0	0
Options	642	449	516	668	0	0	0	0
E. Other⁵	25,508	22,644	25,913	27,793	957	1,116	1,613	1,866
GROSS CREDIT EXPOSURE⁶					1,969	1,478	2,075	1,900
<i>Memo: Exchange-traded contracts^{2,7}</i>	36,787	52,830	46,592	58,517				

¹ All figures are adjusted for double-counting. Notional amounts outstanding have been adjusted by halving positions vis-à-vis other reporting dealers. Gross market values have been calculated as the sum of the total gross positive market value of contracts and the absolute value of the gross negative market value of contracts with non-reporting counterparties. This table excludes credit default swaps, which are shown separately in Table 4. ² Sources: FOW TRADEdata; Futures Industry Association; various futures and options exchanges. ³ Single currency contracts only. ⁴ Adjustments for double-counting partly estimated. ⁵ Includes foreign exchange, interest rate, equity and commodity derivatives of non-reporting institutions, based on the triennial central bank survey on foreign exchange and derivatives market activity. ⁶ Gross market values after taking into account legally enforceable bilateral netting agreements. ⁷ Excludes commodity contracts.

Table 2

The global OTC foreign exchange derivatives market^{1,2}

Amounts outstanding in billions of US dollars

	Notional amounts				Gross market values			
	End-Dec 2003	End-Jun 2004	End-Dec 2004	End-Jun 2005	End-Dec 2003	End-Jun 2004	End-Dec 2004	End-Jun 2005
Total contracts	24,475	26,997	29,580	31,075	1,301	867	1,546	1,141
With reporting dealers	8,660	10,796	11,674	12,059	395	247	486	377
With other financial institutions	9,450	10,113	11,640	12,521	535	352	648	470
With non-financial customers	6,365	6,088	6,266	6,495	370	267	413	294
Up to 1 year ³	18,840	21,252	23,125	24,264				
Between 1 and 5 years ³	3,901	3,912	4,386	4,716				
Over 5 years ³	1,734	1,834	2,069	2,095				
US dollar	21,429	24,551	25,999	27,590	1,212	808	1,408	1,024
Euro	10,145	10,312	11,939	12,363	665	380	752	512
Japanese yen	5,500	6,516	7,087	6,880	217	178	258	220
Pound sterling	4,286	4,614	4,351	4,274	179	130	220	150
Swiss franc	1,333	1,344	1,463	1,557	56	37	60	54
Canadian dollar	1,019	968	1,172	1,216	58	35	71	56
Swedish krona	821	767	1,175	1,307	36	18	41	48
Other	4,419	4,922	5,973	6,965	179	147	282	219
<i>Memo: Exchange-traded contracts⁴</i>	118	98	164	170				

¹ See footnote 1 to Table 1. ² Counting both currency sides of every foreign exchange transaction means that the currency breakdown sums to 200% of the aggregate. ³ Residual maturity. ⁴ See footnote 2 to Table 1.

Table 3
The global OTC interest rate derivatives market¹

Amounts outstanding in billions of US dollars

	Notional amounts				Gross market values			
	End-Dec 2003	End-Jun 2004	End-Dec 2004	End-Jun 2005	End-Dec 2003	End-Jun 2004	End-Dec 2004	End-Jun 2005
Total contracts	141,991	164,626	190,502	204,393	4,328	3,951	5,417	6,698
With reporting dealers	63,579	72,550	82,258	86,957	1,872	1,606	2,155	2,597
With other financial institutions	57,564	70,219	85,728	91,782	1,768	1,707	2,631	3,263
With non-financial customers	20,847	21,857	22,516	25,655	687	638	631	837
Up to 1 year ²	46,474	57,157	62,658	68,308				
Between 1 and 5 years ²	58,914	66,093	77,928	80,312				
Over 5 years ²	36,603	41,376	49,915	55,773				
US dollar	46,178	57,827	61,103	72,156	1,734	1,464	1,535	1,824
Euro	55,793	63,006	76,161	76,426	1,730	1,774	2,986	3,692
Japanese yen	19,526	21,103	24,209	25,224	358	324	352	454
Pound sterling	9,884	11,867	15,289	16,621	228	188	240	372
Swiss franc	2,444	2,651	3,243	2,804	73	48	62	75
Canadian dollar	1,302	1,298	1,475	1,602	36	28	40	53
Swedish krona	1,520	1,645	2,213	2,222	33	28	48	63
Other	5,344	5,229	6,808	7,339	135	98	155	165
<i>Memo: Exchange-traded contracts³</i>	33,917	49,385	42,769	53,794				

¹ See footnote 1 to Table 1. ² Residual maturity. ³ See footnote 2 to Table 1.

Table 4
Credit default swaps market
Nominal or notional principal amounts outstanding at end-June 2005

In billions of US dollars

		Total Dec 2004		Total Jun 2005		Maturity of 1 year or less ¹		Maturity over 1 year and up to 5 years ¹		Maturity over 5 years ¹		Gross positive market values	Gross negative market values
		Amounts outstanding		Amounts outstanding		Amounts outstanding		Amounts outstanding		Amounts outstanding		Amounts outstanding	
		bought	sold	bought	sold	bought	sold	bought	sold	bought	sold	bought	sold
All instruments	All counterparties	4,644	4,486	7,645	7,391	570	401	5,312	5,377	1,762	1,612	137	130
	Reporting dealers	2,733	2,755	4,844	4,835	354	250	3,503	3,618	987	968	78	76
	Other financial institutions	1,634	1,485	2,544	2,340	195	143	1,628	1,595	721	602	52	47
	Non-financial institutions	276	247	257	216	21	9	181	165	55	43	6	6
Single-name credit default swaps	All counterparties	3,725	3,691	5,510	5,417	444	344	3,832	3,942	1,234	1,129	99	99
	Reporting dealers	2,292	2,323	3,650	3,606	280	229	2,637	2,679	733	698	61	60
	Other financial institutions	1,234	1,191	1,696	1,648	150	108	1,078	1,134	469	405	34	34
	Non-financial institutions	200	177	164	163	15	7	118	129	32	27	3	4
Multi-name credit default swaps	All counterparties	918	795	2,135	1,974	127	57	1,480	1,435	528	483	38	31
	Reporting dealers	441	431	1,194	1,229	74	21	866	939	253	270	17	16
	Other financial institutions	401	294	849	692	46	35	551	460	253	197	18	13
	Non-financial institutions	76	70	92	53	7	1	63	36	22	16	3	2

¹ The remaining contract maturity is determined by the difference between the reporting date and the expiry date of the contract and not by the date of execution of the deal.

Table 5a

Herfindahl indices for all OTC interest rate derivatives contracts

Currency	Contract type	Dec 98	Dec 99	Jun 00	Dec 00	Jun 01	Dec 01	Jun 02	Dec 02	Jun 03	Dec 03	Jun 04	Dec 04	Jun 05
CAD	Forward rate agreements	810	1,373	1,418	1,452	1,347	1,812	1,556	1,818	1,530	1,522	1,965	1,855	1,659
	Interest rate swaps	647	800	856	876	874	1,044	1,044	1,047	1,041	1,039	1,048	1,051	1,000
	Options	962	1,340	1,458	1,791	1,621	1,702	1,682	2,112	2,161	2,226	2,313	2,830	2,955
CHF	Forward rate agreements	1,133	1,317	1,421	1,274	1,264	1,252	1,234	1,218	1,264	1,269	1,169	1,278	1,158
	Interest rate swaps	542	643	655	688	678	788	824	846	896	852	797	851	936
	Options	1,077	1,154	1,432	2,439	1,239	1,228	1,461	1,693	1,684	1,616	1,796	1,583	1,508
EUR	Forward rate agreements	–	937	851	1,107	936	740	556	571	539	639	670	611	631
	Interest rate swaps	–	522	511	500	486	524	478	492	481	478	473	472	479
	Options	–	578	530	565	559	584	561	546	608	591	675	668	567
GBP	Forward rate agreements	828	641	614	728	693	638	605	610	607	1095	930	933	855
	Interest rate swaps	406	444	429	448	438	476	489	515	544	565	594	574	614
	Options	628	686	677	662	648	727	648	615	643	666	747	1,481	1,288
JPY	Forward rate agreements	860	932	1,014	1,109	1,937	1,758	1,763	1,942	1,972	1,647	1,308	1,898	2,565
	Interest rate swaps	440	528	545	585	613	706	779	790	806	744	728	699	664
	Options	436	596	715	791	708	1217	1202	1624	1223	1065	978	776	781
SEK	Forward rate agreements	965	914	936	957	1,125	1,002	944	886	839	947	965	892	811
	Interest rate swaps	542	601	586	640	592	608	532	569	561	570	583	587	564
	Options	899	987	1,036	1,076	989	1,081	1,149	1,224	1,174	1,230	1,137	1,084	1,077
USD	Forward rate agreements	617	710	755	879	888	1,145	907	1,042	901	786	725	641	657
	Interest rate swaps	415	490	500	528	529	730	666	682	701	672	626	667	650
	Options	901	734	782	819	764	1,143	1,044	1,038	961	877	847	760	756

Table 5b

Herfindahl indices for all OTC foreign exchange derivatives contracts

Contract type	Dec 98	Dec 99	Jun 00	Dec 00	Jun 01	Dec 01	Jun 02	Dec 02	Jun 03	Dec 03	Jun 04	Dec 04	Jun 05
Forwards, forex swaps and currency swaps	333	413	423	423	416	471	427	434	438	429	442	442	436
Options	504	544	507	528	546	564	518	503	498	605	560	611	593

Table 5c

Herfindahl indices for all OTC equity-linked derivatives contracts

Region	Contract type	Dec 98	Dec 99	Jun 00	Dec 00	Jun 01	Dec 01	Jun 02	Dec 02	Jun 03	Dec 03	Jun 04	Dec 04	Jun 05
Europe	Forwards and swaps	869	787	618	750	693	733	770	762	768	698	611	637	585
	Options	659	613	657	779	891	880	952	791	985	1,013	1,195	711	662
Japan	Forwards and swaps	2,837	3,416	2,501	2,043	1,461	2,005	1,822	1,946	1,854	3,106	1,984	1,731	1,926
	Options	970	1,102	1,018	1,386	860	841	1,072	1,132	2,322	1,718	2,553	1,179	893
Latin America	Forwards and swaps	2,849	9,274	6,881	5,015	5,163	6,063	7,546	7,281	8,839	3,808	3,732	5,694	6,953
	Options	4,307	4,330	6,776	6,703	4,353	8,084	7,585	4,807	9,332	6,432	6,304	4,485	9,028
Other Asia	Forwards and swaps	1,313	3,606	5,119	1,663	1,470	5,294	6,086	1,677	3,197	2,233	2,010	1,339	1,357
	Options	1,271	2,341	1,586	1,600	1,187	1,447	1,550	1,675	1,894	5,464	5,435	1,739	1,177
United States	Forwards and swaps	1,111	1,895	1,088	1,132	1,048	1,070	1,174	1,037	964	1,040	855	843	764
	Options	759	1,275	749	759	663	751	890	665	793	1,031	836	943	711

Table 5d

Herfindahl indices for all OTC interest rate derivatives contracts between reporters¹

Currency	Contract type	Dec 98	Dec 99	Jun 00	Dec 00	Jun 01	Dec 01	Jun 02	Dec 02	Jun 03	Dec 03	Jun 04	Dec 04	Jun 05
CAD	Forward rate agreements	983	1,707	1,594	1,876	1,365	2,266	1,992	2,325	2,000	1,814	2,118	2,218	1,815
	Interest rate swaps	671	834	876	910	818	1,008	949	893	974	1,018	1,008	1,045	938
	Options	1,041	1,341	1,212	1,622	1,558	1,474	1,720	2,426	2,695	2,811	2,722	3,135	2,333
CHF	Forward rate agreements	1,194	1,480	1,505	1,256	1,211	1,270	1,262	1,594	1,606	1,475	1,348	1,401	1,244
	Interest rate swaps	530	701	724	708	705	822	854	890	835	833	800	815	932
	Options	1,458	1,371	1,495	1,186	1,350	1,041	1,220	1,441	1,487	1,347	1,691	1,634	1,223
EUR	Forward rate agreements	0	961	956	1,071	954	727	540	547	555	540	506	576	661
	Interest rate swaps	0	549	543	530	506	571	503	505	474	478	474	470	483
	Options	0	583	584	619	618	642	636	558	600	575	605	643	556
GBP	Forward rate agreements	862	736	666	788	769	697	647	648	576	746	1,012	939	977
	Interest rate swaps	400	456	427	468	458	490	497	550	522	547	723	691	695
	Options	678	928	886	795	826	828	786	685	670	661	721	845	842
JPY	Forward rate agreements	869	973	1,073	1,386	2,319	2,194	2,095	2,316	2,379	1,803	1,463	2,291	3,163
	Interest rate swaps	460	568	600	629	691	801	866	895	935	894	843	792	749
	Options	521	795	822	876	803	1,381	1,665	1,749	1,423	1,383	1,158	855	871
SEK	Forward rate agreements	897	862	964	939	1,279	979	962	938	970	1,211	1,125	996	902
	Interest rate swaps	591	617	607	662	601	623	530	570	569	602	651	664	641
	Options	876	859	969	900	857	898	1,143	1,148	1,101	1,232	1,111	1,098	1,036
USD	Forward rate agreements	631	757	932	894	934	1,046	1,070	1,440	1,142	978	791	625	615
	Interest rate swaps	421	508	533	562	577	784	719	757	757	751	678	716	682
	Options	896	822	858	931	832	1,111	1,239	1,144	991	899	820	770	783

¹ "Reporters" ("reporting dealers") are defined as those institutions whose head office is located in the G10 countries and which participate in the semiannual OTC derivatives market statistics; in addition, "reporting dealers" include all branches and subsidiaries of these entities worldwide; "reporters" will mainly be commercial and investment banks and securities houses, including their branches and subsidiaries and other entities which are active dealers.

Table 5e

Herfindahl indices for all OTC foreign exchange derivatives contracts between reporters

Contract type	Dec 98	Dec 99	Jun 00	Dec 00	Jun 01	Dec 01	Jun 02	Dec 02	Jun 03	Dec 03	Jun 04	Dec 04	Jun 05
Forwards, forex swaps and currency swaps	342	425	437	430	411	464	444	452	478	463	499	490	494
Options	517	543	550	558	496	614	526	512	538	518	683	700	640

Table 5f

Herfindahl indices for all OTC equity-linked derivatives contracts between reporters

Region	Contract type	Dec 98	Dec 99	Jun 00	Dec 00	Jun 01	Dec 01	Jun 02	Dec 02	Jun 03	Dec 03	Jun 04	Dec 04	Jun 05
Europe	Forwards and swaps	1,192	883	694	938	948	859	840	753	639	705	582	670	618
	Options	582	750	943	874	834	912	737	728	655	676	697	715	748
Japan	Forwards and swaps	4,424	2,539	3,610	5,209	2,844	2,541	3,220	2,435	2,225	2,789	1,275	2,367	1,980
	Options	1,081	1,316	1,288	1,758	908	924	1,137	968	2,433	1,698	1,127	1,102	838
Latin America	Forwards and swaps	4,350	8,613	4,116	5,115	10,000	10,000	6,242	4,863	5,556	6,932	3,851	3,284	3,387
	Options	2,127	6,936	7,398	3,433	3,613	4,273	4,772	8,724	3,090	7,515	5,133	4,587	5,707
Other Asia	Forwards and swaps	2,370	6,097	7,915	3,550	482	9,879	9,740	5,494	7,022	5,918	3,675	2,464	2,482
	Options	2,001	5,268	2,035	1,604	2,152	2,120	3,290	3,678	3,520	3,166	2,526	874	1,000
United States	Forwards and swaps	1,154	1,049	850	1,136	2,424	1,315	2,542	1,632	708	889	800	931	855
	Options	1,347	1,796	975	1,020	753	783	765	951	1,555	668	774	762	803

Table 5g

Herfindahl indices for all OTC interest rate derivatives contracts between reporters and non-reporters

Currency	Contract type	Dec 98	Dec 99	Jun 00	Dec 00	Jun 01	Dec 01	Jun 02	Dec 02	Jun 03	Dec 03	Jun 04	Dec 04	Jun 05
CAD	Forward rate agreements	885	1,613	1,567	1,412	2,114	2,003	1,681	1,991	1,681	2,079	2,092	1,635	1,978
	Interest rate swaps	786	982	1,050	1,050	1,167	1,495	1,568	1,631	1,374	1,366	1,423	1,305	1,235
	Options	1,047	1,589	1,963	2,065	1,917	2,111	1,996	2,451	2,174	2,269	2,448	2,817	3,559
CHF	Forward rate agreements	1,959	1,063	1,961	1,638	1,639	2,171	2,250	2,079	1,933	1,990	2,049	1,376	1,490
	Interest rate swaps	711	763	741	725	703	951	1,082	1,099	1,261	1,035	1,026	1,075	1,074
	Options	731	928	1,361	4,531	1,147	2,146	2,061	2,254	2,354	2,140	1,929	1,682	1,943
EUR	Forward rate agreements	–	999	1,294	1,449	1,032	1,040	831	931	814	1,209	1,295	847	859
	Interest rate swaps	–	597	557	513	515	540	529	559	563	551	565	541	545
	Options	–	973	615	541	543	578	499	607	707	684	861	835	716
GBP	Forward rate agreements	1,234	754	735	884	683	797	773	879	1,247	2,928	881	1,210	1,158
	Interest rate swaps	521	503	541	503	489	562	599	604	669	685	546	549	602
	Options	663	634	689	717	704	766	772	719	797	781	946	2,755	2,907
JPY	Forward rate agreements	1,709	3,055	3,153	2,502	3,915	4,132	4,983	3,782	2,431	2,105	1,692	1,304	1,503
	Interest rate swaps	501	592	571	632	575	625	717	739	767	762	807	757	775
	Options	466	688	729	759	656	1,009	946	1,402	911	802	1,008	1,087	670
SEK	Forward rate agreements	1,371	1,535	1,340	1,341	2,073	1,771	1,849	1,690	916	879	980	917	1,097
	Interest rate swaps	649	799	760	784	716	771	751	717	707	638	662	840	572
	Options	1,121	1,398	1,260	1,444	1,209	1,379	1,221	1,339	1,330	1,327	1,322	1,159	1,187
USD	Forward rate agreements	750	883	805	1,338	1,395	1,978	1,089	1,319	1,265	859	813	871	925
	Interest rate swaps	501	558	545	574	538	731	694	683	725	674	661	683	702
	Options	987	756	815	814	792	1,275	1,058	1,018	1,030	915	937	793	770

Table 5h

Herfindahl indices for all OTC foreign exchange derivatives contracts between reporters and non-reporters

Contract type	Dec 98	Dec 99	Jun 00	Dec 00	Jun 01	Dec 01	Jun 02	Dec 02	Jun 03	Dec 03	Jun 04	Dec 04	Jun 05
Forwards, forex swaps and currency swaps	357	432	438	444	453	516	469	468	460	443	445	465	446
Options	640	646	566	576	646	675	638	603	592	995	670	656	680

Table 5i

Herfindahl indices for all OTC equity-linked derivatives contracts between reporters and non-reporters

Region	Contract type	Dec 98	Dec 99	Jun 00	Dec 00	Jun 01	Dec 01	Jun 02	Dec 02	Jun 03	Dec 03	Jun 04	Dec 04	Jun 05
Europe	Forwards and swaps	1,187	900	706	841	733	831	824	947	984	857	879	767	814
	Options	1,254	945	743	1,312	1,962	1,541	2,235	1,327	1,788	1,863	2,227	852	794
Japan	Forwards and swaps	2,691	4,186	2,616	2,359	1,924	2,494	2,059	2,458	2,910	5,520	3,114	2,165	2,159
	Options	912	1,909	1,822	918	1,412	1,108	1,096	2,110	2,132	1,988	4,446	1,810	1,583
Latin America	Forwards and swaps	2,883	9,277	6,919	5,051	5,524	6,324	7,932	7,526	8,863	4,353	3,839	6,352	7,269
	Options	4,570	4,538	7,794	6,875	4,945	8,829	8,324	9,561	9,622	7,604	6,678	4,534	9,051
Other Asia	Forwards and swaps	1,487	2,677	3,734	1,645	1,817	1,676	2,256	2,088	1,273	1,485	1,536	1,282	1,315
	Options	1,357	1,527	1,346	1,702	1,143	1,352	1,059	2,443	2,454	6,074	6,013	2,275	1,616
United States	Forwards and swaps	1,260	2,277	1,290	1,228	1,321	1,288	1,390	1,229	1,265	1,419	1,276	1,242	1,020
	Options	941	1,774	884	1,023	851	955	1,212	812	809	1,457	1,063	1,282	863