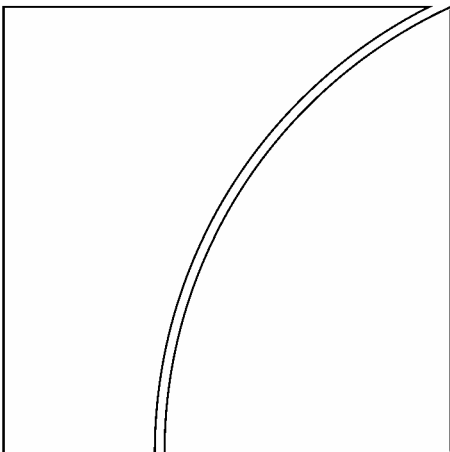




BANK FOR INTERNATIONAL SETTLEMENTS

Monetary and Economic
Department

**OTC derivatives market activity in
the second half of 2005**



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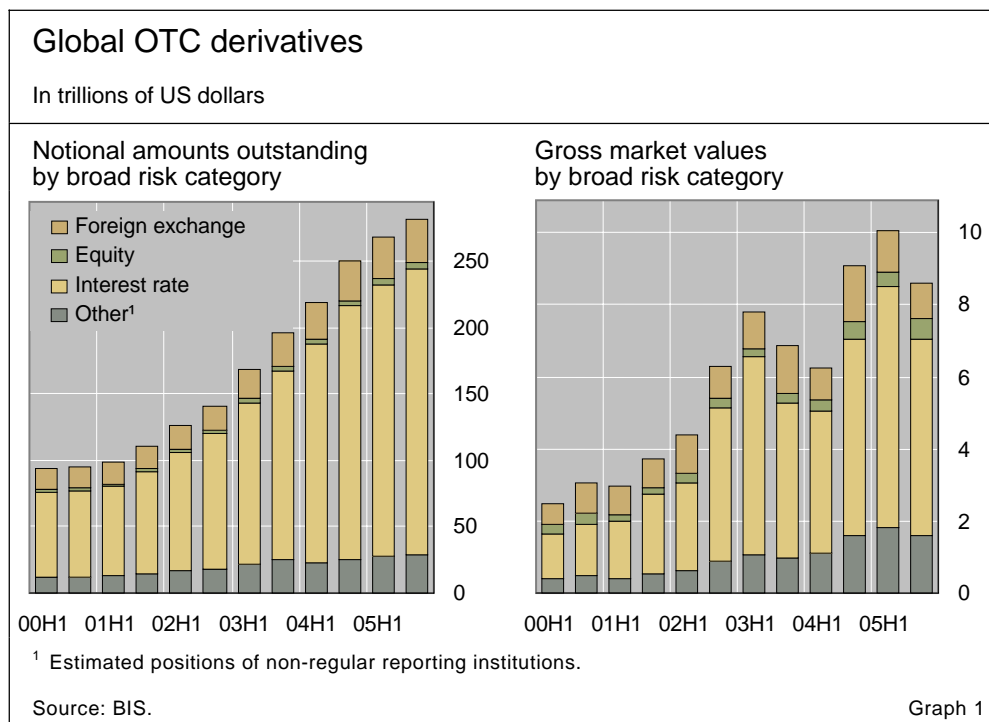
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I. Market developments in the second half of 2005

The volume of over-the-counter (OTC) derivatives contracts outstanding continued to rise in the second half of 2005, albeit at a slowing pace. Notional amounts of all types of OTC contracts excluding credit derivatives stood at \$285 trillion at the end of December, 5% higher than six months before (Graph 1 and Table 1).¹ The growth in notional amounts was particularly strong in contracts on commodities (23%) and equities (11%), and more moderate in the much larger interest rate (5%) and foreign exchange (2%) segments of the market.

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, declined by 12% to \$9 trillion. This was mainly due to a rebound in long-term interest rates, which reduced the replacement costs of interest rate swaps.



1. Rapid growth in commodity and equity contracts

Rising commodity prices during the second half of 2005 stimulated activity in commodity contracts, whose notional amounts increased by almost one quarter to \$3.6 trillion at the end of December. The notional amounts of contracts on gold and other precious metals grew by 17% between July and December 2005, slightly behind the growth of derivatives on other commodities (23%). However, the sharp rise in gold prices during this period led to a doubling of the replacement value of gold contracts to \$51 billion. The total gross market value of contracts on other commodities increased by one third to \$466 billion.

The worldwide rally in equity prices has left its mark on the OTC derivatives markets. Notional amounts of equity derivatives increased by 11% to \$5 trillion, whereas gross market values rose by one half to almost \$0.6 trillion. Activity was particularly buoyant in the market for contracts on Latin American stocks and stock indices, whose notional amounts more than tripled to \$0.2 trillion. The amount outstanding of contracts on Asian equities (excluding Japan) rose by 38% to \$0.14 trillion. Among the mature markets, growth was particularly strong in contracts on US stocks (35% to \$1.4 trillion), despite the relative underperformance of

¹ All growth rates refer to changes over the previous six months.

US equities. Activity in derivatives on Japanese stocks increased by 10%, while that in contracts on European equities stagnated at a notional amount of \$2.8 trillion.

2. Slowing growth in interest rate products

Growth in the notional amounts of OTC interest rate derivatives slowed for the second consecutive half-year to 5% in the second half of 2005 (Table 3). This contrasts with semiannual rates of growth well into double digits during the first half of the decade. It is still too early to say whether this slowdown in growth is temporary or of a more permanent nature, perhaps related to the maturing of the market. What is clear is that the rates of growth in the OTC market outstrip those recorded on organised derivatives exchanges. Moreover, at \$215 trillion at the end of 2005, the notional amounts of OTC interest rate derivatives have been far higher than open positions in exchange-traded interest rate contracts. To some extent, the higher volume of the OTC segment is explained by the fact that these products tend to have longer maturities than futures and options traded on exchanges, the vast majority of which expire within one year. By contrast, only one third of all OTC fixed income contracts recorded by the BIS have a residual maturity of one year or less. One unit of turnover in the OTC market will therefore be associated with a much larger size of open positions than the same unit traded on an exchange.

A second reason for the higher volume of open positions in the OTC segment is that contracts usually cannot be terminated before expiry. A trader wishing to exit a position therefore has to enter a second contract that offsets the original exposure. The notional amounts outstanding double as a consequence, even though the effective market risk position has dropped to zero. The data for exchange-traded contracts, by contrast, refer to the net rather than the gross position of a trader in a particular contract (open interest). Staying with the above example, buying a futures contract today and selling it tomorrow will result in zero open interest. As a consequence, comparing open positions in the OTC market and those on organised exchanges will be biased in favour of the former. To a certain extent, this may also apply to growth rates.

Financial institutions are the main users of OTC interest rate derivatives. In the period under review, only 12% of the outstanding contracts of the reporting dealers had a non-financial institution as counterparty. In the case of forward rate agreements, the proportion of non-financial customers was even lower, at less than 4%.

The growth in notional amounts was fairly balanced across the various types of contract. Interest rate swaps continue to be the dominant type of OTC derivatives contract, with notional amounts totalling \$173 trillion, followed by interest rate options (\$28 trillion) and forward rate agreements (\$14 trillion).

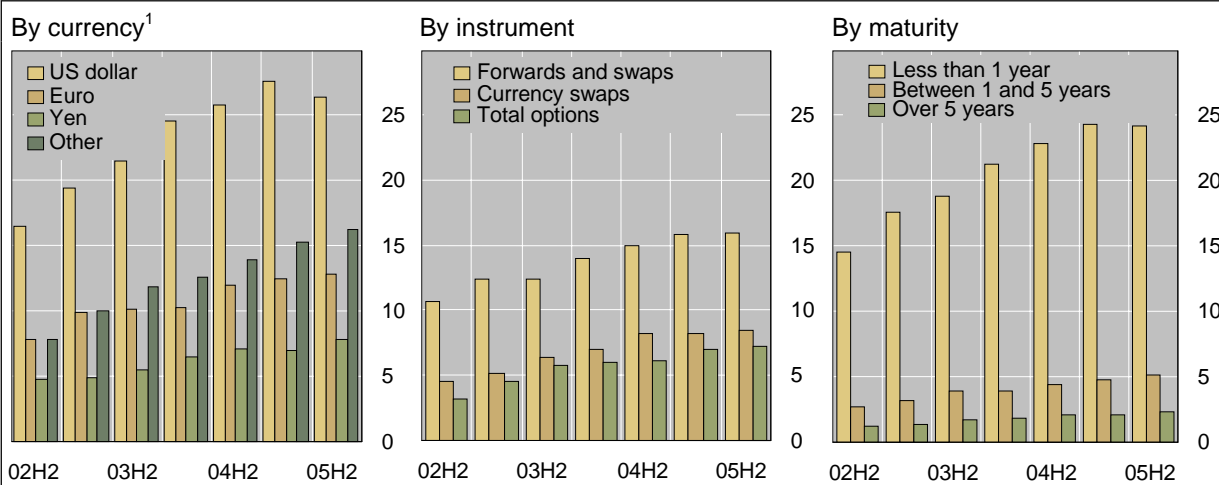
The share of the major currencies in the OTC market for interest rate derivatives was stable during the second half of 2005. The euro continued to be the most important currency in the market for interest rate swaps, accounting for 39% of notional amounts outstanding, it is followed by the US dollar (33% of the amount outstanding), the yen (14%) and the pound sterling (7%). By contrast, the dollar was more important than the euro in forward rate agreements, where 41% of all contracts (as measured by the amount outstanding) were denominated in dollars as opposed to the euro's 30%. The respective shares in interest rate options stood at 43% versus 42%.

3. Subdued activity in FX derivatives

Notional amounts of foreign exchange derivatives were stable at \$32 trillion, while gross market values declined by 13% to \$1 trillion (Graph 2 and Table 2). Among the major currencies, activity was particularly strong in contracts with one leg denominated in yen, the notional amounts of which increased by 13%. Adjusting for the appreciation of the yen against the dollar lifts the rate of growth in such contracts to 23%. The growth in yen contracts was driven mainly by a 28% rise in the volume of yen options to \$3 trillion, while the notional amount of forward contracts remained virtually unchanged. Notional amounts in contracts in euros increased by 4% (7% adjusting for exchange rate movements). This contrasted with a 4% decline in contracts in US dollars. As a consequence, the share of the dollar in the OTC foreign exchange derivatives market declined to 83%, the lowest since data collection began in 1998.

Foreign exchange derivatives market

Notional amounts outstanding, in trillions of US dollars



¹ Because two currencies are involved in each transaction, the sum of individual currencies comes to twice the total.

Source: BIS.

Graph 2

Among other currencies, high rates of growth were recorded in contracts on the Australian dollar, where notional amounts increased by one fifth to \$1.5 trillion. This was entirely due to a 77% surge in the volume of options on the Australian dollar. The increase in the amounts outstanding of such instruments was driven by the financial sector, while the share of counterparties from the non-financial sector declined from approximately one third three years ago to less than 10% at the end of 2005. Even higher growth than in Australian dollar contracts was recorded in derivatives on the New Zealand dollar (+60%). This may be related to the strong issuance of eurokiwi and uridashi bonds. The latter are foreign currency bonds mainly issued by large international banks or supranational institutions targeted at Japanese retail investors. The New Zealand dollar has recently overtaken the Australian dollar as the leading currency in this market due to the high yields offered in that currency. The issuers of eurokiwis and uridashis tend to swap the proceeds into other currencies, and therefore provide a natural counterparty for New Zealand banks issuing in foreign currency or for traders speculating on a decline in the NZ dollar. Another factor behind the massive growth of the NZ dollar derivatives market could be the increased use of currency swaps for liquidity operations by the Reserve Bank of New Zealand, at least to the extent that these operations are with reporting dealers and not local or Australian institutions not included in the sample.

Outstanding amounts in the two emerging market currencies with the largest presence in the OTC foreign exchange derivatives markets, the Hong Kong dollar and the Mexican peso, declined by 11% and 35%, respectively. In the case of the peso, this decline follows a 60% increase during the first half of the year.

4. Less rapid growth in credit default swaps

Notional amounts outstanding of credit default swaps (CDSs) rose by one third during the second half of 2005 to \$13.7 trillion (Table 4), after a 60% increase in the previous six months.² Gross market values of CDSs went up by 31%. Growth was particularly strong in single-name contracts, whose notional amounts increased by 40% to \$10.2 trillion. Multi-name CDSs rose by 21% to \$3.5 trillion.

The market for CDSs is largely an interbank market. Trades between reporting dealers account for almost two thirds of the total notional amount outstanding, and other financial institutions make up much of the remainder. Non-financial customers were counterparties in only 3% of all trades. The data do not confirm fears that the emergence of a liquid credit derivatives market has led to a large-scale transfer of risks from

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.

the banking to the insurance sector. Insurance corporations accounted for \$180 billion (2%) of the protection bought, and purchased \$60 billion (less than 1%) of the protection sold by the reporting dealers. While it is possible that these aggregates hide some sizeable individual exposures, they certainly do not support a picture in which insurance companies purchase CDSs to take on credit risk on a massive scale. That said, it must be pointed out that the BIS data do not contain information on instruments other than CDSs (including synthetic CDOs) that could be used to transfer credit risk across sectors.

5. Concentration increases in smaller market segments

Concentration has increased in several segments of the OTC derivatives market, although little change has been recorded in the larger currencies or in liquid instruments such as interest rate swaps. By contrast, the Herfindahl indices of some product lines that were already characterised by a comparatively high degree of concentration, like forward rate agreements in Swiss francs or pounds sterling, have increased noticeably in the past six months. In the case of the sterling market, higher concentration in forward rate agreements contrasted with lower concentration in interest rate options. A broad increase in concentration is recorded in the market for equity-linked derivatives. Herfindahl indices increased by more than 10% in six out of the 10 instrument/currency categories and decreased by a similar amount in only one. By contrast, the concentration indices remained stable in the FX derivatives market.³

³ The Herfindahl indices suggest that concentration in the FX derivatives market is lower than in the larger market for interest rate derivatives. This may in part be the result of the use of very broad product categories that do not include a breakdown by currency pairs.

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 6a to 6i).

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) (Tables 4 and 5), which include notional amounts outstanding and gross market values for single- and multi-name instruments. As of December 2005, additional information by counterparty, sector and rating has been made available.

2. Definitions

2.1 Types of data collected

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 contracts, 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.

Herfindahl index: The Herfindahl index represents a measure of market concentration and is defined as the sum of the squares of the market shares of each individual institution. It ranges from 0 to 10,000. The more concentrated the market, the higher the measure becomes. If the market is fully concentrated (only one institution), the measure will have the (maximum) value of 10,000.

2.2 Instrument types

Forward contracts: Forward contracts represent agreements for delayed delivery of financial instruments or commodities in which the buyer agrees to purchase and the seller agrees to deliver, at a specified future date, a specified instrument or commodity at a specified price or yield. Forward contracts are generally not traded on organised exchanges and their contractual terms are not standardised. The reporting exercise also includes transactions where only the difference between the contracted forward outright rate and the prevailing spot rate is settled at maturity, such as non-deliverable forwards (ie forwards which do not require physical delivery of a non-convertible currency) and other contracts for differences.

Swaps: Swaps are transactions in which two parties agree to exchange payment streams based on a specified notional amount for a specified period. Forward-starting swap contracts are reported as swaps.

Options: Option contracts convey either the right or the obligation, depending upon whether the reporting institution is the purchaser or the writer, respectively, to buy or sell a financial instrument or commodity at a specified price up to a specified future date.

2.3 Specific definitions for credit default swaps

Single-name CDS: A credit derivative where the reference entity is a single name.

Multi-name CDS: A contract where the reference entity is more than one name as in portfolio or basket credit default swaps or credit default swap indices. A basket credit default swap is a CDS where the credit event is the default of some combination of the credits in a specified basket of credits.

3. Data availability

Detailed tables on OTC derivatives and concentration measures from end-June 1998, 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 first half of 2006, will be released no later than 30 November 2006.

III. Statistical tables

Table 1
The global OTC derivatives market¹
 Amounts outstanding in billions of US dollars

	Notional amounts				Gross market values			
	End-Jun 2004	End-Dec 2004	End-Jun 2005	End-Dec 2005	End-Jun 2004	End-Dec 2004	End-Jun 2005	End-Dec 2005
GRAND TOTAL (excluding credit default swaps - CDSs)	220,058	251,499	271,282	284,819	6,395	9,244	10,417	9,139
A. Foreign exchange contracts	26,997	29,289	31,081	31,609	867	1,546	1,141	998
Outright forwards and forex swaps	13,926	14,951	15,801	15,915	308	643	464	407
Currency swaps	7,033	8,223	8,236	8,501	442	745	549	452
Options	6,038	6,115	7,045	7,193	116	158	129	139
<i>Memo: Exchange-traded contracts²</i>	<i>98</i>	<i>164</i>	<i>170</i>	<i>172</i>				
B. Interest rate contracts³	164,626	190,502	204,795	215,237	3,951	5,417	6,699	5,463
FRAs	13,144	12,789	13,973	14,483	29	22	31	29
Swaps	127,570	150,631	163,749	172,869	3,562	4,903	6,077	4,864
Options	23,912	27,082	27,072	27,885	360	492	592	570
<i>Memo: Exchange-traded contracts²</i>	<i>49,385</i>	<i>42,769</i>	<i>53,794</i>	<i>52,300</i>				
C. Equity-linked contracts	4,521	4,385	4,551	5,057	294	498	382	560
Forwards and swaps	691	756	1,086	1,111	63	76	88	105
Options	3,829	3,629	3,464	3,946	231	422	294	455
<i>Memo: Exchange-traded contracts²</i>	<i>3,347</i>	<i>3,659</i>	<i>4,553</i>	<i>5,340</i>				
D. Commodity contracts⁴	1,270	1,443	2,940	3,608	166	169	376	523
Gold	318	369	288	334	45	32	24	51
Other	952	1,074	2,652	3,273	121	137	351	472
Forwards and swaps	503	558	1,748	2,319	0	0	0	0
Options	449	516	904	955	0	0	0	0
E. Other⁵	22,644	25,879	27,915	29,308	1,116	1,613	1,818	1,595
GROSS CREDIT EXPOSURE⁶					1,478	2,075	1,897	2,003
<i>Memo: Exchange-traded contracts^{2,7}</i>	<i>52,830</i>	<i>46,592</i>	<i>58,517</i>	<i>57,811</i>				
<i>Memo: CDSs⁸</i>		<i>6,396</i>	<i>10,211</i>	<i>13,698</i>		<i>182</i>	<i>264</i>	<i>346</i>

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. The grand total excludes CDSs, which are shown separately in Tables 4 and 5. 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 of foreign exchange and derivatives market activity. ⁶ Gross market values after taking into account legally enforceable bilateral netting agreements. ⁷ Excludes commodity contracts. ⁸ See Tables 4 and 5.

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

Amounts outstanding in billions of US dollars

	Notional amounts outstanding				Gross market values (total)			
	End-Jun 2004	End-Dec 2004	End-Jun 2005	End-Dec 2005	End-Jun 2004	End-Dec 2004	End-Jun 2005	End-Dec 2005
Total contracts	26,997	29,289	31,081	31,609	867	1,546	1,141	998
With reporting dealers	10,796	11,668	12,179	12,092	247	486	377	322
With other financial institutions	10,113	11,417	12,334	13,039	352	648	470	415
With non-financial customers	6,088	6,204	6,568	6,479	267	413	294	261
Up to 1 year ³	21,252	22,834	24,256	24,134				
Between 1 and 5 years ³	3,912	4,386	4,729	5,180				
Over 5 years ³	1,834	2,069	2,097	2,295				
US dollar	24,551	25,726	27,584	26,364	808	1,408	1,024	868
Euro	10,312	11,900	12,404	12,870	380	752	512	397
Japanese yen	6,516	7,076	6,907	7,793	178	258	220	256
Pound sterling	4,614	4,331	4,273	4,422	130	220	150	121
Swiss franc	1,344	1,452	1,586	1,692	37	60	54	46
Canadian dollar	968	1,171	1,217	1,380	35	71	56	70
Swedish krona	767	957	1,039	1,071	18	41	48	23
Other	4,922	5,965	7,152	7,628	147	282	219	214
<i>Memo: Exchange-traded contracts⁴</i>	<i>98</i>	<i>164</i>	<i>170</i>	<i>172</i>				

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 outstanding				Gross market values (total)			
	End-Jun 2004	End-Dec 2004	End-Jun 2005	End-Dec 2005	End-Jun 2004	End-Dec 2004	End-Jun 2005	End-Dec 2005
Total contracts	164,626	190,502	204,795	215,237	3,951	5,417	6,699	5,463
With reporting dealers	72,550	82,258	87,049	90,984	1,606	2,155	2,598	2,066
With other financial institutions	70,219	85,729	92,092	99,162	1,707	2,631	3,265	2,719
With non-financial customers	21,857	22,516	25,655	25,092	638	631	837	677
Up to 1 year ²	57,157	62,659	68,681	69,091				
Between 1 and 5 years ²	66,093	77,929	82,341	88,402				
Over 5 years ²	41,376	49,915	55,773	57,744				
US dollar	57,827	61,103	72,558	75,354	1,464	1,535	1,826	1,535
Euro	63,006	76,161	76,426	82,641	1,774	2,986	3,692	3,002
Japanese yen	21,103	24,209	25,224	26,561	324	352	454	301
Pound sterling	11,867	15,289	16,621	15,248	188	240	372	346
Swiss franc	2,651	3,243	2,804	3,283	48	62	75	49
Canadian dollar	1,298	1,475	1,602	1,747	28	40	53	36
Swedish krona	1,645	2,213	2,222	2,551	28	48	63	41
Other	5,229	6,809	7,339	7,852	98	155	165	152
<i>Memo: Exchange-traded contracts³</i>	<i>49,385</i>	<i>42,769</i>	<i>53,794</i>	<i>52,300</i>				

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

	Notional amounts						Gross market values		
	End-Dec 2004		End-Jun 2005		End-Dec 2005		End-Dec 2004	End-Jun 2005	End-Dec 2005
	bought	sold	bought	sold	bought	sold			
Total CDS contracts	4,653	4,495	7,659	7,405	10,281	9,749	182	264	346
Reporting dealers	2,740	2,763	4,857	4,849	6,372	6,293	97	153	204
Other financial institutions	1,636	1,485	2,545	2,340	3,552	3,179	73	99	126
Banks and securities firms ¹					2,147	1,970			66
Insurance firms ¹					176	59			2
Other ¹					1,229	1,150			59
Non-financial customers	276	247	257	216	358	277	12	12	15
One year or less ²	359	306	571	402	860	475			
Over 1 year up to 5 years ²	3,384	3,375	5,322	5,387	7,162	7,247			
Over 5 years ²	910	814	1,765	1,615	2,260	2,027			
Single-name instruments ³	3,732	3,698	5,521	5,428	7,491	7,312	155	196	247
Multi-name instruments	920	797	2,138	1,977	2,790	2,437	27	69	98

¹ Global aggregates available only from end-December 2005. ² Not available for gross market values. ³ See Table 5.

Table 5
Credit default swaps market
Single-name instruments
Notional amounts outstanding and gross market values at end-December 2005
In billions of US dollars

	Notional amounts						Gross market values		
	End-Dec 2004		End-Jun 2005		End-Dec 2005		End-Dec 2004	End-Jun 2005	End-Dec 2005
	bought	sold	bought	bought	sold	bought			
Total single-name instruments	3,732	3,698	5,521	5,428	7,491	7,312	155	196	247
Reporting dealers	2,297	2,330	3,659	3,617	4,604	4,567	87	120	151
Other financial institutions	1,234	1,191	1,697	1,648	2,622	2,519	59	69	87
Banks and securities firms ¹					1,628	1,559			49
Insurance firms ¹					94	32			1
Other ¹					901	928			37
Non-financial customers	200	177	165	163	265	226	9	7	9
One year or less ²	312	275	445	345	647	421			
Over 1 year up to 5 years ²	2,812	2,866	3,841	3,951	5,352	5,498			
Over 5 years ²	608	556	1,235	1,130	1,492	1,393			
Sovereigns ^{1,2}					828	844			
Non-sovereigns ^{1,2}					6,663	6,468			
Investment grade ^{1,2}					5,241	5,185			
Below investment grade ^{1,2}					969	961			
Non-rated ^{1,2}					1,281	1,167			

¹ Global aggregates available only from end-December 2005. ² Not available for gross market values.

Table 6a

Herfindahl indices for OTC interest rate derivatives contracts

Currency	Contract Type	Jun-99	Dec-99	Jun-00	Dec-00	Jun-01	Dec-01	Jun-02	Dec-02	Jun-03	Dec-03	Jun-04	Dec-04	Jun-06	Dec-05
CAD	Forward rate agreements	923	1,373	1,418	1,452	1,347	1,812	1,556	1,818	1,530	1,522	1,965	1,741	1,659	1,649
	Interest rate swaps	737	800	856	876	874	1,044	1,044	1,047	1,041	1,039	1,048	973	1,000	1,017
	Options	1,438	1,340	1,458	1,791	1,621	1,702	1,682	2,112	2,112	2,161	2,226	2,313	2,697	2,955
CHF	Forward rate agreements	1,085	1,317	1,421	1,274	1,264	1,252	1,234	1,218	1,264	1,269	1,169	1,222	1,156	1,630
	Interest rate swaps	678	643	655	688	678	788	824	846	896	852	797	807	936	1,010
	Options	937	1,154	1,432	2,439	1,239	1,228	1,461	1,693	1,693	1,684	1,795	1,292	1,508	1,650
EUR	Forward rate agreements	834	937	851	1,107	936	740	556	571	539	639	670	597	631	667
	Interest rate swaps	572	522	511	500	486	524	478	492	481	478	473	481	479	478
	Options	525	578	530	565	559	584	561	545	545	591	575	607	567	547
GBP	Forward rate agreements	856	641	614	728	693	638	605	610	607	1,095	930	923	855	1,210
	Interest rate swaps	433	444	429	448	438	476	489	515	544	565	594	578	614	654
	Options	828	686	677	662	648	727	648	615	615	643	666	747	1,452	918
JPY	Forward rate agreements	942	932	1,014	1,109	1,937	1,758	1,763	1,942	1,972	1,647	1,308	1,852	2,565	3,025
	Interest rate swaps	484	528	545	585	613	706	779	790	806	744	728	693	664	636
	Options	949	596	715	791	708	1,217	1,202	1,624	1,223	1,065	978	739	761	811
SEK	Forward rate agreements	870	914	936	957	1,125	1,002	944	885	839	947	955	861	811	767
	Interest rate swaps	549	601	586	640	592	608	532	569	561	570	583	583	564	572
	Options	824	987	1,036	1,076	989	1,081	1,149	1,224	1,224	1,174	1,137	995	1,077	1,265
USD	Forward rate agreements	655	710	755	879	888	1,145	907	1,042	901	786	725	645	652	685
	Interest rate swaps	495	490	500	528	529	730	666	682	701	672	626	673	650	685
	Options	847	734	782	819	764	1,143	1,044	1,038	961	877	847	767	756	778

Table 6b

Herfindahl indices for OTC foreign exchange derivatives contracts

Contract Type	Jun-99	Dec-99	Jun-00	Dec-00	Jun-01	Dec-01	Jun-02	Dec-02	Jun-03	Dec-03	Jun-04	Dec-04	Jun-05	Dec-05
Forwards, forex swaps and currency swaps	372	413	423	423	416	471	427	434	438	429	442	446	440	464
Options	525	544	507	528	546	564	518	503	488	605	560	605	591	628

Table 6c

Herfindahl indices for OTC equity-linked derivatives contracts

Region	Contract type	Jun-99	Dec-99	Jun-00	Dec-00	Jun-01	Dec-01	Jun-02	Dec-02	Jun-03	Dec-03	Jun-04	Dec-04	Jun-05	Dec-05
European Equities	Forwards and swaps	715	767	618	750	693	733	770	762	768	698	611	631	598	666
	Options	639	613	657	779	891	880	962	791	985	1013	1195	659	662	617
Japanese Equities	Forwards and swaps	2,170	3,416	2,501	2,043	1,461	2,005	1,822	1,946	1,854	3,106	1,984	1,734	2,056	2,342
	Options	1,462	1,102	1,018	1,386	860	841	1,072	1,132	2,322	1,718	2,553	1,203	893	1,022
Latin American Equities	Forwards and swaps	3,071	9,274	6,881	5,015	5,163	6,063	7,546	7,281	8,339	3,808	3,732	4,243	6,953	6,358
	Options	6,169	4,330	6,776	6,703	4,353	8,084	7,585	4,807	9,332	6,432	6,304	4,029	4,427	5,841
Other Asian Equities	Forwards and swaps	3,506	3,606	5,119	1,663	1,631	5,294	6,086	1,677	3,197	2,233	2,010	1,536	1,355	1,409
	Options	1,388	2,341	1,586	1,600	1,188	1,447	1,550	1,675	1,894	5,464	5,435	1,674	1,177	903
US equities	Forwards and swaps	1,215	1,895	1,088	1,132	1,048	1,070	1,174	1,037	964	1,040	855	849	722	940
	Options	1,042	1,275	749	759	663	751	890	665	793	1,031	836	915	725	824

Table 6d
Herfindhal indices for OTC Interest rate derivatives contracts between reporters¹

Currency	Contract Type	Jun-99	Dec-99	Jun-00	Dec-00	Jun-01	Dec-01	Jun-02	Dec-02	Jun-03	Dec-03	Jun-04	Dec-04	Jun-05	Dec-05
CAD	Forward rate agreements	1,008	1,707	1,594	1,876	1,365	2,266	1,992	2,325	2,000	1,814	2,118	2,218	1,815	1,979
	Interest rate swaps	772	834	876	910	818	1,008	949	893	974	1,018	1,008	1,045	938	978
	Options	1,436	1,341	1,212	1,622	1,558	1,474	1,720	2,425	2,695	2,811	2,722	3,135	2,333	2,660
CHF	Forward rate agreements	1,176	1,480	1,505	1,256	1,211	1,270	1,262	1,584	1,606	1,475	1,348	1,401	1,244	1,710
	Interest rate swaps	776	701	724	708	705	822	854	890	835	833	800	815	932	1,044
	Options	1,044	1,371	1,495	1,186	1,350	1,041	1,220	1,441	1,487	1,347	1,691	1,634	1,223	1,262
EUR	Forward rate agreements	744	961	966	1,071	954	727	540	547	555	540	506	576	661	679
	Interest rate swaps	595	549	543	530	506	571	503	505	474	478	474	470	483	493
	Options	591	583	584	619	618	642	636	558	600	575	605	649	556	561
GBP	Forward rate agreements	982	736	666	788	769	697	647	648	576	746	1,012	939	977	1,180
	Interest rate swaps	408	456	427	468	458	490	497	550	522	547	723	691	695	756
	Options	1,145	928	886	795	826	828	786	685	670	661	721	845	842	899
JPY	Forward rate agreements	894	973	1,073	1,386	2,319	2,194	2,095	2,316	2,379	1,803	1,463	2,291	3,163	3,447
	Interest rate swaps	501	568	600	629	691	801	866	895	935	894	843	792	749	714
	Options	546	795	822	876	803	1,381	1,665	1,749	1,423	1,363	1,158	855	871	932
SEK	Forward rate agreements	819	862	964	939	1,279	979	962	938	970	1,211	1,125	996	902	769
	Interest rate swaps	563	617	607	662	601	623	530	570	569	602	651	664	641	653
	Options	786	859	969	900	857	898	1,143	1,148	1,101	1,232	1,111	1,068	1,036	1,280
USD	Forward rate agreements	692	757	932	894	934	1,046	1,070	1,440	1,142	978	791	625	604	708
	Interest rate swaps	537	508	533	562	577	764	719	757	757	751	678	716	682	726
	Options	873	822	858	931	832	1,111	1,239	1,144	991	899	820	770	783	838

¹ "Reporters" ("Reporting dealers") are defined as those institutions whose head office is located in the Group of Ten countries and which participate in the semi-annual 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 6e

Herfindahl indices for OTC foreign exchange derivatives contracts between reporters

Contract Type	Jun-99	Dec-99	Jun-00	Dec-00	Jun-01	Dec-01	Jun-02	Dec-02	Jun-03	Dec-03	Jun-04	Dec-04	Jun-05	Dec-05
Forwards, forex swaps and currency swaps	385	425	437	430	411	464	444	452	478	463	499	491	493	537
Options	539	543	550	558	496	614	526	512	538	518	683	700	635	708

Table 6f

Herfindahl indices for OTC equity-linked derivatives contracts between reporters

Region	Contract Type	Jun-99	Dec-99	Jun-00	Dec-00	Jun-01	Dec-01	Jun-02	Dec-02	Jun-03	Dec-03	Jun-04	Dec-04	Jun-05	Dec-05
European Equities	Forwards and swaps	851	883	694	938	948	859	840	753	639	705	582	670	619	755
	Options	725	750	943	874	834	912	737	728	655	676	697	715	748	780
Japanese Equities	Forwards and swaps	4,756	2,539	3,614	5,209	2,844	2,541	3,220	2,435	2,225	2,769	1,275	2,367	2,027	1,694
	Options	1,403	1,316	1,288	1,758	908	924	1,137	968	2,433	1,698	1,127	1,102	838	1,015
Latin American Equities	Forwards and swaps	6,230	8,613	4,116	5,115	10,000	10,000	6,242	4,863	5,556	6,932	3,851	3,284	3,387	5,800
	Options	3,206	6,936	7,398	3,433	3,613	4,273	4,772	8,724	3,090	7,515	5,133	4,687	5,707	10,000
Other Asian Equities	Forwards and swaps	6,146	6,097	7,915	3,550	4,962	9,879	9,740	5,494	7,022	5,918	3,675	2,467	2,482	2,248
	Options	2,386	5,268	2,502	1,604	2,152	2,120	3,290	3,678	3,520	3,166	2,526	874	1,000	1,010
US equities	Forwards and swaps	1,157	1,049	850	1,136	2,424	1,315	2,542	1,632	708	889	800	931	870	843
	Options	1,448	1,796	975	1,020	753	783	765	951	1,555	668	774	762	803	812

Table 6g

Herfindhal indices for OTC Interest rate derivatives contracts between reporters and non-reporters

Currency	Contract Type	Jun-99	Dec-99	Jun-00	Dec-00	Jun-01	Dec-01	Jun-02	Dec-02	Jun-03	Dec-03	Jun-04	Dec-04	Jun-05	Dec-05
CAD	Forward rate agreements	1,026	1,613	1,567	1,412	2,114	2,003	1,681	1,991	1,681	2,079	2,092	1,773	1,978	1,448
	Interest rate swaps	885	982	1,050	1,050	1,167	1,495	1,568	1,631	1,374	1,366	1,423	1,276	1,235	1,220
	Options	1,500	1,589	1,963	2,065	1,917	2,111	1,996	2,451	2,174	2,269	2,448	2,632	3,559	3,343
CHF	Forward rate agreements	1,055	1,063	1,961	1,638	1,639	2,171	2,250	2,079	1,933	1,990	2,049	1,371	1,490	1,907
	Interest rate swaps	696	763	741	725	703	951	1,082	1,099	1,261	1,035	1,026	1,099	1,074	1,110
	Options	936	928	1,361	4,531	1,147	2,146	2,061	2,254	2,364	2,140	1,929	1,496	1,943	2,142
EUR	Forward rate agreements	1,415	999	1,294	1,449	1,032	1,040	831	931	814	1,209	1,295	876	859	891
	Interest rate swaps	645	597	557	513	515	540	529	559	563	551	565	656	545	546
	Options	567	973	615	541	543	578	499	607	707	684	861	943	716	632
GBP	Forward rate agreements	1,372	754	735	884	683	797	773	879	1,247	2,928	881	1,203	1,156	1,692
	Interest rate swaps	599	503	541	503	489	562	599	604	669	685	546	563	602	671
	Options	704	634	689	717	704	766	772	719	797	781	946	2,809	2,907	1,129
JPY	Forward rate agreements	3,035	3,055	3,153	2,502	3,915	4,132	4,983	3,782	2,431	2,105	1,692	1,395	1,503	1,409
	Interest rate swaps	578	592	571	632	575	625	717	739	767	762	807	1,077	775	765
	Options	2,701	688	729	759	656	1,009	946	1,402	911	802	1,008	1,275	670	740
SEK	Forward rate agreements	1,272	1,535	1,340	1,341	2,073	1,771	1,849	1,690	916	879	980	908	1,097	1,174
	Interest rate swaps	710	799	760	784	716	771	751	717	707	638	662	879	572	607
	Options	1,100	1,398	1,260	1,444	1,209	1,379	1,221	1,339	1,330	1,327	1,322	1,104	1,187	1,532
USD	Forward rate agreements	939	883	805	1,338	1,395	1,978	1,089	1,319	1,265	859	813	917	923	936
	Interest rate swaps	526	558	545	574	538	731	694	683	725	674	661	871	702	732
	Options	980	756	815	814	792	1,275	1,058	1,018	1,030	915	937	933	770	757

Table 6h

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

Contract Type	Jun-99	Dec-99	Jun-00	Dec-00	Jun-01	Dec-01	Jun-02	Dec-02	Jun-03	Dec-03	Jun-04	Dec-04	Jun-05	Dec-05
Forwards, forex swaps and currency swaps	401	432	438	444	453	516	469	468	460	443	445	518	454	461
Options	596	646	566	576	646	675	638	603	592	995	670	638	672	673

Table 6i

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

Region	Contract Type	Jun-99	Dec-99	Jun-00	Dec-00	Jun-01	Dec-01	Jun-02	Dec-02	Jun-03	Dec-03	Jun-04	Dec-04	Jun-05	Dec-05
European Equities	Forwards and swaps	802	900	706	841	733	831	824	947	984	857	879	761	837	801
	Options	892	945	743	1,312	1,962	1,541	2,235	1,327	1,768	1,863	2,227	832	794	818
Japanese Equities	Forwards and swaps	1,877	4,186	2,616	2,359	1,924	2,494	2,059	2,458	2,910	5,520	3,114	2,209	2,330	3,097
	Options	2,028	1,909	1,822	918	1,412	1,108	1,096	2,110	2,132	1,988	4,446	1,932	1,583	1,832
Latin American Equities	Forwards and swaps	3,093	9,277	6,919	5,051	5,524	6,324	7,932	7,526	8,863	4,353	3,839	4,681	7,270	6,429
	Options	7,075	4,538	7,794	6,875	4,945	8,829	8,324	9,561	9,622	7,604	6,678	4,072	4,623	5,532
Other Asian Equities	Forwards and swaps	3,134	2,677	3,734	1,645	1,848	1,676	2,256	2,088	1,273	1,485	1,536	1,667	1,313	1,417
	Options	1,680	1,527	1,346	1,702	1,146	1,352	1,059	2,443	2,454	6,074	6,013	2,207	1,616	1,266
US equities	Forwards and swaps	1,304	2,277	1,290	1,228	1,321	1,288	1,390	1,229	1,265	1,419	1,276	1,246	929	1,207
	Options	1,450	1,774	884	1,023	851	955	1,212	812	809	1,457	1,063	1,213	852	1,019