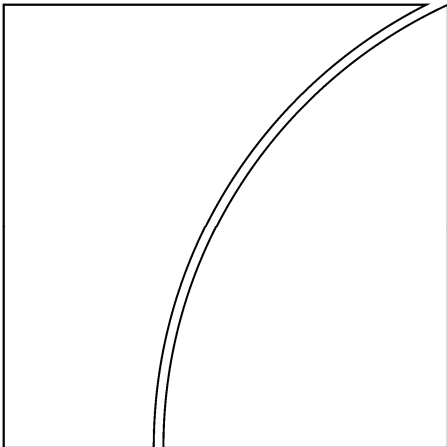




BANK FOR INTERNATIONAL SETTLEMENTS



OTC derivatives market activity in the first half of 2011

Monetary and Economic Department

November 2011

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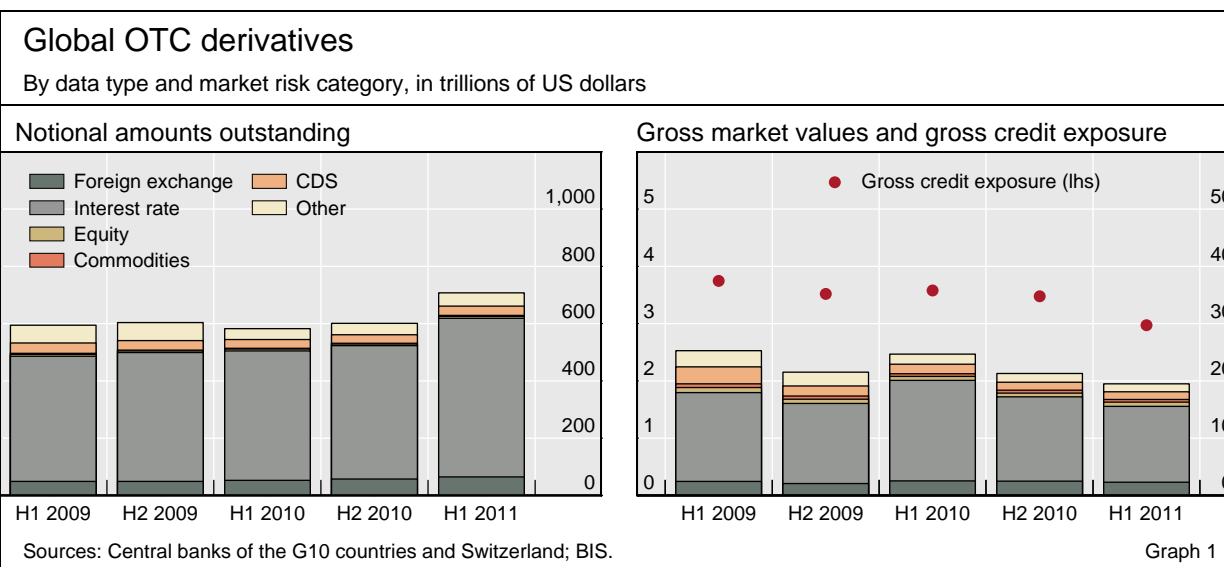
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I. OTC market developments in the first half of 2011

After an increase of only 3% in the second half of 2010, total *notional amounts outstanding* of over-the-counter (OTC) derivatives rose by 18% in the first half of 2011, reaching \$708 trillion by the end of June 2011 (Graph 1, left-hand panel, and Table 1).¹ Notional amounts outstanding of credit default swaps (CDS) grew by 8%, while outstanding equity-linked contracts went up by 21%.

*Gross market values*² of all OTC contracts declined by 8%, driven mainly by the 10% reduction in the market value of interest rate contracts. CDS market values were almost unchanged. *Overall gross credit exposure*³ dropped by a further 15% to \$3.0 trillion, compared with a 3% decrease in the second half of 2010.



1.1 Interest rate and foreign exchange derivatives

- *OTC interest rate derivatives* (Table 3): In the largest risk category in the OTC derivatives market, notional amounts outstanding increased by 19% in the first half of 2011. Contracts on dollar rates were up 13%. Positions in all currencies increased, including the Canadian dollar (+63%, partly due to additional coverage), sterling (+33%), the euro (+24%) and the Swiss franc (+21%). Overall interest rate derivative market values fell by around 10%.
- *FX derivatives* (Table 2): The notional amounts of FX derivatives increased by 12%, with maturities of one year or less up 26%, while maturities over five years almost halved (-48%). Gross market values dropped 6%. Market values for instruments on yen contracted by 21%, and those on the Swedish krona were down 18%. The market value of instruments on the Swiss franc remained fairly steady (rising 9%, after increases of 46% and 106% in the preceding two half-years).

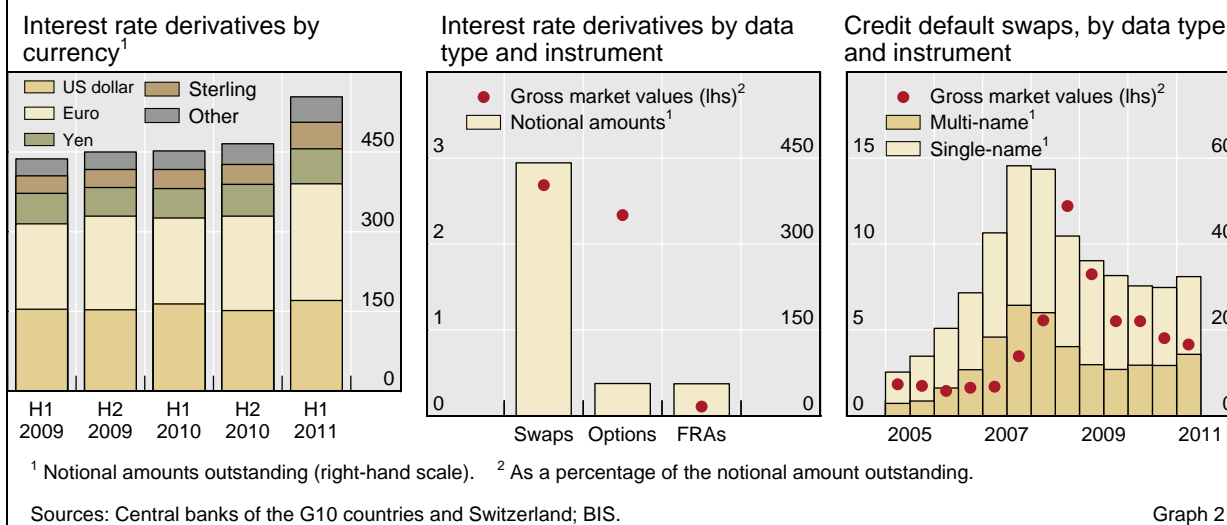
¹ About 0.6 percentage point of this increase was due to expanded reporting coverage in Canada.

² Gross market values, which measure the cost of replacing all existing contracts, provide a measure of market risk.

³ Gross credit exposures take into account legally enforceable bilateral netting agreements (see Statistical notes 2.2). Before 2011, excluding CDS contracts for all countries except the United States.

Global OTC derivatives

In trillions of US dollars and in per cent



1.2 Credit default swaps

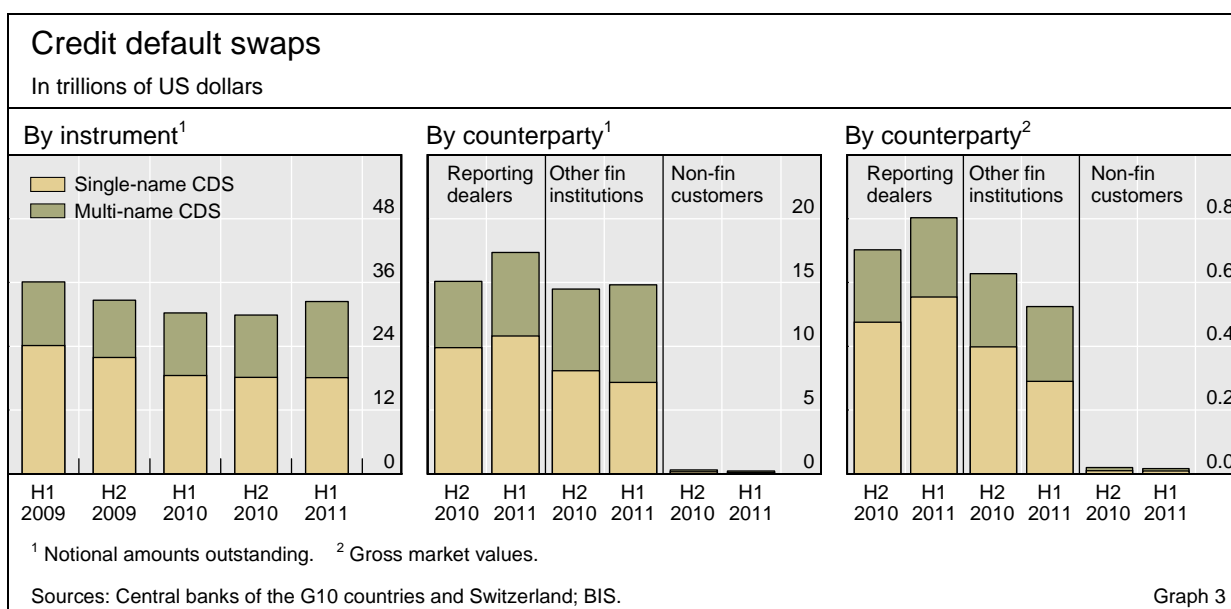
As of June 2011, additional data are reported for: CDS net market values (Table 4), sector breakdown for securitised products,⁴ rating information (Table 5) and a breakdown by counterparty location (Table 8).

- CDS notional amounts outstanding increased moderately in the first part of 2011 (+8%). Positions with other financial institutions were up 2%. Amounts outstanding with central counterparties (CCPs) increased to about 17% of the total market at end-June 2011, after reaching 15% at end-December 2010.⁵ Positions with non-financial customers dropped another 23% to \$238 billion after a 63% decline in the second half of 2010. They now represent less than 1% of the market compared with the previous peak of 5%, reached at the end of December 2009.
- CDS gross market values were largely unchanged at \$1.3 trillion, reflecting a decline of 3% for single-name CDS, and a 5% increase for multi-name contracts. With the exception of contracts with CCPs (+19%) and insurance firms (+21%), market values decreased with counterparties such as banks and security firms (-31%) and other financial customers (-12%, including special purpose vehicles (SPVs) and hedge funds, which were not identified separately before June 2011).
- Contracts with SPVs and hedge funds accounted for 2% and 3% of total of CDS notional amounts outstanding, but for around 10% and 5% of their net market values, respectively (Table 4).
- The single-name sovereign CDS market, accounting for 8% of total CDS notional amounts, increased by 8%, after a 6% rise in the previous half-year, but representing less than half of the 23% gain during the first half of 2010. Positions in single-name, non-sovereign CDS eased by 2% in the first half of 2011.

⁴ Available at <http://www.bis.org/statistics/derdetailed.htm>.

⁵ Counting each CCP contract once, rather than halving them (see Statistical notes 2.4 for more details).

- With regard to the maturity structure, notional amounts grew 23% in the short segment and 8% in the medium-term bucket, while there was little change in the long-term (five years and over) component (+1%).
- Counterparty location was reported for the first time (Table 8) and revealed that most CDS are held with non-local counterparties (82%). A more detailed geographical breakdown is expected to be published in future releases.



1.3 Equity and commodity derivatives

- *Equity derivatives:* Notional amounts outstanding of equity-linked contracts increased by 21%. Positions in equity-linked options were up by 26%, while those in forwards and swaps increased by 11%. Market values rose by 5% in forwards and swaps and by 11% in options.
- *Commodity derivatives:* Amounts outstanding grew by 9%, with contracts on gold up 18% and options on precious metals and other commodities up 19%. However, gross market values on commodity contracts fell by 10%.

1.4 Concentration indices

- According to Herfindahl indices calculated on the basis of responses from individual dealers, concentration was largely unchanged in most sectors. In the interest rate segment, with the inclusion of new reporters, concentration in all instruments (options in particular) on the Canadian dollar dropped markedly from previously elevated levels. Concentration in interest rate options on the Swiss franc significantly increased (Table 9a). Concentration in instruments linked to Latin American equities, which had risen strongly in the second half of 2010, dropped to levels comparable to those in other regions (Table 9c).

II. Statistical notes

1. Coverage

As of end-June 1998, the central banks of the 11 reporting countries⁶ introduced reporting by leading global dealers as a regular feature of the collection of statistics on derivatives markets. The aim 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 for forwards, swaps and options on foreign exchange, interest rate, equity and commodity derivatives. All published figures are adjusted for double-counting of positions between reporting institutions. Notional amounts outstanding are adjusted by halving positions vis-à-vis other reporting dealers. Total gross market values are calculated by adding all reporters' contracts with positive market value to the absolute value of reporters' contracts with non-reporting counterparties that have negative market value.

As of end-June 2004, the BIS began releasing statistics on concentration measures in the context of the semiannual OTC derivatives statistics. The central banks of the 11 reporting countries provided the BIS with data back to June 1998, including concentration measures for foreign exchange, interest rate and equity-linked derivatives (Tables 9a to 9i).

In response to a request from the Committee on the Global Financial System (CGFS), as of end-December 2004 the BIS began releasing semiannual statistics on credit default swaps (CDS) (Tables 4 to 8). These include notional amounts outstanding and gross market values for single- and multi-name instruments. From end-June 2010 more granular information is collected on CDS counterparties, ie Central Counterparties, Special Purpose Vehicles and Hedge Funds, and index products as a subset of multi-name CDS instruments are shown separately. As of June 2011, additional data on net market values, an expanded sector breakdown for securitised products, additional rating information and a breakdown by counterparty location have been reported to the BIS.

2. Definitions

2.1 Reporting basis

Data on amounts outstanding are collected and reported on a consolidated basis. This means that data from all branches and (majority-owned) subsidiaries worldwide of a given institution are aggregated and reported by the parent institution to the official monetary authority in the country where the parent institution has its head office. Deals between affiliates (ie branches and subsidiaries) of the same institution are excluded from the reporting.

⁶ Belgium, Canada, France, Germany, Italy, Japan, the Netherlands, Sweden, Switzerland, the United Kingdom and the United States. From December 2011, Australia and Spain are expected to contribute to the semiannual survey, bringing to 13 the number of reporting countries.

2.2 *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" indicates 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.

Gross credit exposure and liabilities: Gross 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.

2.3 *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 confer 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.

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 CDS or CDS indices. A basket CDS is a CDS where the credit event is the default of some combination of the credits in a specified basket of credits.

Index products: Multi-name credit default swap contracts with constituent reference credits and a fixed coupon that are determined by an administrator such as Markit (which administers the CDX indices and the iTraxx indices). Index products include tranches of credit default swap indices.

2.3.1. Specific definitions for foreign exchange transactions

Outright forward: Transaction involving the exchange of two currencies at a rate agreed on the date of the contract for value or delivery (cash settlement) at some time in the future (more than two business days later). This category also includes forward foreign exchange agreement transactions (FXA), non-deliverable forwards and other forward contracts for differences.

Foreign exchange swap: Transaction involving the actual exchange of two currencies (principal amount only) on a specific date at a rate agreed at the time of the conclusion of the contract (the short leg), and a reverse exchange of the same two currencies at a date further in the future at a rate (generally different from the rate applied to the short leg) agreed at the time of the contract (the long leg). Both spot/forward and forward/forward swaps should be included. Short-term swaps carried out as "tomorrow/next day" transactions should also be included in this category.

Currency swap: Contract which commits two counterparties to exchange streams of interest payments in different currencies for an agreed period of time and to exchange principal amounts in different currencies at a pre-agreed exchange rate at maturity.

Currency option: Option contract that gives the right to buy or sell a currency with another currency at a specified exchange rate during a specified period. This category also includes exotic foreign exchange options such as average rate options and barrier options.

2.3.2. Specific definitions for single-currency interest rate derivatives

Forward rate agreement (FRA): Interest rate forward contract in which the rate to be paid or received on a specific obligation for a set period of time, beginning at some time in the future, is determined at contract initiation.

Interest rate swap: Agreement to exchange periodic payments related to interest rates on a single currency; can be fixed for floating, or floating for floating based on different indices. This group includes those swaps whose notional principal is amortised according to a fixed schedule independent of interest rates.

Interest rate option: Option contract that gives the right to pay or receive a specific interest rate on a predetermined principal for a set period of time.

2.3.3. Specific definitions for equity and stock index derivatives

Equity forward: Contract to exchange an equity or equity basket at a set price at a future date.

Equity swap: Contract in which one or both payments are linked to the performance of equities or an equity index (eg S&P 500). It involves the exchange of one equity or equity index return for another and the exchange of an equity or equity index return for a floating or fixed interest rate.

Equity option: Option contract that gives the right to deliver or receive a specific equity or equity basket at an agreed price at an agreed time in the future.

2.3.4. Specific definitions for commodity derivatives

Commodity forward: Forward contract to exchange a commodity or commodity index at a set price at a future date.

Commodity swap: Contract with one or both payments linked to the performance of a commodity price or a commodity index. It involves the exchange of the return on one commodity or commodity index for another and the exchange of a commodity or commodity index for a floating or fixed interest rate.

Commodity option: Option contract that gives the right to deliver or receive a specific commodity or commodity index at an agreed price at a set date in the future.

Non-plain vanilla products are in principle separated into their plain vanilla components. If this is not feasible, then the OTC options section takes precedence in the instrument classification, so that any product with an embedded option is reported as an OTC option. All other OTC products are reported in the forwards and swaps section.

2.4 Counterparties and elimination of double-counting

Reporting institutions are requested to provide for each instrument in the foreign exchange, interest rate, equity and credit derivatives risk categories a breakdown of contracts by counterparty as follows: reporting dealers, other financial institutions and non-financial customers.

Reporting dealers: Institutions whose head office is located in one of the 11 reporting countries (Belgium, Canada, France, Germany, Italy, Japan, the Netherlands, Sweden, Switzerland, the United Kingdom and the United States)⁷ and which participate in the semiannual OTC derivatives market statistics; in addition, reporting dealers include all branches and subsidiaries of these entities worldwide; “reporting dealers” will mainly be commercial and investment banks and securities houses, including their branches and subsidiaries and other entities that are active dealers.

Other financial institutions: Financial institutions *not* classified as reporting dealers, including central counterparties (CCPs), banks, funds and non-bank financial institutions

⁷ From December 2011, Australia and Spain are expected to contribute to the semiannual survey, bringing to 13 the number of reporting countries.

which may be considered as financial end users (eg mutual funds, pension funds, hedge funds, currency funds, money market funds, building societies, leasing companies, insurance companies and central banks).

In the specific case of the *credit default swaps*, the counterparty item “other financial institutions” is broken further down into the following subcategories:

- Banks and securities firms: smaller commercial banks, investment banks and securities houses that do not participate in the survey.
- Central counterparties (CCPs): entities that interpose themselves between counterparties to contracts traded in one or more financial markets, becoming the buyer to every seller and the seller to every buyer.⁸
- Insurance firms (including pension funds⁹), reinsurance and financial guaranty firms.
- Special purpose vehicles, special purpose corporations and special purpose entities: legal entities that are established for the sole purpose of carrying out single transactions, such as in the context of asset securitisation through the issuance of asset-backed and mortgage-backed securities.
- Hedge funds: mainly unregulated investment funds that typically hold long or short positions in commodity and financial instruments in many different markets according to a predetermined investment strategy and that may be highly leveraged.
- Other financial customers: all remaining financial institutions that are not listed above. In practice, they are mainly mutual funds.

Non-financial customer: Any counterparty other than those described above, in practice mainly corporate firms and governments.

Elimination of inter-dealer double-counting

Double-counting arises because transactions between two reporting entities are recorded by each of them, ie twice. In order to derive meaningful measures of overall market size, it is therefore necessary to halve the data on transactions between reporting dealers. To allow for this, reporters are asked to identify and report separately deals contracted with other reporters. The following methods of adjustment are applied for the three different types of data (see Section 2.1) collected in the survey:

- (1) Amounts outstanding data: double-counting is eliminated by deducting half of the amount reported under the counterparty category “reporting dealers”.
- (2) Gross market values: the gross negative market value of contracts with other reporting dealers is subtracted from the total gross market value data in order to obtain the adjusted aggregates.
- (3) Gross credit exposures: similarly to the adjustment performed for the gross market values, the gross negative credit exposures, ie liabilities, vis-à-vis other reporting dealers are subtracted from the total gross credit exposures in order to correct the reported aggregates for inter-dealer double-counting.

⁸ The CCPs that are currently serving or have plans to serve the CDS market are: Eurex Credit Clear, ICE Clear Europe and LCH.Clearnet SA in Europe; CME CMDX and ICE Trust US in North America; and Japan Securities Clearing Corporation and Tokyo Financial Exchange in Japan.

⁹ As a general rule, pension funds are included under insurance firms. However, if they do not offer saving schemes involving an element of risk-sharing linked to life expectancy, they are more akin to mutual funds and are therefore included under “other financial customers”.

Effect of central clearing activities on the statistics

A central counterparty (CCP) is an entity that interposes itself between counterparties to contracts traded in one or more financial markets, becoming the buyer to every seller and the seller to every buyer. When a derivatives contract between two reporting dealers is cleared by a CCP, this contract is replaced, in an operation called novation, by two new contracts: one between counterparty A and the CCP, and a second between the CCP and counterparty B. As the BIS data record all outstanding positions, it would capture both the contracts in this example. This measure of the market size, ie a measure that captures all outstanding contracts, may be appropriate for gauging counterparty risk, given that any outstanding contract could potentially be defaulted on. However, this approach overstates the size of the derivatives market if used to proxy other aspects, such as the transfer of underlying risks, for which a single counting of the centrally cleared contracts would be more appropriate.

2.5 Maturities

A breakdown by remaining contract maturity is provided for foreign exchange contracts (including gold), interest rate contracts, equity-linked contracts and CDS notional amounts outstanding, according to the following bands:

- one year or less
- over one year and up to five years
- over five years

In the case of transactions where the first leg has not come due, the remaining maturity of each leg should be determined as the difference between the reporting date and the settlement or due date, respectively, of the near- and far-end legs of the transaction.

For CDS, the remaining contract maturity is to be determined by the difference between the reporting date and the expiry date for the contract and not by the date of execution of the deal.

2.6 Rating (for credit default swaps)

A breakdown by rating is available for credit default swaps. The current rating for any contract is used and not the rating at inception. The categories used are those provided by the major rating companies. If no public ratings are available, reporters have been requested to use their internal ratings.

Data are available for the following rating categories:

- investment grade (AAA–BBB)
 - upper investment grade (AAA and AA)
 - lower investment grade (A and BBB)
- below investment grade (BB and below)
- non-rated

If a CDS contract refers to a specific underlying reference asset for which several public ratings are available, the lower of the two highest is used. However, if the CDS contract specifies merely a corporate name (or country) as the underlying credit rather than a specific reference obligation, reporters are allowed to report the internal credit rating that meets their business requirements.

For single-name instruments, the rating of the underlying reference obligation(s) is used.

For rated multi-name instruments, the rating of the contract (entire basket, portfolio, or index) is used. If the portfolio or basket underlying a multi-name instrument is unrated or not available, then it is recommended that the contract be allocated to (1) "investment grade" if all underlying contracts are investment grade, and to (2) "below investment grade" if the underlying reference entities are sub-investment grade.

An instrument is classified as "non-rated" only if (1) it does not have any rating and (2) it is not possible or very burdensome to classify the contract based on the ratings of the underlying reference entities.

2.7 Sector of the reference entity (for credit default swaps)

A breakdown is provided for credit default swaps by economic sector of the obligor of the underlying reference obligation (reference entity) as follows:

- *Sovereigns*: Restricted to a country's central, state or local government, excluding publicly owned financial or non-financial firms.
- *Non-sovereign*, of which:
 - *Financial firms*: all categories of financial institution, including commercial and investment banks, securities houses, mutual funds, hedge funds and money market funds, building societies, leasing companies, insurance companies and pension funds.
 - *Non-financial firms*: all categories of institution other than financial firms and sovereigns (as defined above).
 - *Securitised products, ie portfolio or structured products*: CDS contracts, written on a securitised product or a combination of securitised products, ie asset-backed securities (ABS) or mortgage-backed securities (MBS). The reference entity of these types of contract is not the securitised product itself, ie the ABS or the MBS, but the individual securities or loans that were used to construct it. From this perspective, these contracts are classified as multi-name rather than single-name instruments. Hence, by default, all CDS contracts written on securitised products are classified as multi-name instruments.
 - CDS on asset-backed and mortgage-backed securities
 - CDS on other securitised products (including collateralised debt obligations)
 - *Multisectors*: CDS on other than securitised products where the reference entities belong to different sectors (such as in the case of basket credit default swaps).

2.8 Location of the counterparty (for credit default swaps)

A breakdown by nationality of the counterparty (ie on an ultimate risk basis) is provided for CDS notional amounts outstanding.

- Home country: trades with counterparties with head office incorporated in reporter's home country (reporting dealers and non-reporting counterparties in home country).
- Abroad: trades with counterparties abroad:¹⁰ (reporting dealers and non-reporting counterparties abroad).
 - United States
 - Japan
 - European developed countries¹¹
 - Latin America¹²
 - Other Asian countries¹³
 - All other countries

3. Data availability and next publication date

Detailed tables on OTC derivatives and concentration measures from end-June 1998 are available, with their main breakdowns, at www.bis.org/statistics/derstats.htm.

These published data may be subject to revisions. In most cases, such revisions are likely to be minor. Details of any significant revisions will be published on the BIS website.

The next OTC derivatives statistics with new data from Australia and Spain, covering the second half of 2011, will be released no later than **15 May 2012**.

¹⁰ Due to the absence of data from one large reporting country, this detailed information is not available in the current release.

¹¹ Includes Belgium, Cyprus, Denmark, Finland, France, Germany, Gibraltar, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Monaco, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, the United Kingdom, the Vatican City and other Europe. Excludes Albania, Bulgaria, Hungary, Poland, Romania, Russia and the successor republics of Czechoslovakia, the Soviet Union and Yugoslavia.

¹² Argentina, the Bahamas, Barbados, Belize, Bermuda, Bolivia, Brazil, the British West Indies, the Cayman Islands, Chile, Colombia, Costa Rica, Cuba, the Dominican Republic, Ecuador, El Salvador, the Falkland Islands, the French West Indies, French Guinea, Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, the Netherlands Antilles, Nicaragua, Panama, Peru, Suriname, Trinidad and Tobago, Uruguay, Venezuela and other Latin America and Caribbean.

¹³ Afghanistan, Bahrain, Bangladesh, Bhutan, Brunei, Burma, Cambodia, China, Chinese Taipei, Hong Kong SAR, India, Indonesia, Iran, Iraq, Israel, Jordan, Korea, Kuwait, Laos, Lebanon, Macao SAR, Malaysia, the Maldives, Mongolia, Nepal, North Korea, Oman, Pakistan, the Philippines, Qatar, Saudi Arabia, Singapore, Sri Lanka, Syria, Thailand, the United Arab Emirates, Vietnam, Yemen and other Asia and Middle East.

III. Statistical tables

Table 1
Global OTC derivatives market¹
 Amounts outstanding, in billions of US dollars

	Notional amounts outstanding				Gross market value			
	H2 2009	H1 2010	H2 2010	H1 2011	H2 2009	H1 2010	H2 2010	H1 2011
GRAND TOTAL	603,900	582,685	601,046	707,569	21,542	24,697	21,296	19,518
A. Foreign exchange contracts	49,181	53,153	57,796	64,698	2,070	2,544	2,482	2,336
Outright forwards and forex swaps	23,129	25,624	28,433	31,113	683	930	886	777
Currency swaps	16,509	16,360	19,271	22,228	1,043	1,201	1,235	1,227
Options	9,543	11,170	10,092	11,358	344	413	362	332
<i>Memo: Exchange-traded contracts²</i>	292	348	316	389	...	...	...	...
B. Interest rate contracts³	449,875	451,831	465,260	553,880	14,020	17,533	14,746	13,244
FRAs	51,779	56,242	51,587	55,842	80	81	206	60
Swaps	349,288	347,508	364,377	441,615	12,576	15,951	13,139	11,864
Options	48,808	48,081	49,295	56,423	1,364	1,501	1,401	1,319
<i>Memo: Exchange-traded contracts²</i>	67,292	69,756	62,232	76,157	...	...	...	...
C. Equity-linked contracts	5,937	6,260	5,635	6,841	708	706	648	708
Forwards and swaps	1,652	1,754	1,828	2,029	176	189	167	176
Options	4,285	4,506	3,807	4,813	532	518	480	532
<i>Memo: Exchange-traded contracts²</i>	5,790	5,536	5,718	6,426	...	...	...	...
D. Commodity contracts⁴	2,944	2,852	2,922	3,197	545	458	526	471
Gold	423	417	397	468	48	45	47	50
Other	2,521	2,434	2,525	2,729	497	413	479	421
Forwards and swaps	1,675	1,551	1,781	1,846	...	...	...	...
Options	846	883	744	883	...	...	...	...
E. Credit default swaps⁵	32,693	30,261	29,898	32,409	1,801	1,666	1,351	1,345
Single-name instruments	21,917	18,494	18,145	18,105	1,243	993	884	854
Multi-name instruments	10,776	11,767	11,753	14,305	558	673	466	490
Index products	...	...	7,476	12,473	...	...	...	...
F. Unallocated⁶	63,270	38,329	39,536	46,543	2,398	1,789	1,543	1,414
GROSS CREDIT EXPOSURE⁷	...	...	...	...	3,521	3,581	3,480	2,971
<i>Memo: Exchange-traded contracts^{2, 8}</i>	73,375	75,639	68,265	82,972	...	...	...	...

¹ Data on total notional amounts outstanding, gross market value and gross credit exposure are shown on a net basis, ie transactions between reporting dealers are counted only once. The definitions of notional amounts outstanding, gross market value and gross credit exposure are available under section 2 of the statistical notes. 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 See Tables 4 to 8. ⁶ Includes foreign exchange, interest rate, equity, commodity and credit derivatives of non-reporting institutions, based on the latest Triennial Central Bank Survey of Foreign Exchange and Derivatives Market Activity, in 2010. ⁷ Before 2011, excludes CDS contracts for all countries except the United States. ⁸ Excludes commodity contracts.

Table 2

Global OTC foreign exchange derivatives market^{1, 2}

Amounts outstanding, in billions of US dollars

	Notional amounts outstanding				Gross market values			
	H2 2009	H1 2010	H2 2010	H1 2011	H2 2009	H1 2010	H2 2010	H1 2011
Total contracts	49,181	53,153	57,796	64,698	2,070	2,544	2,482	2,336
With reporting dealers	18,896	19,924	21,956	26,170	732	890	899	875
With other financial institutions	21,445	23,476	25,636	28,854	888	1,100	1,050	973
With non-financial customers	8,840	9,753	10,204	9,675	449	554	534	489
Up to 1 year ³	30,614	33,637	37,987	47,732	...	...	...	...
Between 1 and 5 years ³	9,712	10,738	10,135	11,904	...	...	...	...
Over 5 years ³	8,855	8,778	9,674	5,061	...	...	...	...
US dollar	40,921	45,133	48,741	54,035	1,662	2,037	1,956	1,808
Euro	20,364	20,114	21,913	24,972	864	1,141	887	894
Yen	11,238	11,824	12,574	13,068	539	657	688	540
Sterling	5,929	6,624	6,584	7,011	282	286	254	251
Swiss franc	3,106	3,859	4,213	4,876	98	202	294	321
Canadian dollar	1,858	2,236	2,421	3,065	78	102	101	121
Swedish krona	1,309	1,371	1,589	1,739	39	45	50	41
Other	13,637	15,144	17,556	20,629	578	618	735	696
<i>Memo: Exchange-traded contracts⁴</i>	292	348	316	389	...	...	...	...

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

Global OTC interest rate derivatives market¹

Amounts outstanding, in billions of US dollars

	Notional amounts outstanding				Gross market values			
	H2 2009	H1 2010	H2 2010	H1 2011	H2 2009	H1 2010	H2 2010	H1 2011
Total contracts	449,875	451,831	465,260	553,880	14,020	17,533	14,746	13,244
With reporting dealers	138,580	132,128	134,483	159,656	3,970	4,548	4,136	3,977
With other financial institutions	275,688	282,031	293,490	354,368	9,313	12,068	9,756	8,616
With non-financial customers	35,607	37,673	37,286	39,856	736	916	854	650
Up to 1 year ²	180,007	196,040	188,118	246,729	...	...	...	...
Between 1 and 5 years ²	134,312	129,488	139,449	177,428	...	...	...	...
Over 5 years ²	135,556	126,303	137,693	129,723	...	...	...	...
US dollar	153,373	164,119	151,583	170,658	5,347	7,573	6,177	5,745
Euro	175,790	161,515	177,831	219,682	6,073	7,043	5,827	4,795
Yen	53,855	55,395	59,509	65,491	843	980	1,022	1,012
Sterling	34,257	36,219	37,813	50,121	1,038	1,146	1,016	970
Swiss franc	4,807	4,650	5,114	6,173	128	138	140	144
Canadian dollar	3,427	4,411	4,247	6,905	102	102	90	113
Swedish krona	4,696	4,461	5,098	5,832	99	98	71	64
Other	19,669	21,061	24,064	29,017	389	451	404	402
<i>Memo: Exchange-traded contracts³</i>	<i>67,292</i>	<i>69,756</i>	<i>62,232</i>	<i>76,157</i>	<i>...</i>	<i>...</i>	<i>...</i>	<i>...</i>

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

Table 4

Credit default swaps¹

Amounts outstanding, in billions of US dollars

	Notional amounts outstanding						Gross market values		Net market values ²
	H2 2010			H1 2011			H2 2010	H1 2011	H1 2011
	Bought	Sold	Total	Bought	Sold	Total			
Total contracts	22,768	22,228	29,898	25,182	24,575	32,409	1,351	1,345	375
With reporting dealers	14,991	15,207	15,099	17,271	17,426	17,348	702	804	178
With other financial institutions	7,571	6,917	14,489	7,766	7,057	14,823	628	525	184
Central counterparties ³	2,194	2,204	4,398	2,783	2,759	5,543	78	93	18
Banks and security firms	3,826	3,520	7,346	3,185	2,923	6,108	325	223	50
Insurance firms	190	79	270	287	71	358	29	36	20
SPVs, SPCs and SPEs	...	...	...	399	130	528	...	66	39
Hedge funds	...	...	...	328	635	963	...	47	20
Other financial customers	1,361	1,115	2,476	784	539	1,323	196	61	36
With non-financial customers	206	104	310	146	92	238	20	16	13
Single-name credit default swaps	14,188	13,854	18,145	14,493	14,429	18,105	884	854	...
With reporting dealers	9,821	9,974	9,898	10,751	10,884	10,817	476	555	...
With other financial institutions	4,264	3,819	8,083	3,667	3,499	7,166	398	290	...
Central counterparties ³	779	773	1,552	1,132	1,119	2,251	29	52	...
Banks and security firms	2,799	2,355	5,154	1,789	1,610	3,398	234	141	...
Insurance firms	102	58	160	114	47	162	25	20	...
SPVs, SPCs and SPEs	...	...	...	129	46	174	...	24	...
Hedge funds	...	...	...	154	355	509	...	24	...
Other financial customers	585	632	1,217	349	323	672	109	30	...
With non-financial customers	102	62	164	75	46	121	10	10	...
Multi-name credit default swaps	8,580	8,374	11,753	10,690	10,146	14,305	466	490	...
With reporting dealers	5,169	5,232	5,201	6,519	6,543	6,531	226	249	...
With other financial institutions	3,307	3,099	6,406	4,099	3,558	7,657	230	234	...
Central counterparties ³	1,415	1,430	2,845	1,652	1,640	3,292	49	42	...
Banks and security firms	1,027	1,164	2,192	1,396	1,313	2,709	90	82	...
Insurance firms	89	21	109	173	24	197	4	15	...
SPVs, SPCs and SPEs	...	...	...	270	84	354	...	42	...
Hedge funds	...	...	...	173	281	454	...	23	...
Other financial customers	776	483	1,259	435	216	651	87	31	...
With non-financial customers	104	43	146	71	46	117	10	7	...
of which: index products	...	...	...	9,221	9,154	12,473	...	...	...
With reporting dealers	...	...	...	5,897	5,908	5,902	...	...	...
With other financial institutions	...	...	...	3,283	3,214	6,496	...	...	...
Central counterparties ³	...	...	...	1,642	1,637	3,279	...	...	...
Banks and security firms	...	...	...	1,161	1,157	2,318	...	...	...
Insurance firms	...	...	...	46	21	67	...	...	...
SPVs, SPCs and SPEs	...	...	...	81	47	127	...	...	...
Hedge funds	...	...	...	156	230	386	...	...	...
Other financial customers	...	...	...	197	122	319	...	...	...
With non-financial customers	...	...	...	41	33	74	...	...	...

¹ See footnote 1 to Table 1: Data on notional amounts outstanding bought and sold are recorded on a gross basis, ie not adjusted for inter-dealer double-counting. ² Based on the data reported by 10 countries. ³ Both contracts post-novation are captured.

Table 5

Credit default swaps, by rating category¹

Notional amounts outstanding, in billions of US dollars

	Total			Investment grade (AAA-BBB)			Non-investment grade (BB and below)			Non-rated ²		
	H1 2010	H2 2010	H1 2011	H1 2010	H2 2010	H1 2011	H1 2010	H2 2010	H1 2011	H1 2010	H2 2010	H1 2011
Total contracts	30,261	29,898	32,409	...	...	20,478	...	...	6,243	...	...	5,688
With reporting dealers	15,774	15,099	17,348	...	...	10,177	...	...	3,754	...	...	3,418
With other financial institutions	13,643	14,489	14,823	...	...	10,169	...	...	2,450	...	...	2,204
Central counterparties ³	2,967	4,398	5,543	...	...	4,617	...	...	644	...	...	282
Banks and security firms	7,975	7,346	6,108	...	...	3,955	...	...	1,314	...	...	839
Insurance firms	273	270	358	...	...	175	...	...	44	...	...	139
SPVs, SPCs and SPEs	...	...	528	...	...	212	...	...	76	...	...	240
Hedge funds	...	...	963	...	...	572	...	...	213	...	...	178
Other financial customers	2,428	2,476	1,323	...	...	639	...	...	158	...	...	526
With non-financial customers	844	310	238	...	...	132	...	...	39	...	...	67
Single-name credit default swaps	18,494	18,145	18,105	13,024	12,631	12,330	4,079	4,151	3,793	1,390	1,362	1,981
With reporting dealers	10,473	9,898	10,817	7,184	6,495	6,931	2,482	2,591	2,660	808	812	1,226
With other financial institutions	7,637	8,083	7,166	5,616	6,053	5,332	1,487	1,530	1,119	534	500	716
Central counterparties ³	1,059	1,552	2,251	1,027	1,485	2,109	14	21	93	18	47	49
Banks and security firms	5,197	5,154	3,398	3,733	3,729	2,357	1,156	1,231	780	309	194	262
Insurance firms	131	160	162	83	94	94	16	21	15	31	45	52
SPVs, SPCs and SPEs	...	...	174	...	...	79	...	...	36	...	...	59
Hedge funds	...	...	509	...	...	323	...	...	124	...	...	61
Other financial customers	1,251	1,217	672	773	745	368	301	258	70	177	214	233
With non-financial customers	383	164	121	225	83	67	110	30	15	48	51	39
Multi-name credit default swaps	11,767	11,753	14,305	...	...	8,148	...	...	2,450	...	...	3,707
With reporting dealers	5,301	5,201	6,531	...	...	3,245	...	...	1,094	...	...	2,191
With other financial institutions	6,005	6,406	7,657	...	...	4,838	...	...	1,331	...	...	1,487
Central counterparties ³	1,908	2,845	3,292	...	...	2,507	...	...	551	...	...	233
Banks and security firms	2,778	2,192	2,709	...	...	1,598	...	...	534	...	...	577
Insurance firms	142	109	197	...	...	81	...	...	30	...	...	86
SPVs, SPCs and SPEs	...	...	354	...	...	133	...	...	40	...	...	181
Hedge funds	...	...	454	...	...	248	...	...	88	...	...	117
Other financial customers	1,177	1,259	651	...	...	270	...	...	88	...	...	293
With non-financial customers	461	146	117	...	...	65	...	...	24	...	...	28

¹ See footnote 1 to Table 1. ² Without rating or rating not known. ³ Both contracts post-novation are captured.

Table 6

Credit default swaps, by remaining maturity¹

Notional amounts outstanding, in billions of US dollars

	Total			One year or less			Over one year up to five years			Over five years		
	H1 2010	H2 2010	H1 2011	H1 2010	H2 2010	H1 2011	H1 2010	H2 2010	H1 2011	H1 2010	H2 2010	H1 2011
Total contracts	30,261	29,898	32,409	3,328	3,182	3,925	20,787	21,481	23,195	6,145	5,235	5,290
With reporting dealers	15,774	15,099	17,348	1,866	1,920	2,327	10,820	10,447	12,233	3,088	2,731	2,789
With other financial institutions	13,643	14,489	14,823	1,363	1,239	1,578	9,444	10,826	10,803	2,836	2,423	2,443
Central counterparties ²	2,967	4,398	5,543	164	278	576	2,353	3,566	4,301	449	554	666
Banks and security firms	7,975	7,346	6,108	976	780	784	5,582	5,452	4,379	1,417	1,113	945
Insurance firms	273	270	358	15	15	19	137	140	175	121	115	164
SPVs, SPCs and SPEs	...	...	528	...	...	33	...	...	277	...	...	218
Hedge funds	...	...	963	...	...	61	...	...	707	...	...	194
Other financial customers	2,428	2,476	1,323	208	166	104	1,371	1,668	964	849	642	256
With non-financial customers	844	310	238	99	22	20	523	208	160	222	80	58
			32,409			3,925			23,195			5,290
Single-name credit default swaps	18,494	18,145	18,105	2,320	2,252	2,647	12,628	12,716	12,565	3,546	3,176	2,893
With reporting dealers	10,473	9,898	10,817	1,324	1,349	1,640	7,265	6,889	7,554	1,885	1,659	1,623
With other financial institutions	7,637	8,083	7,166	956	887	996	5,130	5,729	4,936	1,552	1,467	1,234
Central counterparties ²	1,059	1,552	2,251	113	206	331	747	1,094	1,604	198	252	316
Banks and security firms	5,197	5,154	3,398	718	578	539	3,573	3,814	2,355	907	762	505
Insurance firms	131	160	162	8	9	10	59	64	78	64	87	74
SPVs, SPCs and SPEs	...	...	174	...	...	13	...	...	79	...	...	82
Hedge funds	...	...	509	...	...	37	...	...	360	...	...	112
Other financial customers	1,251	1,217	672	117	95	66	751	757	460	383	365	146
With non-financial customers	383	164	121	41	16	11	233	98	75	109	50	36
			32,409			3,925			23,195			5,290
Multi-name credit default swaps	11,767	11,753	14,305	1,009	929	1,278	8,159	8,765	10,630	2,600	2,059	2,397
With reporting dealers	5,301	5,201	6,531	543	571	687	3,555	3,557	4,679	1,203	1,072	1,166
With other financial institutions	6,005	6,406	7,657	407	352	582	4,314	5,097	5,867	1,284	957	1,209
Central counterparties ²	1,908	2,845	3,292	51	72	245	1,606	2,472	2,697	251	301	350
Banks and security firms	2,778	2,192	2,709	258	203	246	2,009	1,638	2,024	510	351	440
Insurance firms	142	109	197	7	6	9	79	76	97	57	27	91
SPVs, SPCs and SPEs	...	...	354	...	...	20	...	...	198	...	...	136
Hedge funds	...	...	454	...	...	24	...	...	347	...	...	82
Other financial customers	1,177	1,259	651	91	71	38	620	911	503	466	277	110
With non-financial customers	461	146	117	58	6	9	290	111	85	112	30	23

¹ See footnote 1 to Table 1. ² Both contracts post-novation are captured.

Table7

Credit default swaps, by sector¹

Notional amounts outstanding, in billions of US dollars

	Total		Sovereigns		Financial firms		Non-financial firms		Securitised products		Multiple Sectors	
	H2 2010	H1 2011	H2 2010	H1 2011	H2 2010	H1 2011	H2 2010	H1 2011	H2 2010	H1 2011	H2 2010	H1 2011
Total contracts	29,898	32,409	...	2,908	...	8,083	...	13,125	...	1,093	...	7,200
With reporting dealers	15,099	17,348	...	1,939	...	4,622	...	6,975	...	607	...	3,205
With other financial institutions	14,489	14,823	...	947	...	3,398	...	6,103	...	476	...	3,899
Central counterparties ²	4,398	5,543	...	2	...	962	...	2,266	...	154	...	2,159
Banks and security firms	7,346	6,108	...	614	...	1,477	...	3,056	...	117	...	843
Insurance firms	270	358	...	15	...	83	...	116	...	28	...	116
SPVs, SPCs and SPEs	...	528	...	44	...	162	...	98	...	30	...	195
Hedge funds	...	963	...	148	...	255	...	328	...	48	...	184
Other financial customers	2,476	1,323	...	123	...	460	...	240	...	98	...	402
With non-financial customers	310	238	...	22	...	63	...	47	...	10	...	96
Single-name credit default swaps	18,145	18,105	2,542	2,749	...	5,168	...	10,188	...	0	...	0
With reporting dealers	9,898	10,817	1,498	1,837	...	3,253	...	5,727	...	0	...	0
With other financial institutions	8,083	7,166	1,020	891	...	1,853	...	4,422	...	0	...	0
Central counterparties ²	1,552	2,251	53	2	...	364	...	1,885	...	0	...	0
Banks and security firms	5,154	3,398	747	592	...	861	...	1,945	...	0	...	0
Insurance firms	160	162	10	15	...	65	...	82	...	0	...	0
SPVs, SPCs and SPEs	...	174	...	18	...	81	...	75	...	0	...	0
Hedge funds	...	509	...	145	...	109	...	255	...	0	...	0
Other financial customers	1,217	672	210	119	...	374	...	180	...	0	...	0
With non-financial customers	164	121	24	21	...	62	...	39	...	0	...	0
Multi-name credit default swaps	11,753	14,305	...	159	...	2,916	...	2,937	...	1,093	...	7,200
With reporting dealers	5,201	6,531	...	102	...	1,368	...	1,248	...	607	...	3,205
With other financial institutions	6,406	7,657	...	55	...	1,546	...	1,681	...	476	...	3,899
Central counterparties ²	2,845	3,292	...	0	...	598	...	381	...	154	...	2,159
Banks and security firms	2,192	2,709	...	22	...	616	...	1,110	...	117	...	843
Insurance firms	109	197	...	0	...	18	...	34	...	28	...	116
SPVs, SPCs and SPEs	...	354	...	26	...	80	...	22	...	30	...	195
Hedge funds	...	454	...	3	...	146	...	73	...	48	...	184
Other financial customers	1,259	651	...	4	...	86	...	60	...	98	...	402
With non-financial customers	146	117	...	1	...	1	...	8	...	10	...	96

¹ See footnote 1 to Table 1. ² Both contracts post-novation are captured.

Table 8

Credit default swaps, by location of counterparty¹

Notional amounts outstanding, in billions of US dollars

	Total			With reporting dealers			With non-reporters		
	H1 2010	H2 2010	H1 2011	H1 2010	H2 2010	H1 2011	H1 2010	H2 2010	H1 2011
All locations	30,261	29,898	32,409	15,774	15,099	17,348	14,487	14,799	15,061
Home country ²	...	...	5,932	...	...	2,752	...	...	3,180
Abroad	...	...	26,478	...	...	14,596	...	...	11,881

¹ See footnote 1 to Table 1. The notional amounts outstanding is allocated to one of the locations listed in the table on an ultimate risk basis, ie according to the nationality of the counterparty. ² Home country means country of incorporation of the reporter's head office. Based on the data reported by 10 countries.

Table 9a
Herfindahl indices for all OTC interest rate derivatives contracts

	Canadian dollar			Swiss franc			Euro			Sterling			Japanese yen			Swedish krona			US dollar		
	FRAs ¹	IRS ²	Opts. ³	FRAs ¹	IRS ²	Opts. ³	FRAs ¹	IRS ²	Opts. ³	FRAs ¹	IRS ²	Opts. ³	FRAs ¹	IRS ²	Opts. ³	FRAs ¹	IRS ²	Opts. ³	FRAs ¹	IRS ²	Opts. ³
Jun 1998	824	681	999	1,053	504	953	...	...	...	713	419	723	779	440	500	1,160	539	975	521	393	869
Dec 1998	810	647	962	1,133	542	1,077	...	...	...	828	406	628	860	440	436	965	542	899	617	415	901
Jun 1999	923	737	1,438	1,085	678	937	834	572	525	856	433	828	942	484	949	870	549	824	655	495	847
Dec 1999	1,373	800	1,340	1,317	643	1,154	937	522	578	641	444	686	932	528	596	914	601	987	710	490	734
Jun 2000	1,418	856	1,458	1,421	655	1,432	851	511	530	614	429	677	1,014	545	715	936	586	1,036	755	500	782
Dec 2000	1,452	876	1,791	1,274	688	2,439	1,107	500	565	728	448	662	1,109	585	791	957	640	1,076	879	528	819
Jun 2001	1,347	874	1,621	1,264	678	1,239	936	486	559	693	438	648	1,937	613	708	1,125	592	989	888	529	764
Dec 2001	1,812	1,044	1,702	1,252	788	1,228	740	524	584	638	476	727	1,758	706	1,217	1,002	608	1,081	1,145	730	1,143
Jun 2002	1,556	1,044	1,682	1,234	824	1,461	556	478	561	605	489	648	1,763	779	1,202	944	532	1,149	907	666	1,044
Dec 2002	1,818	1,047	2,112	1,218	846	1,693	571	492	546	610	515	615	1,942	790	1,624	886	569	1,224	1,042	682	1,038
Jun 2003	1,530	1,041	2,161	1,264	896	1,684	539	481	608	607	544	643	1,972	806	1,223	839	561	1,174	901	701	961
Dec 2003	1,522	1,039	2,226	1,269	852	1,616	639	478	591	1,095	565	666	1,647	744	1,065	947	570	1,230	786	672	877
Jun 2004	1,965	1,048	2,313	1,169	797	1,796	670	473	675	930	594	747	1,308	728	978	965	583	1,137	725	626	847
Dec 2004	1,855	1,051	2,830	1,278	851	1,583	611	472	668	933	574	1,480	1,898	699	776	892	587	1,084	641	667	760
Jun 2005	1,659	1,000	2,955	1,158	936	1,508	631	479	567	855	614	1,288	2,565	664	781	811	564	1,077	652	650	756
Dec 2005	1,649	1,017	3,052	1,630	1,015	1,584	667	484	539	1,210	661	905	3,025	635	793	767	571	1,259	690	691	762
Jun 2006	1,670	1,018	2,703	1,698	1,080	1,398	690	503	534	1,083	707	958	3,280	613	824	847	586	1,431	788	678	816
Dec 2006	1,499	1,020	2,952	1,919	1,149	1,205	783	561	569	1,024	692	916	3,468	620	768	1,068	594	1,638	917	679	830
Jun 2007	1,164	987	2,978	2,043	1,150	1,045	812	623	604	1,120	736	806	2,569	675	799	1,096	628	1,945	850	686	865
Dec 2007	1,122	985	2,962	2,032	1,162	948	709	596	596	1,066	765	777	2,302	673	745	1,242	660	2,337	967	698	982
Jun 2008	1,405	976	3,314	1,712	1,336	899	648	562	594	1,055	830	824	1,981	660	938	1,152	677	1,904	881	729	1,020
Dec 2008	1,119	1,032	2,939	1,760	1,344	947	734	764	639	1,613	1,334	867	2,517	875	851	1,143	818	1,301	1,004	896	1,034
Jun 2009	1,240	1,245	2,544	1,672	1,351	852	581	657	607	1,194	921	950	2,164	777	865	1,055	751	1,540	996	949	936
Dec 2009	1,149	1,145	2,739	1,889	1,401	816	622	641	638	1,138	929	1,022	1,810	709	857	939	773	2,452	1,075	936	912
Jun 2010	1,323	1,038	2,097	1,925	1,465	926	621	620	624	1,038	979	1,256	1,409	639	873	924	809	2,623	975	916	866
Dec 2010	1,276	993	2,934	2,159	1,497	913	765	626	619	1,033	884	1,074	1,214	585	881	823	797	2,694	993	920	801
Jun 2011	1,250	795	1,716	1,773	1,422	1,290	612	576	637	907	927	1,035	1,829	578	1,082	820	846	2,006	981	848	832

¹ Forward rate agreements. ² Interest rate swaps. ³ Interest rate options.

Table 9b
**Herfindahl indices for all OTC foreign
exchange derivatives contracts**

	Forwards, forex swaps and currency swaps	Options
Jun 1998	302	519
Dec 1998	333	504
Jun 1999	372	525
Dec 1999	413	544
Jun 2000	423	507
Dec 2000	423	528
Jun 2001	416	546
Dec 2001	471	564
Jun 2002	427	518
Dec 2002	434	503
Jun 2003	438	498
Dec 2003	429	605
Jun 2004	442	560
Dec 2004	448	611
Jun 2005	440	591
Dec 2005	464	624
Jun 2006	475	606
Dec 2006	481	567
Jun 2007	486	558
Dec 2007	497	570
Jun 2008	496	636
Dec 2008	515	641
Jun 2009	556	640
Dec 2009	570	628
Jun 2010	565	654
Dec 2010	570	635
Jun 2011	551	648

Table 9c

Herfindahl indices for all OTC equity-linked derivatives contracts

	Europe		Japan		Latin America		Other Asia		United States	
	Forwards and swaps	Options	Forwards and swaps	Options	Forwards and swaps	Options	Forwards and swaps	Options	Forwards and swaps	Options
Jun 1998	909	627	2,655	1,074	5,484	3,545	1,232	1,447	1,086	1,362
Dec 1998	869	659	2,837	970	2,849	4,307	1,313	1,271	1,111	759
Jun 1999	715	639	2,170	1,462	3,071	6,169	3,506	1,388	1,215	1,042
Dec 1999	787	613	3,416	1,102	9,274	4,330	3,606	2,341	1,895	1,275
Jun 2000	618	657	2,501	1,018	6,881	6,776	5,119	1,586	1,088	749
Dec 2000	750	779	2,043	1,386	5,015	6,703	1,663	1,600	1,132	759
Jun 2001	693	891	1,461	860	5,163	4,353	1,631	1,188	1,048	663
Dec 2001	733	880	2,005	841	6,063	8,084	5,294	1,447	1,070	751
Jun 2002	770	952	1,822	1,072	7,546	7,585	6,086	1,550	1,174	890
Dec 2002	762	791	1,946	1,132	7,281	4,807	1,677	1,675	1,037	665
Jun 2003	768	985	1,854	2,322	8,839	9,332	3,197	1,894	964	793
Dec 2003	698	1,013	3,106	1,718	3,808	6,432	2,233	5,464	1,040	1,031
Jun 2004	611	1,195	1,984	2,553	3,732	6,304	2,010	5,435	855	836
Dec 2004	635	710	1,779	1,185	5,694	4,485	1,339	1,739	843	943
Jun 2005	597	661	2,064	898	6,953	4,427	1,355	1,177	722	725
Dec 2005	650	614	2,347	3,973	7,039	5,790	1,334	5,566	947	787
Jun 2006	613	690	1,408	3,409	6,704	3,918	1,294	5,537	946	1,385
Dec 2006	687	775	1,278	3,158	7,199	3,902	1,066	5,615	1,487	751
Jun 2007	782	716	1,168	2,333	7,876	3,735	1,343	1,098	1,057	802
Dec 2007	732	668	1,423	1,310	7,420	4,414	1,350	2,881	803	755
Jun 2008	707	706	1,044	989	5,979	6,290	1,180	1,249	847	741
Dec 2008	690	860	1,150	1,191	4,563	4,934	967	871	720	909
Jun 2009	921	981	981	1,512	4,687	6,181	949	1,105	773	1,145
Dec 2009	808	931	802	1,098	3,319	4,043	1,077	1,026	763	1,490
Jun 2010	850	1,124	693	1,013	3,900	6,467	1,219	1,192	877	1,416
Dec 2010	824	1,013	701	990	5,529	3,893	1,781	1,134	793	1,152
Jun 2011	709	923	832	1,067	2,078	2,369	1,200	1,176	814	1,239

Table 9d

Herfindahl indices for OTC interest rate derivatives contracts between reporters¹

	Canadian dollar			Swiss franc			Euro			Sterling			Japanese yen			Swedish krona			US dollar		
	FRAs ²	IRS ³	Opts. ⁴	FRAs ²	IRS ³	Opts. ⁴	FRAs ²	IRS ³	Opts. ⁴	FRAs ²	IRS ³	Opts. ⁴	FRAs ²	IRS ³	Opts. ⁴	FRAs ²	IRS ³	Opts. ⁴	FRAs ²	IRS ³	Opts. ⁴
Jun 1998	972	740	1,193	1,231	551	1,110	...	...	...	673	414	866	832	494	489	1,021	610	816	653	454	722
Dec 1998	983	671	1,041	1,194	530	1,458	...	...	...	862	400	678	869	460	521	897	591	876	631	421	896
Jun 1999	1,008	772	1,436	1,176	776	1,044	744	595	591	982	408	1,145	894	501	546	819	563	786	692	537	873
Dec 1999	1,707	834	1,341	1,480	701	1,371	961	549	583	736	456	928	973	568	795	862	617	859	757	508	822
Jun 2000	1,594	876	1,212	1,505	724	1,495	956	543	584	666	427	886	1,073	600	822	964	607	969	932	533	858
Dec 2000	1,876	910	1,622	1,256	708	1,186	1,071	530	619	788	468	795	1,386	629	876	939	662	900	894	562	931
Jun 2001	1,365	818	1,558	1,211	705	1,350	954	506	618	769	458	826	2,319	691	803	1,279	601	857	934	577	832
Dec 2001	2,266	1,008	1,474	1,270	822	1,041	727	571	642	697	490	828	2,194	801	1,381	979	623	898	1,046	784	1,111
Jun 2002	1,992	949	1,720	1,262	854	1,220	540	503	636	647	497	786	2,095	866	1,665	962	530	1,143	1,070	719	1,239
Dec 2002	2,325	893	2,426	1,594	890	1,441	547	505	558	648	550	685	2,316	895	1,749	938	570	1,148	1,440	757	1,144
Jun 2003	2,000	974	2,695	1,606	835	1,487	555	474	600	576	522	670	2,379	935	1,423	970	569	1,101	1,142	757	991
Dec 2003	1,814	1,018	2,811	1,475	833	1,347	540	478	575	746	547	661	1,803	894	1,383	1,211	602	1,232	978	751	899
Jun 2004	2,118	1,008	2,722	1,348	800	1,691	506	474	605	1,012	723	721	1,463	843	1,158	1,125	651	1,111	791	678	820
Dec 2004	2,218	1,045	3,135	1,401	815	1,634	576	470	649	939	691	845	2,291	792	855	996	664	1,098	625	716	770
Jun 2005	1,815	938	2,333	1,244	932	1,223	661	483	556	977	695	842	3,163	749	871	902	641	1,036	604	682	783
Dec 2005	1,979	978	2,659	1,710	1,043	1,214	679	496	547	1,180	751	870	3,447	706	903	769	650	1,265	703	729	807
Jun 2006	1,698	996	2,686	1,813	1,169	1,296	707	515	557	1,090	756	908	3,841	661	881	771	658	1,830	782	695	979
Dec 2006	1,687	1,007	2,738	2,321	1,229	1,034	819	514	577	1,024	702	890	3,662	646	842	892	654	1,350	884	683	880
Jun 2007	1,246	952	2,342	2,086	1,217	901	701	512	616	936	729	801	2,354	705	972	918	676	1,504	825	672	889
Dec 2007	1,088	945	2,578	2,183	1,176	935	637	542	669	1,003	799	832	2,853	731	814	1,131	744	2,278	916	694	767
Jun 2008	1,315	978	2,641	1,868	1,470	844	642	566	665	1,177	944	813	2,279	748	1,063	1,193	785	1,721	952	764	925
Dec 2008	1,126	1,050	2,851	1,998	1,420	929	654	703	720	1,738	1,646	857	2,411	726	993	1,151	941	1,280	1,069	917	1,076
Jun 2009	1,256	1,109	3,202	2,026	1,483	1,097	608	590	670	1,396	1,131	929	2,359	678	947	1,142	974	1,193	1,041	811	998
Dec 2009	1,088	1,076	2,508	2,199	1,518	1,022	630	523	690	1,149	1,040	1,045	1,810	594	946	1,070	1,074	1,316	1,098	775	993
Jun 2010	1,488	1,051	2,451	2,189	1,681	1,045	660	524	699	1,310	859	1,184	1,417	559	1,056	1,075	1,200	1,545	1,043	723	987
Dec 2010	1,257	1,017	2,229	2,522	1,630	964	591	529	652	956	857	999	1,056	538	1,053	862	1,140	1,982	1,153	803	837
Jun 2011	1,278	974	1,930	1,950	1,542	1,155	598	477	646	954	869	1,053	1,192	504	1,219	872	1,204	1,649	1,063	754	878

¹ Reporters (reporting dealers) are defined as those institutions whose head office is located in one of the 11 reporting countries and which participate in the semiannual OTC derivatives market statistics; in addition, reporting dealers include all branches and subsidiaries of these entities worldwide; reporting dealers will mainly be commercial and investment banks and securities houses, including their branches and subsidiaries and other entities which are active dealers. ² Forward rate agreements. ³ Interest rate swaps. ⁴ Interest rate options.

Table 9e
**Herfindahl indices for OTC foreign exchange
 derivatives contracts between reporters¹**

Period	Forwards, forex swaps and currency swaps	Options
Jun 1998	323	527
Dec 1998	342	517
Jun 1999	385	539
Dec 1999	425	543
Jun 2000	437	550
Dec 2000	430	558
Jun 2001	411	496
Dec 2001	464	614
Jun 2002	444	526
Dec 2002	452	512
Jun 2003	478	538
Dec 2003	463	518
Jun 2004	499	683
Dec 2004	491	700
Jun 2005	493	635
Dec 2005	534	705
Jun 2006	532	656
Dec 2006	523	603
Jun 2007	516	588
Dec 2007	544	634
Jun 2008	557	761
Dec 2008	575	711
Jun 2009	647	767
Dec 2009	650	740
Jun 2010	602	681
Dec 2010	606	689
Jun 2011	559	664

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

Table 9f

Herfindahl indices for OTC equity-linked derivatives contracts between reporters¹

	Europe		Japan		Latin America		Other Asia		United States	
	Forwards and swaps	Options	Forwards and swaps	Options	Forwards and swaps	Options	Forwards and swaps	Options	Forwards and swaps	Options
Jun 1998	1,539	796	4,147	1,042	8,578	2,815	2,964	2,477	1,648	906
Dec 1998	1,192	582	4,424	1,081	4,350	2,127	2,370	2,001	1,154	1,347
Jun 1999	851	725	4,756	1,403	6,230	3,206	6,146	2,386	1,157	1,448
Dec 1999	883	750	2,539	1,316	8,613	6,936	6,097	5,268	1,049	1,796
Jun 2000	694	943	3,614	1,288	4,116	7,398	7,915	2,502	850	975
Dec 2000	938	874	5,209	1,758	5,115	3,433	3,550	1,604	1,136	1,020
Jun 2001	948	834	2,844	908	10,000	3,613	4,962	2,152	2,424	753
Dec 2001	859	912	2,541	924	10,000	4,273	9,879	2,120	1,315	783
Jun 2002	840	737	3,220	1,137	6,242	4,772	9,740	3,290	2,542	765
Dec 2002	753	728	2,435	968	4,863	8,724	5,494	3,678	1,632	951
Jun 2003	639	655	2,225	2,433	5,556	3,090	7,022	3,520	708	1,555
Dec 2003	705	676	2,789	1,698	6,932	7,515	5,918	3,166	889	668
Jun 2004	582	697	1,275	1,127	3,851	5,133	3,675	2,526	800	774
Dec 2004	669	714	2,395	1,116	3,284	4,587	2,467	874	931	762
Jun 2005	618	748	2,068	838	3,387	5,707	2,482	1,000	870	803
Dec 2005	757	779	1,836	5,063	5,729	9,957	2,062	995	787	851
Jun 2006	568	829	1,600	3,606	7,743	1,784	1,924	873	629	1,316
Dec 2006	705	873	1,699	2,216	5,273	3,253	1,189	931	1,118	915
Jun 2007	862	760	1,495	1,218	6,676	3,744	1,819	982	679	882
Dec 2007	1,068	751	1,904	1,147	7,056	2,948	2,114	991	879	765
Jun 2008	796	832	1,335	989	5,350	5,032	1,909	1,159	825	796
Dec 2008	838	1,104	1,414	897	9,565	4,112	1,678	1,270	1,053	941
Jun 2009	1,093	1,074	1,323	1,104	5,296	4,184	1,807	1,439	1,143	1,130
Dec 2009	935	987	973	940	9,590	6,205	1,506	1,228	1,170	1,162
Jun 2010	949	1,252	737	819	9,685	6,196	1,808	1,408	1,220	1,255
Dec 2010	921	1,141	701	846	6,486	8,835	2,283	1,398	1,036	1,367
Jun 2011	793	963	1,036	894	5,894	2,444	1,307	1,489	963	1,179

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

Table 9g

Herfindahl indices for OTC interest rate derivatives contracts between reporters¹ and non-reporters

	Canadian dollar			Swiss franc			Euro			Sterling			Japanese yen			Swedish krona			US dollar		
	FRAs ²	IRS ³	Opts. ⁴	FRAs ²	IRS ³	Opts. ⁴	FRAs ²	IRS ³	Opts. ⁴	FRAs ²	IRS ³	Opts. ⁴	FRAs ²	IRS ³	Opts. ⁴	FRAs ²	IRS ³	Opts. ⁴	FRAs ²	IRS ³	Opts. ⁴
Jun 1998	828	826	1,072	862	820	909	...	...	...	859	561	739	1,033	518	660	1,703	717	1,570	666	512	1,483
Dec 1998	885	786	1,047	1,959	711	731	...	...	...	1,234	521	663	1,709	501	466	1,371	649	1,121	750	501	987
Jun 1999	1,026	885	1,500	1,055	696	936	1,415	645	567	1,372	599	704	3,035	578	2,701	1,272	710	1,100	939	526	980
Dec 1999	1,613	982	1,589	1,063	763	928	999	597	973	754	503	634	3,055	592	688	1,535	799	1,398	883	558	756
Jun 2000	1,567	1,050	1,963	1,961	741	1,361	1,294	557	615	735	541	689	3,153	571	729	1,340	760	1,260	805	545	815
Dec 2000	1,412	1,050	2,065	1,638	725	4,531	1,449	513	541	884	503	717	2,502	632	759	1,341	784	1,444	1,338	574	814
Jun 2001	2,114	1,167	1,917	1,639	703	1,147	1,032	515	543	683	489	704	3,915	575	656	2,073	716	1,209	1,395	538	792
Dec 2001	2,003	1,495	2,111	2,171	951	2,146	1,040	540	578	797	562	766	4,132	625	1,009	1,771	771	1,379	1,978	731	1,275
Jun 2002	1,681	1,568	1,996	2,250	1,082	2,061	831	529	499	773	599	772	4,983	717	946	1,849	751	1,221	1,089	694	1,058
Dec 2002	1,991	1,631	2,451	2,079	1,099	2,254	931	559	607	879	604	719	3,782	739	1,402	1,690	717	1,339	1,319	683	1,018
Jun 2003	1,681	1,374	2,174	1,933	1,261	2,354	814	563	707	1,247	669	797	2,431	767	911	916	707	1,330	1,265	725	1,030
Dec 2003	2,079	1,366	2,269	1,990	1,035	2,140	1,209	551	684	2,928	685	781	2,105	762	802	879	638	1,327	859	674	915
Jun 2004	2,092	1,423	2,448	2,049	1,026	1,929	1,295	565	861	881	546	946	1,692	807	1,008	980	662	1,322	813	661	937
Dec 2004	1,635	1,305	2,817	1,376	1,075	1,682	847	541	835	1,210	549	2,755	1,304	757	1,087	917	840	1,159	871	683	793
Jun 2005	1,978	1,235	3,559	1,490	1,074	1,943	859	545	716	1,158	602	2,907	1,503	775	670	1,097	572	1,187	923	702	770
Dec 2005	1,448	1,220	3,339	1,907	1,125	2,054	891	556	632	1,693	687	1,127	1,409	775	732	1,174	611	1,531	928	747	751
Jun 2006	2,003	1,177	2,763	1,744	1,086	1,847	959	570	583	1,741	757	1,285	1,581	736	901	1,459	660	2,240	1,001	757	718
Dec 2006	1,656	1,158	3,167	3,516	1,185	1,644	1,032	685	698	1,449	773	1,144	2,406	734	901	2,006	708	2,065	1,404	765	863
Jun 2007	1,144	1,159	3,563	2,011	1,208	1,598	1,467	851	697	2,149	823	951	4,351	785	1,103	1,737	829	2,426	1,132	794	940
Dec 2007	1,811	1,158	3,137	1,737	1,248	1,498	1,759	779	798	2,995	904	1,409	1,893	822	1,716	1,852	857	2,531	1,289	844	1,745
Jun 2008	1,783	1,097	3,661	1,329	1,282	1,709	1,849	683	888	2,896	965	1,731	1,837	820	3,196	1,801	946	2,344	1,232	891	1,944
Dec 2008	1,554	1,707	3,428	1,605	1,355	1,487	1,110	703	868	3,056	983	1,862	3,690	999	1,964	1,593	841	1,584	1,566	940	2,253
Jun 2009	1,590	1,601	3,013	2,138	1,274	1,393	1,502	799	988	2,611	952	1,858	2,786	1,084	1,507	1,812	1,009	1,960	1,300	1,208	2,092
Dec 2009	2,333	1,343	3,572	1,413	1,342	1,210	1,521	781	1,086	3,239	944	1,919	2,913	1,037	1,351	2,300	878	3,486	1,750	1,130	1,983
Jun 2010	1,791	1,188	3,611	2,059	1,397	1,112	1,049	748	938	1,975	1,148	1,744	3,051	937	1,040	1,707	875	3,453	1,334	1,112	1,550
Dec 2010	2,597	1,014	3,653	2,082	1,473	1,316	1,874	720	1,009	3,433	952	2,153	3,737	835	1,426	1,814	726	3,781	1,321	1,015	1,408
Jun 2011	2,581	753	1,961	2,000	1,411	1,704	763	668	767	1,197	976	1,229	4,332	868	913	1,253	813	3,012	934	921	945

¹ Reporters (reporting dealers) are defined as those institutions whose head office is located in one of the eleven reporting countries and which participate in the semiannual OTC derivatives market statistics; in addition, reporting dealers include all branches and subsidiaries of these entities worldwide; reporting dealers will mainly be commercial and investment banks and securities houses, including their branches and subsidiaries and other entities which are active dealers. ² Forward rate agreements. ³ Interest rate swaps. ⁴ Interest rate options.

Table 9h
**Herfindahl indices for OTC foreign exchange
 derivatives contracts between reporters¹ and non-
 reporters**

Period	Forwards, forex swaps and currency swaps	Options
Jun 1998	330	691
Dec 1998	357	640
Jun 1999	401	596
Dec 1999	432	646
Jun 2000	438	566
Dec 2000	444	576
Jun 2001	453	646
Dec 2001	516	675
Jun 2002	469	638
Dec 2002	468	603
Jun 2003	460	592
Dec 2003	443	995
Jun 2004	445	670
Dec 2004	476	656
Jun 2005	454	672
Dec 2005	461	645
Jun 2006	475	659
Dec 2006	484	635
Jun 2007	492	632
Dec 2007	533	673
Jun 2008	531	744
Dec 2008	563	691
Jun 2009	630	769
Dec 2009	627	811
Jun 2010	690	936
Dec 2010	643	897
Jun 2011	570	684

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

Table 9i

Herfindahl indices for OTC equity derivatives contracts between reporters¹ and non-reporters

	Europe		Japan		Latin America		Other Asia		United States	
	Forwards and swaps	Options	Forwards and swaps	Options	Forwards and swaps	Options	Forwards and swaps	Options	Forwards and swaps	Options
Jun 1998	1,158	995	2,508	1,236	5,291	3,715	1,468	812	1,227	1,700
Dec 1998	1,187	1,254	2,691	912	2,883	4,570	1,487	1,357	1,260	941
Jun 1999	802	892	1,877	2,028	3,093	7,075	3,134	1,680	1,304	1,450
Dec 1999	900	945	4,186	1,909	9,277	4,538	2,677	1,527	2,277	1,774
Jun 2000	706	743	2,616	1,822	6,919	7,794	3,734	1,346	1,290	884
Dec 2000	841	1,312	2,359	918	5,051	6,875	1,645	1,702	1,228	1,023
Jun 2001	733	1,962	1,924	1,412	5,524	4,945	1,848	1,146	1,321	851
Dec 2001	831	1,541	2,494	1,108	6,324	8,829	1,676	1,352	1,288	955
Jun 2002	824	2,235	2,059	1,096	7,932	8,324	2,256	1,059	1,390	1,212
Dec 2002	947	1,327	2,458	2,110	7,526	9,561	2,088	2,443	1,229	812
Jun 2003	984	1,788	2,910	2,132	8,863	9,622	1,273	2,454	1,265	809
Dec 2003	857	1,863	5,520	1,988	4,353	7,604	1,485	6,074	1,419	1,457
Jun 2004	879	2,227	3,114	4,446	3,839	6,678	1,536	6,013	1,276	1,063
Dec 2004	767	852	2,165	1,810	6,352	4,534	1,282	2,275	1,242	1,282
Jun 2005	837	794	2,330	1,583	7,270	4,623	1,313	1,616	929	852
Dec 2005	767	814	3,014	2,080	7,122	5,481	1,431	6,399	1,187	962
Jun 2006	803	721	1,942	3,099	6,857	3,971	1,240	7,619	1,234	1,612
Dec 2006	748	1,140	1,645	4,896	7,330	3,953	1,189	7,309	1,709	896
Jun 2007	822	1,073	1,582	4,599	8,167	3,842	1,549	1,513	1,415	924
Dec 2007	603	965	1,316	2,197	7,603	4,486	1,483	5,165	1,028	861
Jun 2008	949	918	1,217	1,786	6,809	6,527	1,207	1,841	1,014	836
Dec 2008	729	1,066	1,038	2,688	4,747	5,063	1,091	1,262	825	1,053
Jun 2009	872	1,325	1,304	2,984	5,335	6,404	962	1,254	848	1,571
Dec 2009	805	1,447	1,051	2,115	3,754	4,178	1,209	1,233	862	2,361
Jun 2010	910	1,325	993	2,515	5,009	6,478	1,329	1,224	1,142	2,019
Dec 2010	873	990	936	2,231	6,254	2,807	2,209	1,074	897	1,344
Jun 2011	745	995	1,308	2,579	2,329	2,863	1,476	1,045	986	1,770

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