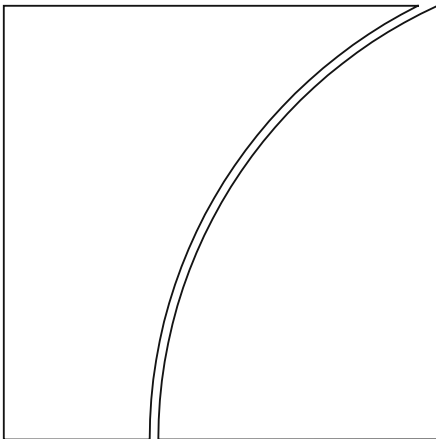




BANK FOR INTERNATIONAL SETTLEMENTS



## **Statistical release**

# OTC derivatives statistics at end-June 2016

Monetary and Economic Department

November 2016

Tools to access and download the OTC derivatives statistics:

- [BIS website](#) – tables in PDF of the BIS's most current data
- [BIS Statistics Explorer](#) – a browsing tool for pre-defined views of the BIS's most current data. An example of a chart showing the notional principal of all OTC derivatives is shown [here](#).

Data behind the charts in this release can be downloaded from the BIS website ([www.bis.org/statistics/otc\\_hy1611\\_charts.zip](http://www.bis.org/statistics/otc_hy1611_charts.zip)).

Questions about the OTC derivatives statistics may be addressed to [statistics@bis.org](mailto:statistics@bis.org).

This release is available on the BIS website ([www.bis.org/publ/otc\\_hy.htm](http://www.bis.org/publ/otc_hy.htm)).

# OTC derivatives statistics at end-June 2016

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Data are subject to change. Revised data will be released concurrently with the forthcoming *BIS Quarterly Review* on 11 December 2016. The December 2016 *BIS Quarterly Review* will include several special feature articles that analyse the results of the 2016 Triennial Central Bank Survey of foreign exchange and over-the-counter derivatives markets.

The OTC derivatives statistics at end-December 2016 will be released no later than 15 May 2017.

## Notations

billion	thousand million
trillion	thousand billion
e	estimated
lhs	left-hand scale
rhs	right-hand scale
\$	US dollar unless specified otherwise
...	not available
.	not applicable
–	nil or negligible

Differences in totals are due to rounding.

The term “country” as used in this publication also covers territorial entities that are not states as understood by international law and practice but for which data are separately and independently maintained.

## Abbreviations

### Countries

AR	Argentina	IN	India
AU	Australia	IT	Italy
AT	Austria	JP	Japan
BE	Belgium	KR	Korea
BH	Bahrain	LV	Latvia
BR	Brazil	MX	Mexico
CA	Canada	MY	Malaysia
CH	Switzerland	NL	Netherlands
CL	Chile	NO	Norway
CN	China	PE	Peru
CO	Colombia	PH	Philippines
DE	Germany	PL	Poland
DK	Denmark	PT	Portugal
ES	Spain	RO	Romania
FI	Finland	RU	Russia
FR	France	SA	Saudi Arabia
GB	United Kingdom	SE	Sweden
GR	Greece	SG	Singapore
HK	Hong Kong SAR	TH	Thailand
HU	Hungary	TR	Turkey
ID	Indonesia	TW	Chinese Taipei
IE	Ireland	US	United States
IL	Israel	ZA	South Africa

### Currencies

CAD	Canadian dollar	JPY	yen
CHF	Swiss franc	SEK	Swedish krona
EUR	euro	USD	US dollar
GBP	pound sterling		

## 1. Relationship of the Triennial Survey to the semiannual survey

This publication presents the combined results of two complementary BIS surveys on positions in over-the-counter (OTC) derivatives markets: the semiannual survey of derivatives dealers in 13 jurisdictions, and the Triennial Central Bank Survey of dealers in an additional 33 jurisdictions ([Annex C](#)). These surveys took place at end-June 2016. A companion survey on turnover in foreign exchange and OTC interest rate derivatives markets took place in April 2016, and the results were published in September ([www.bis.org/publ/rpfx16.htm](http://www.bis.org/publ/rpfx16.htm)).

The structure of the outstanding positions part of the Triennial Central Bank Survey is the same as that of the semiannual survey of OTC derivatives markets. Both cover the notional principal and gross market values of foreign exchange, interest rate, equity, commodity and credit derivatives contracts outstanding in OTC markets. Furthermore, both surveys cover the worldwide consolidated positions of reporting dealers, excluding positions between related entities that are part of the same banking group. The semiannual survey captures the positions of about 70 banks and other derivatives dealers based in 13 countries, at end-June and end-December of each year. Every three years, the positions of additional dealers and countries are captured in the Triennial Central Bank Survey. At end-June 2016, together the two surveys covered more than 400 dealers in 46 countries.<sup>1</sup>

The Triennial and semiannual surveys are coordinated by the BIS under the auspices of the [Committee on the Global Financial System](#). They are supported through the [Data Gaps Initiative](#) endorsed by the G20, specifically recommendation 6. Central banks and other authorities collected data from banks and other derivatives dealers headquartered in their jurisdictions and reported national aggregates to the BIS, which then calculated global aggregates. Owing to the small number of dealers in some countries, the BIS does not publish any national aggregates, only global totals.

Compared with the semiannual survey, the Triennial Survey provides additional information in three areas. First, the Triennial Survey serves as a benchmark for calculating the global coverage of the semiannual survey. This information is used to scale up the amounts from the semiannual survey during periods between Triennial Surveys. Second, the Triennial Survey provides information about the size and structure of many smaller OTC derivatives markets. While the semiannual survey captures the bulk of outstanding OTC contracts worldwide, it is not necessarily representative of positions in smaller markets. The Triennial Survey collects comparable data for a wide diversity of dealers, including dealers active in smaller markets who may not be active in the major derivatives markets.

Third, there are small differences in the information collected in the two surveys. On the one hand, the Triennial Survey captures some OTC instruments not previously covered by the semiannual survey, in particular credit derivatives other than credit default swaps (CDS). On the other hand, the semiannual survey provides much more detailed information about CDS. In particular, the Triennial Survey does not collect information about the rating and sector of the underlying reference entity.

Non-standard terms used in this publication are explained in the glossary ([Annex D](#)). More information about how the OTC derivatives statistics are compiled is available in the reporting guidelines on the BIS website ([www.bis.org/statistics/triennialrep/2016survey\\_guidelinesoutstanding.pdf](http://www.bis.org/statistics/triennialrep/2016survey_guidelinesoutstanding.pdf)).

<sup>1</sup> Whereas outstanding positions are reported on a consolidated basis, the turnover part of the Triennial Survey is reported by the sales desks of reporting dealers located in participating countries, on an unconsolidated basis. Dealers located in 52 countries participated in the turnover part of the 2016 Triennial Survey. In several of the six countries that participated in the turnover survey but not the outstanding positions survey (BG, CZ, LT, LU, NZ, SK), the market share of foreign banks is high (and thus the outstanding positions of domestic banks are likely to be small), and the positions of these foreign banks were reported on a consolidated basis by the home country of the bank.

## 2. Highlights

Highlights from the combined semiannual and Triennial surveys of outstanding positions in over-the-counter (OTC) derivatives markets:

- New data show that central clearing has made very significant inroads into OTC interest rate derivatives markets but is less prevalent in other OTC derivatives segments. As of end-June 2016, 75% of dealers' outstanding OTC interest rate derivatives contracts were against central counterparties (CCPs), compared with 37% for credit derivatives and less than 2% for foreign exchange and equity derivatives. Overall, 62% of the \$544 trillion in notional amounts outstanding reported by dealers was centrally cleared.
- The gross market value of OTC derivatives – that is, the cost of replacing all outstanding contracts at current market prices – rose to \$20.7 trillion at end-June 2016 from \$14.5 trillion at end-2015. The market value of foreign exchange derivatives involving the yen and pound sterling more than doubled in the first half of 2016 on the back of sharp moves in the respective currencies.
- Outstanding positions in OTC derivatives markets are concentrated among major dealers. Of the \$544 trillion in notional amounts outstanding at end-June 2016, \$512 trillion (94%) was reported by dealers from the 13 countries that participate in the BIS's semiannual survey, and \$32 trillion by dealers that participate only in the Triennial Central Bank Survey.

[Section 3](#) expands on central clearing and other structural changes in OTC derivatives markets in recent years, drawing mainly from the Triennial Central Bank Survey of foreign exchange and OTC derivatives markets. [Section 4](#) focuses on developments in the first half of 2016, based on the semiannual survey.

### 3. Changing structure of OTC derivatives markets

The combined semiannual and Triennial surveys indicate that central clearing is reshaping OTC derivatives markets. Clearing is most prevalent for interest rate derivatives, followed by credit derivatives. By facilitating the compression of trades, clearing has led to an increase in the relative share of uncleared instruments on dealers' balance sheets, in particular foreign exchange (FX) derivatives.

#### FX derivatives increase in importance

The interest rate segment continues to account for the vast majority of outstanding OTC derivatives. At end-June 2016, the notional amount of outstanding OTC interest rate derivatives contracts totalled \$438 trillion, which represented 80% of the global OTC derivatives market ([Annex A](#)). This is down from \$581 trillion, or 83%, at end-June 2013, at the time of the previous Triennial Survey (Graph 1, left-hand panel). Trade compression to eliminate redundant contracts appears to have been a major driver of the decline in notional amounts.<sup>2</sup> Compression was aided by a shift towards CCPs in recent years, which in effect multilateralised the compression process.

FX derivatives make up the second largest segment of the global OTC derivatives market. In contrast to interest rate derivatives, the notional amount of outstanding FX contracts has continued to climb in recent years, rising to a record high of \$86 trillion at end-June 2016. As a share of all OTC derivatives, FX instruments rose from 12% at end-June 2013 to 16% at end-June 2016 when measured in notional amounts – which determines contractual payments – and from 13% to 17% when measured at gross market value – which is the cost of replacing all outstanding contracts at market prices prevailing on the reporting date (Graph 1, right-hand panel).<sup>3</sup>

Turning to the credit derivatives market, in 2007 it was briefly as large as the FX derivatives market in notional amounts, but it has declined steadily in size since then. The notional principal of outstanding credit derivatives fell to \$12 trillion at end-June 2016, from \$25 trillion at end-June 2013 and a peak of \$51 trillion in 2007 (Graph 1, left-hand panel). As a share of all OTC derivatives, credit derivatives fell from 10% to 2% between end-June 2007 and end-June 2016 when measured in notional amounts, and from 8% to 2% when measured at gross market value (Graph 1, right-hand panel).

The smallest segments remained OTC derivatives linked to equities and commodities, which totalled \$7 trillion and \$2 trillion, respectively, at end-June 2016. Together, equity and commodity derivatives accounted for only 2% of notional amounts outstanding, but a larger proportion of market value. At their peak in 2007, equity and commodity derivatives had collectively accounted for over 15% of the gross market value of all OTC derivatives, but this proportion fell to 4% at end-June 2016 (Graph 1, right-hand panel).

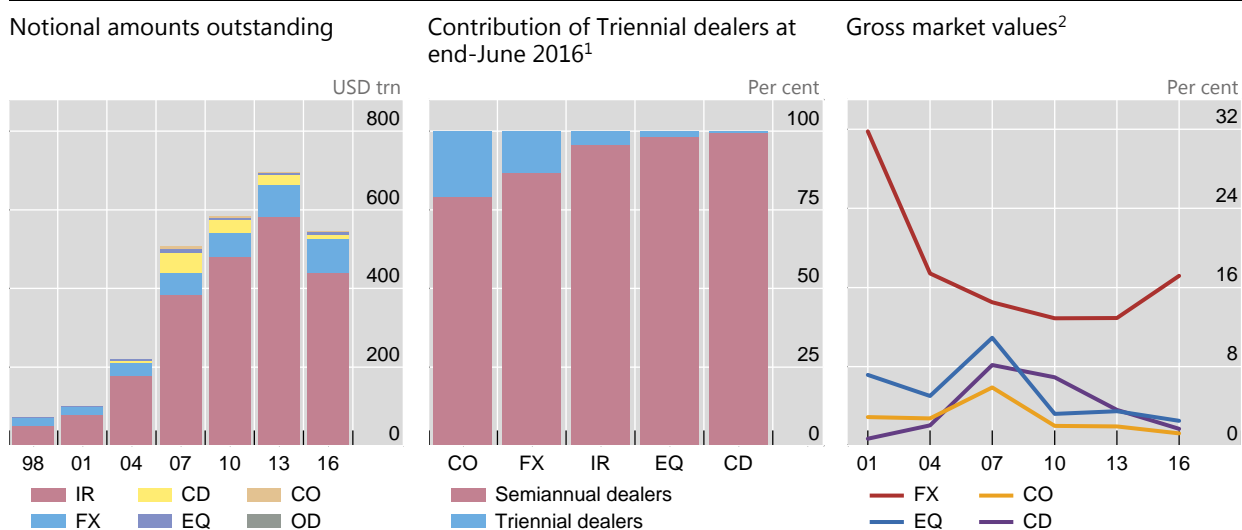
<sup>2</sup> Compression bundles derivatives contracts with similar risks or cash flows into fewer trades. It is a process for tearing up trades that allows economically redundant derivatives trades to be terminated early without changing each participant's net position.

<sup>3</sup> The gross market value is calculated as the sum of the absolute value of gross positive market values and gross negative market values. The gross positive market value is the gain to derivatives dealers – and the gross negative market value the loss – if the dealers were to sell their outstanding contracts at market prices prevailing on the reporting date.

## Global OTC derivatives markets, by underlying risk

Outstanding positions at end-June of the indicated year

Graph 1



CD = credit derivatives; CO = commodity derivatives; EQ = equity-linked derivatives; FX = foreign exchange derivatives; IR = single-currency interest rate derivatives, OD = other OTC derivatives.

<sup>1</sup> As a percentage of notional amounts outstanding at end-June 2016. Semiannual dealers refer to reporting dealers who participate in the semiannual survey, and Triennial dealers refer to those who participate only in the Triennial Survey, ie excluding semiannual dealers. For a list of countries whose dealers participate in the semiannual and Triennial surveys, see Annex C. <sup>2</sup> As a percentage of the gross market value of all outstanding OTC derivatives.

Source: BIS Triennial Central Bank Survey. Further information is available at [www.bis.org/publ/rpfx16.htm](http://www.bis.org/publ/rpfx16.htm).

### Most interest rate derivatives are centrally cleared

For the first time, the latest semiannual and Triennial surveys captured comprehensive data on positions with CCPs. Whereas in previous surveys details about financial counterparties were collected only for CDS, at end-June 2016 CCPs were separately identified for all types of OTC derivatives. Central clearing is a key element in authorities' agenda for reforming OTC derivatives markets to reduce systemic risks. These new data show that central clearing has made very significant inroads into OTC interest rate derivatives markets but is much less prevalent in other OTC derivatives segments.

The share of reporting dealers' positions booked against CCPs is highest for interest rate derivatives, where it stood at 75% at end-June 2016. It is important to note that this share refers to the outstanding positions of reporting dealers and not the share of trades cleared through CCPs; as a share of outstanding positions, contracts with CCPs are counted twice, whereas as a share of trades each contract would be counted once.<sup>4</sup>

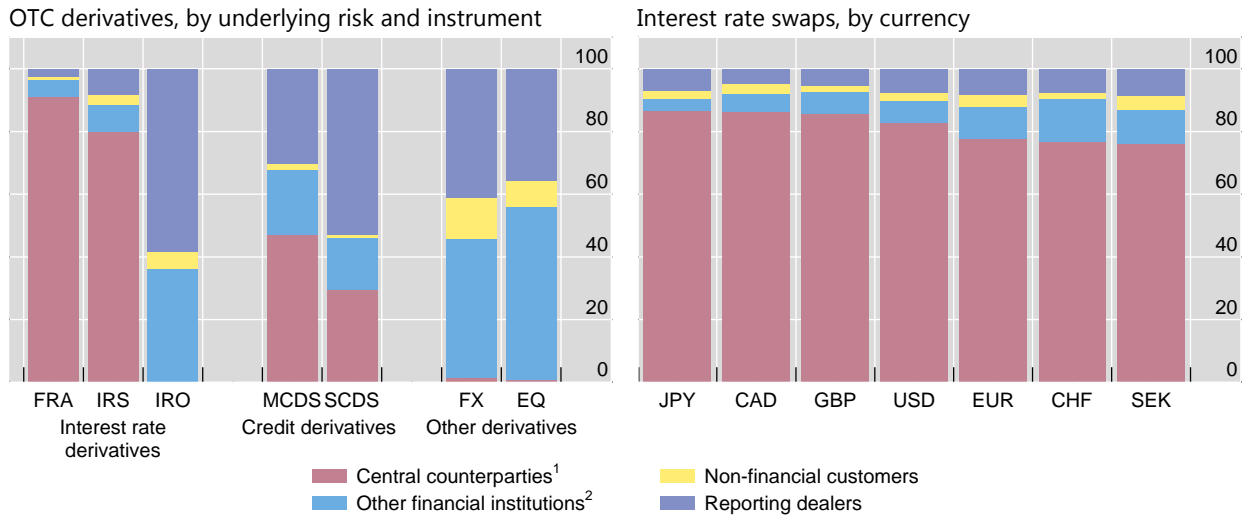
<sup>4</sup> When a derivatives contract between two reporting dealers is cleared by a CCP, this contract is replaced, in an operation called novation, by two new contracts: one between counterparty A and the CCP, and a second between the CCP and counterparty B. In the BIS OTC derivatives statistics, dealers report all outstanding contracts and separately identify contracts between reporting dealers. The BIS then adjusts such inter-dealer positions to eliminate double-counting. However, inter-dealer trades that are subsequently novated to a CCP are not adjusted; each dealer's position with the CCP is included in the global aggregates published by the BIS. Under the extreme assumption that all positions with CCPs are initially inter-dealer contracts, positions with CCPs could be adjusted by dividing by two. For OTC interest rate derivatives, this would reduce the notional amount outstanding by \$165 trillion (half of the \$330 trillion in positions reported against CCPs), which in turn would reduce the share of CCPs in outstanding positions to 60% ( $\$165/(\$438 - \$165)$ ). The actual clearing rate is likely to be



## Significance of central clearing

Types of counterparties, as a percentage of notional amounts outstanding at end-June 2016

Graph 2



FRA = forward rate agreements; FX = foreign exchange derivatives; IRS = interest rate swaps; IRO = interest rate options; EQ = equity-linked derivatives; MCDS = multi-name credit default swaps; SCDS = single-name credit default swaps.

<sup>1</sup> Contracts between reporting dealers that are subsequently novated to CCPs are recorded twice (reported once by each dealer). See footnote 4 on page 6 of the main text. <sup>2</sup> Excluding central counterparties and reporting dealers.

Source: BIS Triennial Central Bank Survey. Further information is available at [www.bis.org/publ/rpfx16.htm](http://www.bis.org/publ/rpfx16.htm).

Among interest-rate instruments, the share of positions booked against CCPs is highest for forward rate agreements and interest rate swaps, at 91% and 80%, respectively (Graph 2, left-hand panel). For interest rate options, the share of CCPs is close to zero. The importance of CCPs does not vary a lot across major currencies, ranging from 76% for interest rate swaps denominated in Swedish krona to 86% for those in Canadian dollars and Japanese yen, with US dollars in between at 83% (Graph 2, right-hand panel).

While comprehensive data on central clearing are available only from end-June 2016, the share of positions with other financial institutions – from the historical counterparty distribution of OTC derivatives – can be used to approximate the pace of the shift in activity towards CCPs in recent years. Previously, CCPs were grouped indistinguishably with all financial institutions other than dealers, and the latest data show that CCPs accounted for most of the positions reported with this group of counterparties. The share of interest rate derivatives with financial institutions other than dealers climbed from 61% of notional amounts outstanding at end-June 2010 to 75% at end-June 2013 and 86% at end-June 2016. In contrast, the inter-dealer segment declined in importance, from 30% to 12% over this period. These opposing trends likely reflect the novation of inter-dealer contracts to CCPs. The notional principal of interest rate contracts between derivatives dealers has been falling more or less steadily since the Great Financial Crisis, dropping from \$163 trillion at end-June 2007 to \$50 trillion at end-June 2016.

Central clearing is also gaining in importance in credit derivatives markets. The proportion of outstanding credit default swaps (CDS) cleared through CCPs has increased steadily since these data were first reported in 2010, from 10% at end-June 2010 to 23% at end-June 2013 and 37% at end-June

higher than this estimate because some positions with CCPs may initially be trades with institutional investors and other financial customers, which in the BIS OTC derivatives statistics are not double-counted when novated to CCPs.

2016. The share of CCPs is higher for multi-name products than for single-name products: 47% versus 29% (Graph 2, left-hand panel). Multi-name products, which consist primarily of contracts on CDS indices, tend to be more standardised than single-name products and consequently more amenable to central clearing. As CDS become more standardised, CCPs' share of newer contracts is likely to increase. Nevertheless, CDS with remaining maturity of one year or less have a lower share of central clearing (27%) than those maturing in one to five years (41%).

The shift towards central clearing in credit derivatives markets contributed to an increased use of legally enforceable netting agreements.<sup>5</sup> Consequently, net market values fell as a percentage of gross market values from 26% at end-2011 to 21% at end-2013. However, since 2013 this trend has reversed despite a continuing shift in activity to CCPs, with the ratio rising to 29% at end-June 2016. The prevalence of netting is greatest for CDS contracts with other reporting dealers and CCPs, for which net market values fell as a percentage of gross values to 21% and 20%, respectively, at end-June 2016 (Table D10.1 on the BIS website). Meanwhile, netting is least prevalent for contracts with insurance companies and non-financial customers, for which the comparable ratios are, respectively, 75% and 71%.

In other segments of OTC derivatives markets, central clearing was negligible. At end-June 2016, the share of outstanding OTC FX derivatives cleared through CCPs was less than 2% (Graph 2, left-hand panel). So too was CCPs' share of OTC equity derivatives. This partly reflects differences in the regulations that apply to different classes of derivatives. Regulators in most of the major derivatives markets require certain classes of standardised OTC derivatives to be centrally cleared, particularly interest rate swaps, CDS and non-deliverable FX forwards; deliverable FX derivatives and equity derivatives are often exempted from these requirements. That said, many regulators are also starting to require higher capital and margin for non-centrally cleared derivatives, which strengthens the incentive to move trades to CCPs.<sup>6</sup> In the United States and other key markets, margining requirements began to be phased in starting in September 2016, and therefore their impact on clearing will only become clear in future data.

## Emerging market dealers focus on FX derivatives

Although the OTC derivatives statistics are not published by dealer nationality, anonymised data show significant differences in the structure of risks managed by derivatives dealers in the semiannual survey – all of which are headquartered in advanced economies – compared with those that participate only in the Triennial Central Bank Survey – most of which are headquartered in emerging market economies. Dealers based in the 13 countries that participate in the semiannual survey accounted for 94% of the \$544 trillion in notional amounts outstanding (Graph 1, left-hand panel). Dealers that participate only in the Triennial Survey accounted for a mere 6%, although this is up from less than 4% at end-June 2013, at the time of the previous Triennial Survey.

The market share of dealers that participate only in the Triennial Survey varies across risk categories. It was highest in the commodity and FX segments – 21% and 14%, respectively, at end-June 2016 – and lowest in the credit, equity and interest rate segments – 1%, 2% and 4%, respectively (Graph 1, centre panel). This mainly reflects the underdevelopment of these latter segments in emerging markets. Among dealers based in emerging markets, FX derivatives accounted for the majority of their outstanding notional positions, in some cases over 80% (Graph 3, left-hand panel). In contrast, among dealers based in advanced economies, derivatives activity is dominated by the management of interest

<sup>5</sup> Netting enables market participants to reduce their counterparty exposure by offsetting contracts with negative market values against contracts with positive market values.

<sup>6</sup> See Financial Stability Board, "OTC derivatives market reforms: eleventh progress report on implementation", August 2016, [www.fsb.org/2016/08/otc-derivatives-market-reforms-eleventh-progress-report-on-implementation/](http://www.fsb.org/2016/08/otc-derivatives-market-reforms-eleventh-progress-report-on-implementation/).

rate risk: interest rate derivatives accounted for 80–90% of their outstanding notional positions, followed by FX derivatives at 10–20% (Graph 3, left-hand panel).

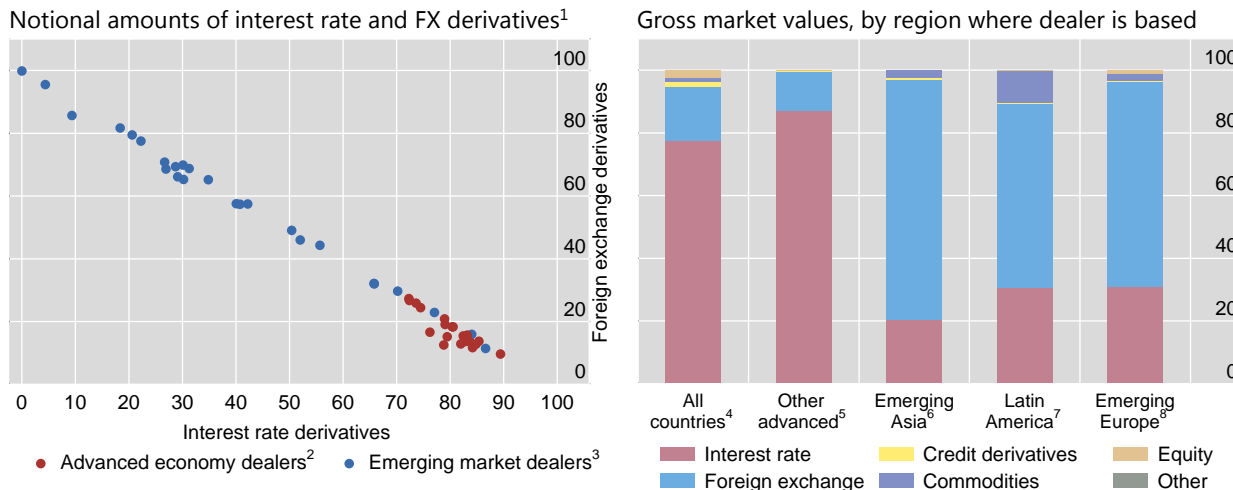
Similarly, FX derivatives account for a larger share of the risk on the balance sheets of emerging market dealers than on the balance sheets of the major dealers from advanced economies. The right-hand panel of Graph 3 decomposes by underlying risk the gross market values reported by different groups of dealers. For dealers from emerging Asia, emerging Europe and Latin America, FX derivatives account for 60% or more gross market values, and interest rate derivatives for less than 30%. For Latin American dealers, commodity derivatives are also relatively important, accounting for around 10% of gross market values. In contrast, among dealers from advanced economies, interest rate derivatives account for close to 80%, and FX derivatives for only 16%.

Furthermore, emerging market dealers tend to focus on managing risks associated with their domestic currency – the currency of the country where they are headquartered – and are much less active in foreign derivatives markets. For notional amounts outstanding, the left-hand panel of Graph 4 shows the proportion of interest rate contracts denominated in each dealer’s domestic currency and US dollars. Interest rate contracts booked by emerging market dealers were denominated mainly in their domestic currency; contracts denominated in US dollars or other foreign currencies accounted for less than 40% of their outstanding notional amounts. Similarly, their FX activity was concentrated in the domestic currency against the US dollar (as opposed to other currency pairs), as shown by the clustering of blue dots in the top right corner of the right-hand panel of Graph 4.

### Risk composition of outstanding positions, by nationality of dealer

As a percentage of all OTC derivatives outstanding at end-June 2016

Graph 3



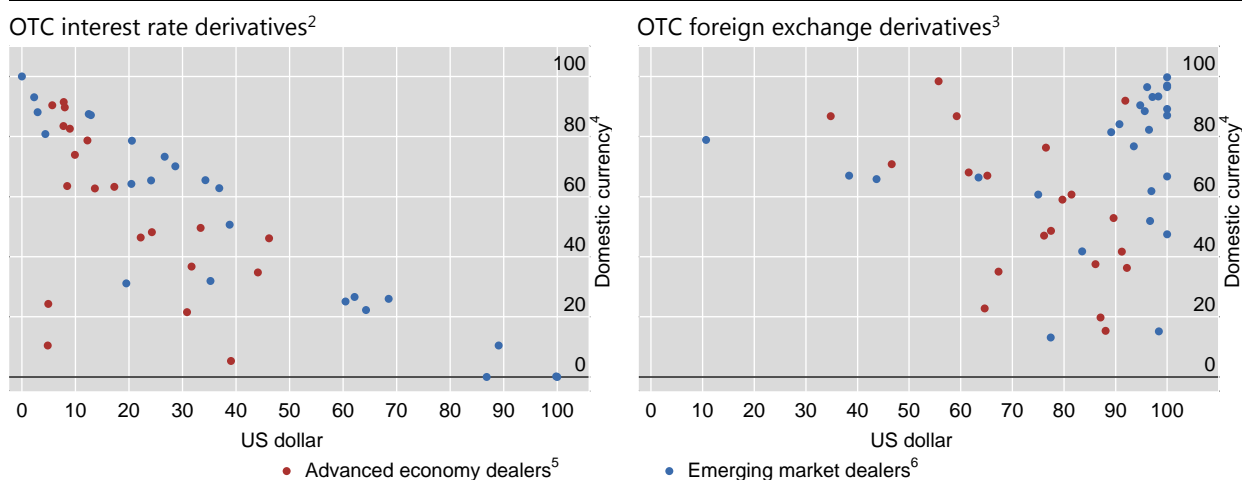
<sup>1</sup> Dots show the risk composition of notional amounts reported by dealers headquartered in each country participating in the semiannual and Triennial surveys. For a list of participating countries, see Annex C. Dealers report their worldwide consolidated positions. <sup>2</sup> Dealers from AU, AT, BE, CA, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, JP, NL, NO, PT, SE and US. <sup>3</sup> Dealers from countries that participate in the Triennial Survey, excluding those listed in footnote 2. See Annex C. <sup>4</sup> All countries that participate in the semiannual and Triennial surveys. <sup>5</sup> AT, DK, FI, GR, IE, NO, PT. Excludes dealers from the 13 countries that participate in the semiannual survey. <sup>6</sup> CN, HK, ID, IN, KR, MY, PH, SG, TH, TW. <sup>7</sup> AR, BR, CL, CO, MX, PE. <sup>8</sup> HU, LV, PL, RO, RU, and TR, plus the Middle East (BH, IL, SA) and Africa (ZA).

Source: BIS Triennial Central Bank Survey. Further information is available at [www.bis.org/publ/rpfx16.htm](http://www.bis.org/publ/rpfx16.htm).

## Currency composition of outstanding positions, by nationality of dealer<sup>1</sup>

As a percentage of notional amounts outstanding at end-June 2016

Graph 4



<sup>1</sup> Dots show the currency composition of notional amounts reported by dealers headquartered in each country participating in the semiannual and Triennial surveys. For a list of participating countries, see [Annex C](#). Dealers report their worldwide consolidated positions. <sup>2</sup> Share of derivatives denominated in US dollars (x-axis) and the domestic currency of the dealer (y-axis), as a percentage of interest rate derivatives in all currencies. <sup>3</sup> Share of derivatives denominated in US dollars (x-axis) and the domestic currency of the dealer (y-axis), as a percentage of FX derivatives in all currencies. Two currencies are involved in each FX contract and therefore the percentage share of individual currencies sums to 200%. <sup>4</sup> Refers to the currency of the “home” country of the dealer, ie the currency of the country where the parent group of the dealer is headquartered. <sup>5</sup> Dealers from AU, AT, BE, CA, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, JP, NL, NO, PT, SE and US. <sup>6</sup> Dealers from countries that participate only in the Triennial Survey, excluding those listed in footnote 5. See [Annex C](#).

Source: BIS Triennial Central Bank Survey. Further information is available at [www.bis.org/publ/rpfx16.htm](http://www.bis.org/publ/rpfx16.htm).

In contrast, dealers from advanced economies are active in a wider range of markets. For many major dealers, contracts denominated in their domestic currency accounted for less than 50% of their outstanding interest rate derivatives, with contracts in US dollars or euros accounting for much of the remainder (Graph 4, left-hand panel). Similarly, many manage FX risks not linked to their domestic currency. For a few dealers from advanced economies, FX contracts involving their domestic currency on one side accounted for less than 30% of the outstanding notional positions (Graph 4, right-hand panel).

## 4. Developments in OTC derivatives markets in the first half of 2016

This section focuses on what the semiannual survey reveals about developments in OTC derivatives markets in the first half of 2016. Outstanding positions in global OTC derivatives markets increased during this period, interrupting the trend decline observed since 2013. The notional amount of outstanding OTC derivatives contracts increased from \$493 trillion to \$544 trillion between end-December 2015 and end-June 2016 ([Graph B1](#), left-hand panel, in Annex B of this release; and [Table D5.1](#) on the BIS website).<sup>7</sup> Nevertheless, notional amounts remained well below the peak of \$710 trillion reached at end-December 2013.<sup>8</sup>

The gross market value of outstanding derivatives contracts also rose in the first half of 2016, from \$14.5 trillion to \$20.7 trillion ([Graph B1](#), centre panel). Market participants can reduce their exposure to counterparty credit risk through netting agreements and collateral. Gross credit exposures, which account for such risk mitigation by adjusting gross market values for legally enforceable bilateral netting agreements (but not for collateral), rose from \$2.9 trillion at end-December 2015 to \$3.7 trillion at end-June 2016. As a share of gross market values, they fell from 20% to 18%, yet remained above the 16% average observed since 2008 ([Graph B1](#), left-hand panel).

### OTC interest rate derivatives

Notional amounts of interest rate derivatives reported by dealers participating in the semiannual survey rose in the first half of 2016, primarily driven by an expansion in yen- and US dollar-denominated contracts. Between end-December 2015 and end-June 2016, the notional value of yen contracts rose from \$39 trillion to \$50 trillion, while that of the US dollar increased from \$139 trillion to \$149 trillion ([Graph B3](#), left-hand panel).

The gross market value of interest rate derivatives also rose between end-December 2015 and end-June 2016, from \$10.1 trillion to \$15.1 trillion ([Table D7](#)). This partially reflected the increase in the notional amounts of outstanding contracts that took place during the same period. The declines in long-term yields which took place during the same period are also likely to have contributed to the increase in market values by widening the gap between market interest rates on the reporting date and rates prevailing at contract inception.<sup>9</sup> Increases in market values were reported for interest rate derivatives denominated in all major currencies.

<sup>7</sup> The statistics on outstanding OTC derivatives positions available in the *BIS Statistical Bulletin* and *BIS Statistics Explorer* are from the semiannual survey. While the overall total shown in the *BIS Statistical Bulletin* and *BIS Statistics Explorer* for all outstanding OTC derivatives incorporates the additional data captured in the Triennial Survey, these additional data are not allocated across the different breakdowns and instead are shown as unallocated positions. Therefore, the breakdowns from the Triennial Survey shown in [Annex A](#) and the detailed PDF and XLS tables on the [BIS website](#) are always greater than the comparable breakdowns shown in the *BIS Statistical Bulletin* and *BIS Statistics Explorer*. For example, for OTC foreign exchange derivatives, the notional amount outstanding was \$86 trillion at end-June 2016, of which only \$74 trillion – the amount reported in the semiannual survey – is shown in [Table D6](#).

<sup>8</sup> Positions are reported in US dollars, and thus changes between periods include the impact of exchange rate movements on positions denominated in currencies other than the US dollar. Between end-2015 and end-June 2016, the overall increase in notional amounts was a bit smaller after adjusting for exchange rate movements: 7%, compared with 10% on an unadjusted basis. The appreciation of the Japanese yen against the US dollar inflated the reported US dollar value of positions denominated in yen, but the depreciation of the pound sterling depressed the value of positions denominated in sterling.

<sup>9</sup> Between end-2015 and end-June 2016, 10-year yields on German, UK and US government bonds fell by more than 70 basis points, and those on Japanese government bonds by about 50 basis points. See “Dissonant markets?”, *BIS Quarterly Review*, September 2016, [www.bis.org/publ/qrpdf/r\\_qt1609a.htm](http://www.bis.org/publ/qrpdf/r_qt1609a.htm).

## OTC foreign exchange derivatives

The notional amount of outstanding FX derivatives reported by semiannual dealers increased from \$70 trillion to \$74 trillion during the first half of 2016. Gross market values also rose over this period, from \$2.6 trillion at end-December 2015 to \$3.1 trillion at end-June 2016, the highest level since 2008 ([Table D6](#)).

The first half of 2016 saw an especially large increase in the gross market values of contracts involving the yen and pound sterling, which more than doubled from \$388 billion to \$873 billion and from \$289 billion to \$620 billion, respectively. Both surges occurred on the back of sharp moves in the respective currencies. Between end-December 2015 and end-June 2016, the yen appreciated by over 15% against the US dollar, while the pound sterling depreciated by around 10%. Most of the latter move took place in the immediate aftermath of the Brexit referendum in late June 2016.

In contrast to the interest rate derivatives market, where inter-dealer contracts have shifted to CCPs (see [Section 3](#)), in the FX derivatives market inter-dealer positions continued to account for nearly as large a share of outstanding contracts as positions with other financial institutions. The notional amount of outstanding FX contracts between reporting dealers totalled \$32 trillion at end-June 2016 ([Graph B2](#), right-hand panel). Contracts with financial counterparties other than dealers stood at \$33 trillion. The inter-dealer share has averaged around 43% since 2011, up from less than 40% prior to 2011. Among instruments, inter-dealer positions account for even larger shares of currency swaps (55% of notional amounts) and options (48%).

## Credit default swaps

The notional amount of outstanding CDS contracts reported by semiannual dealers continued to fall in the first half of 2016, from \$12.3 trillion at end-December 2015 to \$11.8 trillion at end-June 2016 ([Graph B6](#), left-hand panel). The market value of CDS also continued to decline. As of end-June 2016, it stood at \$342 billion in gross terms and \$97 billion in net terms ([Graph B6](#), right-hand panel). This net measure takes account of bilateral netting agreements covering CDS contracts but, unlike gross credit exposures, is not adjusted for cross-product netting.

The recent decline in overall CDS positions reflected primarily the contraction of the inter-dealer segment. The notional amount for contracts between reporting dealers fell from \$5.5 trillion at end-December 2015 to \$5.1 trillion at end-June 2016 ([Table D10.1](#)). Notional amounts with other banks and securities firms also decreased in the first half of 2016, from \$0.9 trillion to \$0.6 trillion.

The distribution of underlying reference entities indicates that the relative share of contracts referencing sovereigns stabilised in the first half of 2016. The share of such contracts in the total notional amount of CDS outstanding had increased steadily from 4% at end-2008 to a peak of 16% at end-2015. This share was roughly unchanged in the first half of 2016, while notional amounts referencing sovereigns fell slightly from \$2.0 trillion at end-2015 to \$1.9 trillion at end-June 2016 ([Table D10.4](#)).

The distribution of outstanding CDS by location of the counterparty showed little change at end-June 2016. The CDS market is very international. CDS with counterparties from the country in which the dealer is headquartered accounted for only 25% of outstanding contracts at end-June 2016, or \$2.9 trillion ([Table D10.5](#)). Most of the foreign counterparties were from Europe, followed by the United States.

## Annexes

### A Table: Global OTC derivatives markets

Amounts outstanding, in billions of US dollars<sup>1</sup>

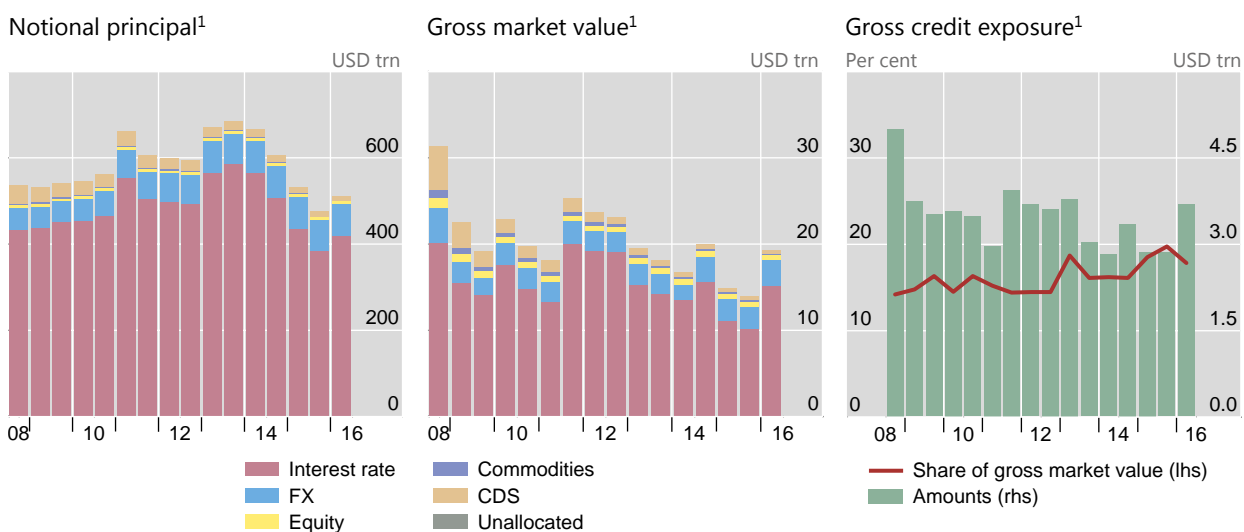
	Notional amounts outstanding			Gross market value		
	end-June 2010	end-June 2013	end-June 2016	end-June 2010	end-June 2013	end-June 2016
<b>GRAND TOTAL</b>	<b>582,683</b>	<b>696,120</b>	<b>544,052</b>	<b>24,695</b>	<b>20,234</b>	<b>20,701</b>
<b>A. Foreign exchange contracts</b>	<b>62,961</b>	<b>80,917</b>	<b>85,710</b>	<b>3,179</b>	<b>2,613</b>	<b>3,558</b>
Forwards and swaps	31,934	39,495	46,889	1,335	1,082	1,698
Currency swaps	18,903	26,292	25,855	1,386	1,169	1,550
Options	12,123	15,074	12,907	458	362	310
Other	1	56	60	...	...	...
<b>B. Interest rate contracts<sup>2</sup></b>	<b>478,093</b>	<b>580,599</b>	<b>437,739</b>	<b>18,508</b>	<b>15,763</b>	<b>16,005</b>
Forward rate agreements	60,028	89,992	74,727	204	276	381
Interest rate swaps	367,541	439,838	327,445	16,703	14,135	14,226
Options	50,519	50,191	35,427	1,600	1,352	1,397
Other	5	579	140	...	...	...
<b>C. Equity-linked contracts</b>	<b>6,868</b>	<b>6,963</b>	<b>6,761</b>	<b>796</b>	<b>706</b>	<b>522</b>
Forwards and swaps	1,854	2,350	2,592	202	209	175
Options	5,013	4,614	4,169	595	498	347
<b>D. Commodity contracts<sup>3</sup></b>	<b>3,273</b>	<b>2,717</b>	<b>1,761</b>	<b>493</b>	<b>391</b>	<b>260</b>
Gold	669	610	500	54	83	47
Other	2,604	2,108	1,261	439	309	212
Forwards and swaps	1,686	1,394	936	...	...	...
Options	918	714	325	...	...	...
<b>E. Credit derivatives</b>	<b>31,416</b>	<b>24,845</b>	<b>11,991</b>	<b>1,708</b>	<b>732</b>	<b>351</b>
Forwards and swaps	31,331	24,497	11,881	...	...	...
CDS	31,057	24,469	11,861	1,694	728	346
Single-name instruments	18,920	13,211	6,681	1,012	432	219
Multi-name instruments	12,136	11,258	5,180	681	296	127
Index products	7,500	10,163	4,836	...	...	...
Options	85	348	110	...	...	...
<b>F. Other derivatives</b>	<b>72</b>	<b>78</b>	<b>89</b>	<b>12</b>	<b>29</b>	<b>6</b>
Forwards and swaps	38	63	75	...	...	...
Options	34	15	14	...	...	...
<b>GROSS CREDIT EXPOSURE<sup>4</sup></b>	<b>...</b>	<b>...</b>	<b>...</b>	<b>3,581</b>	<b>3,784</b>	<b>3,692</b>
<i>Memo: Exchange-traded contracts<sup>5</sup></i>	69,898	62,503	67,700	...	...	...

<sup>1</sup> All figures are adjusted for double-counting of trades between dealers. 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. <sup>2</sup> Single currency contracts only. <sup>3</sup> Adjustments for double-counting partly estimated. <sup>4</sup> Gross market values after taking into account legally enforceable bilateral netting agreements. <sup>5</sup> Open interest of foreign exchange and interest rate futures and options traded worldwide. Sources: Euromoney TRADEDATA, Futures Industry Association; The Options Clearing Corporation; BIS derivatives statistics.

## B Charts: semiannual OTC derivatives statistics

### Global OTC derivatives markets

Graph B1



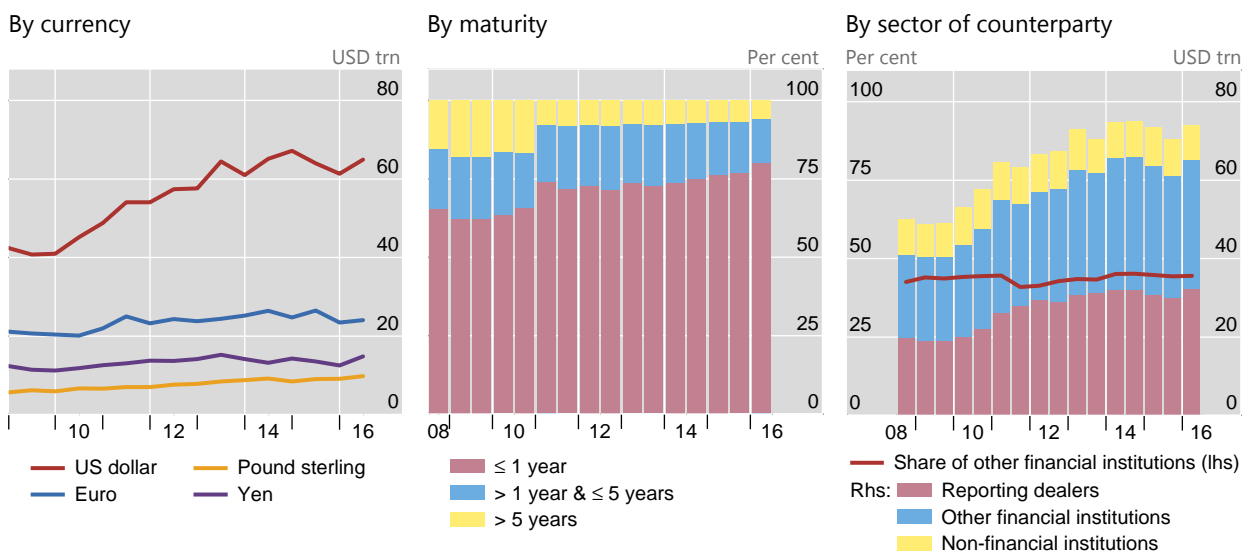
Further information on the BIS derivatives statistics is available at [www.bis.org/statistics/derstats.htm](http://www.bis.org/statistics/derstats.htm).

<sup>1</sup> At half-year end (end-June and end-December). Amounts denominated in currencies other than the US dollar are converted to US dollars at the exchange rate prevailing on the reference date.

### OTC foreign exchange derivatives

#### Notional principal<sup>1</sup>

Graph B2



Further information on the BIS derivatives statistics is available at [www.bis.org/statistics/derstats.htm](http://www.bis.org/statistics/derstats.htm).

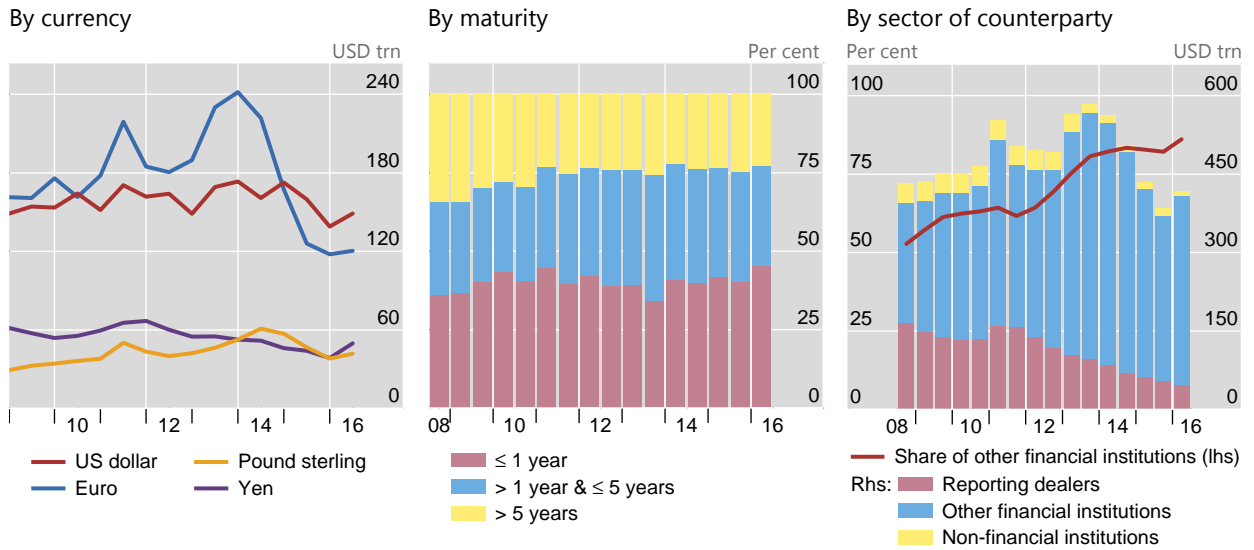
<sup>1</sup> At half-year end (end-June and end-December). Amounts denominated in currencies other than the US dollar are converted to US dollars at the exchange rate prevailing on the reference date.



## OTC interest rate derivatives

Notional principal<sup>1</sup>

Graph B3



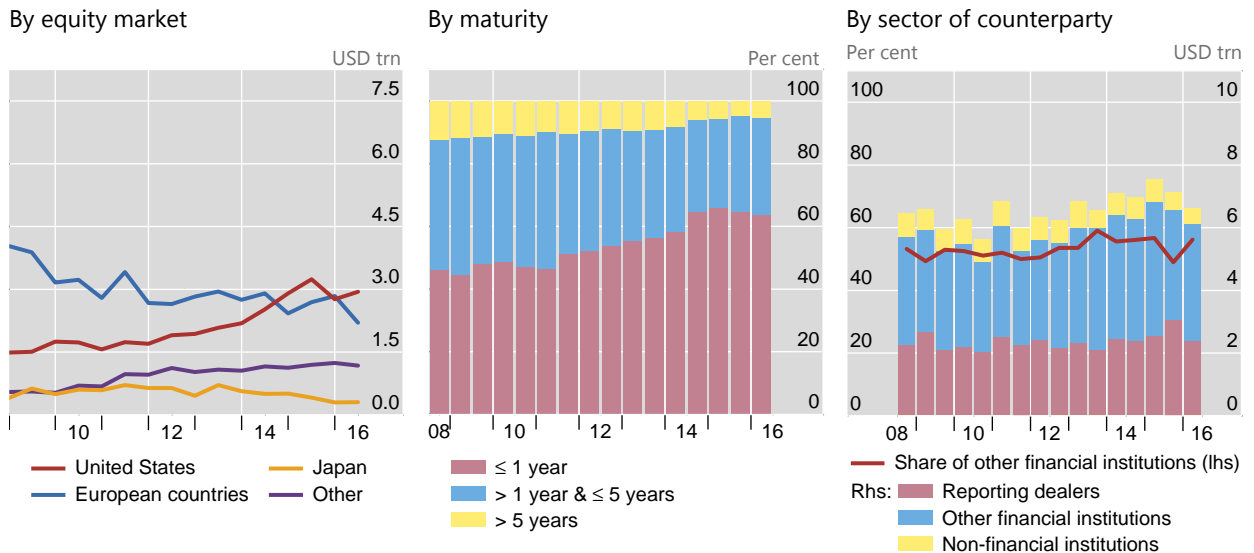
Further information on the BIS derivatives statistics is available at [www.bis.org/statistics/derstats.htm](http://www.bis.org/statistics/derstats.htm).

<sup>1</sup> At half-year end (end-June and end-December). Amounts denominated in currencies other than the US dollar are converted to US dollars at the exchange rate prevailing on the reference date.

## OTC equity-linked derivatives

Notional principal<sup>1</sup>

Graph B4



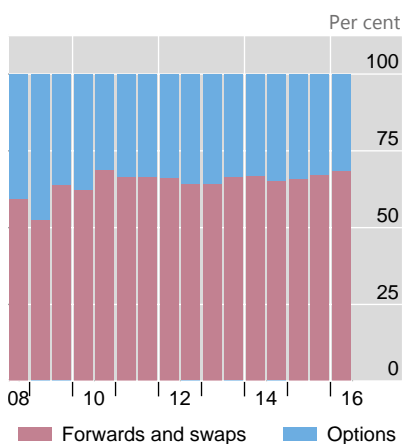
Further information on the BIS derivatives statistics is available at [www.bis.org/statistics/derstats.htm](http://www.bis.org/statistics/derstats.htm).

<sup>1</sup> At half-year end (end-June and end-December). Amounts denominated in currencies other than the US dollar are converted to US dollars at the exchange rate prevailing on the reference date.

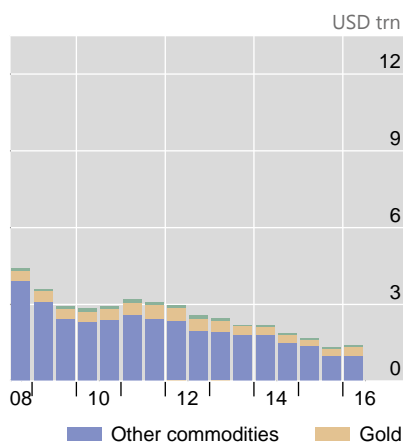
OTC commodity derivatives

Graph B5

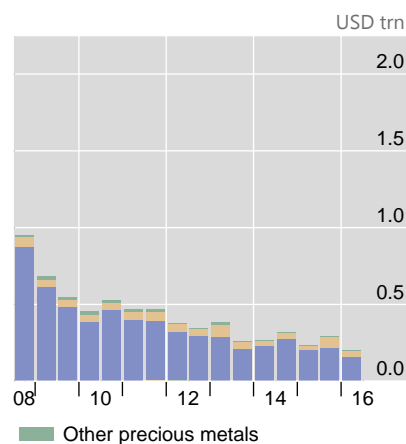
Notional principal, by instrument<sup>1</sup>



Notional principal, by commodity<sup>1</sup>



Gross market value, by commodity<sup>1</sup>



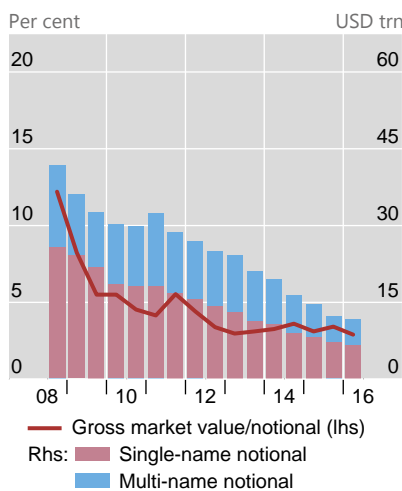
Further information on the BIS derivatives statistics is available at [www.bis.org/statistics/derstats.htm](http://www.bis.org/statistics/derstats.htm).

<sup>1</sup> At half-year end (end-June and end-December). Amounts denominated in currencies other than the US dollar are converted to US dollars at the exchange rate prevailing on the reference date.

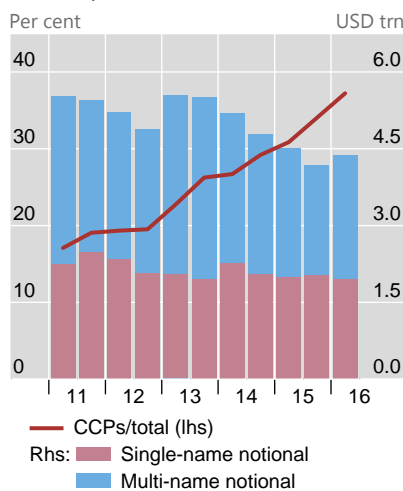
Credit default swaps<sup>1</sup>

Graph B6

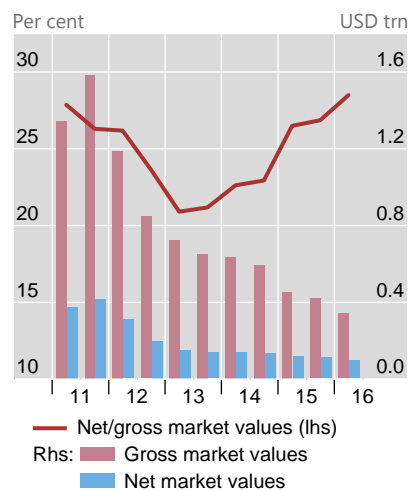
Notional principal



Notional principal with central counterparties (CCPs)



Impact of netting



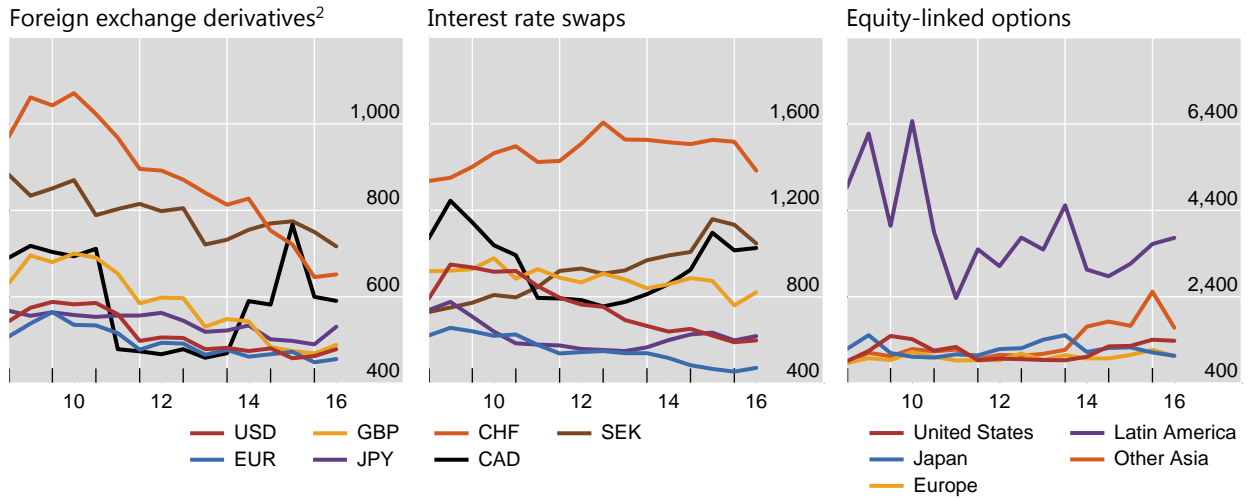
Further information on the BIS derivatives statistics is available at [www.bis.org/statistics/derstats.htm](http://www.bis.org/statistics/derstats.htm).

<sup>1</sup> At half-year end (end-June and end-December). Amounts denominated in currencies other than the US dollar are converted to US dollars at the exchange rate prevailing on the reference date.

# Concentration in global OTC derivatives markets

Herfindahl index<sup>1</sup>

Graph B7



Further information on the BIS derivatives statistics is available at [www.bis.org/statistics/derstats.htm](http://www.bis.org/statistics/derstats.htm).

CAD = Canadian dollar; CHF = Swiss franc; EUR = euro; GBP = pound sterling; JPY = Japanese yen; SEK = Swedish krona; USD = US dollar. JP = Japan; US = United States.

<sup>1</sup> The index ranges from 0 to 10,000, where a lower number indicates that there are many dealers with similar market shares (as measured by notional principal) and a higher number indicates that the market is dominated by a few reporting dealers. <sup>2</sup> Foreign exchange forwards, foreign exchange swaps and currency swaps.

## C Explanatory notes

### Reporting countries

The OTC derivatives statistics are reported to the BIS at an aggregate (country) level rather than individual institution level. A central bank or another national authority collects data from banks and other major derivatives dealers in its jurisdiction, compiles national aggregates and then sends them to the BIS to calculate global aggregates.

Authorities in the following 13 countries participate in the semiannual survey of outstanding positions in OTC derivatives markets:

Country	Reporting authority	Country	Reporting authority
<b>Australia</b>	Reserve Bank of Australia	<b>Netherlands</b>	Netherlands Bank
<b>Belgium</b>	National Bank of Belgium	<b>Spain</b>	Bank of Spain
<b>Canada</b>	Bank of Canada	<b>Sweden</b>	Sveriges Riksbank
<b>France</b>	Bank of France		Statistics Sweden
<b>Germany</b>	Deutsche Bundesbank	<b>Switzerland</b>	Swiss National Bank
<b>Italy</b>	Bank of Italy	<b>United Kingdom</b>	Bank of England
<b>Japan</b>	Bank of Japan	<b>United States</b>	Board of Governors of the Federal Reserve System

Authorities from an additional 33 countries participated in the outstanding positions part of the latest Triennial Central Bank Survey of FX and OTC derivatives markets.

Country	Reporting authority	Country	Reporting authority
<b>Argentina</b>	Central Bank of Argentina	<b>Israel</b>	Bank of Israel
<b>Austria</b>	Central Bank of the Republic of Austria	<b>Korea</b>	Bank of Korea
<b>Bahrain</b>	Bahrain Monetary Agency	<b>Latvia</b>	Bank of Latvia
<b>Brazil</b>	Central Bank of Brazil	<b>Malaysia</b>	Central Bank of Malaysia
<b>Chile</b>	Central Bank of Chile	<b>Mexico</b>	Bank of Mexico
<b>China</b>	People's Bank of China	<b>Norway</b>	Central Bank of Norway
	State Administration of Foreign Exchange	<b>Peru</b>	Central Reserve Bank of Peru
<b>Chinese Taipei</b>	Central Bank of China	<b>Philippines</b>	Bangko Sentral ng Pilipinas
<b>Colombia</b>	Bank of the Republic	<b>Poland</b>	Narodowy Bank Polski
<b>Denmark</b>	Danmarks Nationalbank	<b>Portugal</b>	Bank of Portugal
<b>Finland</b>	Bank of Finland	<b>Romania</b>	National Bank of Romania
<b>Greece</b>	Bank of Greece	<b>Russia</b>	Central Bank of the Russian Federation
<b>Hong Kong SAR</b>	Hong Kong Monetary Authority	<b>Saudi Arabia</b>	Saudi Arabian Monetary Agency
<b>Hungary</b>	Magyar Nemzeti Bank	<b>Singapore</b>	Monetary Authority of Singapore
<b>India</b>	Reserve Bank of India	<b>South Africa</b>	South African Reserve Bank
<b>Indonesia</b>	Bank Indonesia	<b>Thailand</b>	Bank of Thailand
<b>Ireland</b>	Central Bank of Ireland	<b>Turkey</b>	Central Bank of the Republic of Turkey

Bulgaria participated in the outstanding positions part of the Triennial Survey from 2007 to 2013. Australia and Spain participated only in the Triennial Survey through 2010 and from end-2011

participated in the semiannual survey too. An additional six countries participated in the turnover part of the latest Triennial Central Bank Survey.

The market share of dealers that participate in the semiannual survey varies across risk categories. It is highest in the credit, equity and interest rate segments (99%, 98% and 96%, respectively, at end-June 2016) and lowest in the commodity and foreign exchange segments (79% and 86%). Overall, the results of the Triennial Survey indicate that the semiannual survey captured about 94% of global OTC derivatives positions at end-June 2016. The next Triennial Survey of outstanding positions will be conducted in June 2019.

### *Reporting basis*

The OTC derivatives statistics are reported on a consolidated basis. Data from branches and (majority-owned) subsidiaries worldwide of a given institution are aggregated and reported by the parent institution to the authority in the country where the parent institution is headquartered. Intragroup positions, between affiliates of the same institution, are excluded.

Data are reported to the BIS in US dollars, with positions in other currencies being converted into US dollars at the exchange rate prevailing at the end of the reference period. Comparisons of amounts outstanding between periods are affected by movements in exchange rates.

### *Revisions and breaks*

Data are subject to revision and are impacted by breaks – or changes in compilation – over time. Breaks may arise from: changes in the population of reporting institutions, including the addition of new reporting countries; changes in reporting practices; or methodological improvements.

The statistics at end-June 2016 are not impacted by any significant revisions or breaks. New data on central counterparties are available from end-June 2016. They are reported as an “of which” item within the counterparty sector comprising all financial institutions except reporting dealers; therefore, the latest data for other financial institutions are comparable with historical data.

## D Glossary of terms

<a href="#">A</a>	<a href="#">B</a>	<a href="#">C</a>	<a href="#">D</a>	<a href="#">E</a>	<a href="#">F</a>	<a href="#">G</a>	<a href="#">H</a>	<a href="#">I</a>	<a href="#">J</a>	<a href="#">K</a>	<a href="#">L</a>	<a href="#">M</a>	<a href="#">N</a>	<a href="#">O</a>	<a href="#">P</a>	<a href="#">Q</a>	<a href="#">R</a>	<a href="#">S</a>	<a href="#">T</a>	<a href="#">U</a>	<a href="#">V</a>	<a href="#">W</a>	<a href="#">X</a>	<a href="#">Y</a>	<a href="#">Z</a>
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### A [back to index](#)

<b>algo</b>	See "algorithmic trading".
<b>algorithmic trading</b>	Automated transactions where a computer algorithm decides the order of submission and execution with little or no human intervention.
<b>amount outstanding</b>	Value of an asset or liability at a point in time.

### B [back to index](#)

<b>banks and securities firms</b>	Commercial banks, investment banks, securities dealers and securities brokers. Sectoral classification used in the OTC derivatives statistics that refers collectively to banks and securities firms that are not reporting dealers. See also "reporting dealer".
<b>bilateral netting agreement</b>	See "master netting agreement".

### C [back to index](#)

<b>central counterparty (CCP)</b>	Entity that interposes itself between the two sides of a transaction, becoming (for cleared transactions) the buyer to every seller and the seller to every buyer.
<b>commodity forward</b>	Contract between two parties to buy or sell a commodity or commodity index at an agreed price on a future date.
<b>commodity option</b>	Contract that gives the holder the right (but not the obligation) to buy or sell a commodity or commodity index at an agreed price during a specified period.
<b>commodity swap</b>	Agreement between two parties to exchange sequences of payments during a specified period, where at least one sequence of payments is tied to a commodity price or commodity index.
<b>counterparty</b>	Entity that takes the opposite side of a financial contract or transaction – for example, the borrower in a loan contract, or the buyer in a sales transaction.
<b>counterparty country</b>	Country where the counterparty resides.
<b>credit default swap (CDS)</b>	Agreement whereby the seller commits to repay an obligation (eg bond) underlying the contract at par in the event of a default. To produce this guarantee, a regular premium is paid by the buyer during a specified period.
<b>credit derivative</b>	Derivative whose redemption value is linked to specified credit-related events, such as bankruptcy, credit downgrade, non-payment or default of a borrower. For example, a lender might use a credit derivative to hedge the risk that a borrower might default. Common credit derivatives include credit default swaps (CDS), total return swaps and credit spread options.
<b>currency option</b>	Contract that gives the holder the right (but not the obligation) to buy or sell a currency at an agreed exchange rate during a specified period.
<b>currency swap</b>	Agreement between two parties to exchange sequences of payments during a specified period, where each sequence is tied to a different currency. At the end of the swap, principal amounts in the different currencies are usually exchanged.

### D [back to index](#)

<b>derivative</b>	Instrument whose value depends on some underlying financial asset, commodity or predefined variable.
<b>derivative claim</b>	Derivative contract with a positive market value.

### E [back to index](#)

<b>entity</b>	Corporation, organisation or person that exists as a separately identifiable unit. "Separately identifiable" may be demonstrated by legal existence or the existence of a complete set of financial accounts, or by the ability to compile a meaningful and complete set of accounts if they were to be required.
<b>equity forward</b>	Contract to exchange an equity or equity basket at a set price at a future date.
<b>equity option</b>	Contract that gives the holder the right (but not the obligation) to buy or sell an equity security or basket of equities at an agreed price during a specified period.
<b>equity swap</b>	Agreement between two parties to exchange sequences of payments during a specified period, where at least one sequence is tied to an equity price or an equity index.

## F [back to index](#)

<b>financial corporation</b>	Entity that is principally engaged in providing financial services, such as financial intermediation, financial risk management or liquidity transformation. Financial corporations include the following entities: central banks, banks and non-bank financial corporations.
<b>financial institution</b>	See "financial corporation".
<b>fixed interest rate</b>	Interest rate that is fixed for the life of the debt instrument or for a certain number of years. At the date of inception, the timing and value of coupon payments and principal repayments are known.
<b>foreign exchange swap</b>	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).
<b>forward contract</b>	Contract between two parties for the delayed delivery of financial instruments or commodities in which the buyer agrees to purchase and the seller agrees to deliver, on an agreed future date, a specified instrument or commodity at an agreed price or yield. Forward contracts are generally not traded on organised exchanges, and their contractual terms are not standardised.
<b>forward rate agreement (FRA)</b>	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.

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<b>gross credit exposure</b>	Gross market value minus amounts netted with the same counterparty across all risk categories under legally enforceable bilateral netting agreements. Gross credit exposure provides a measure of exposure to counterparty credit risk (before collateral).
<b>gross market value</b>	Sum of the absolute values of all outstanding derivatives 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. Gross market values supply information about the potential scale of market risk in derivatives transactions and of the associated financial risk transfer taking place. Furthermore, gross market value at current market prices provides a measure of economic significance that is readily comparable across markets and products.

## H

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<b>hedge fund</b>	Unregulated investment fund and various types of money managers, including commodity trading advisers (CTAs), which share (a combination of) the following characteristics: they often follow a relatively broad range of investment strategies that are not subject to borrowing and leverage restrictions, with many of them using high levels of leverage; they often have a different regulatory mandate than “institutional investors” and typically cater to sophisticated investors such as high net worth individuals or institutions; and they often hold long and short positions in various markets, asset classes and instruments, with frequent use of derivatives for speculative purposes.
<b>Herfindahl index</b>	Measure of market concentration, defined as the sum of the squared market shares of each individual entity. The index ranges from 0 to 10,000. If only one entity dominates the market, the measure will have the (maximum) value of 10,000.
<b>high-frequency trading (HFT)</b>	An algorithmic trading strategy that profits from incremental price movements, with frequent, small trades executed in milliseconds for very short investment horizons. HFT is a subset of algorithmic trading. See also “ <a href="#">algorithmic trading</a> ”. (BIS lexicon)

## I

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<b>index product</b>	Multi-name CDS contract with constituent reference credits and a fixed coupon that is determined by an administrator such as Markit (which administers the CDX and iTraxx indices). Index products include tranches of CDS indices.
<b>institutional investor</b>	“Real money” investor such as a mutual fund, pension fund, insurance and reinsurance company, and endowment.
<b>interest rate option</b>	Contract that gives the holder the right (but not the obligation) to pay or receive an agreed interest rate on a predetermined principal during a specified period.
<b>interest rate swap</b>	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.
<b>inter-office</b>	See “ <a href="#">intragroup</a> ”.
<b>intragroup</b>	Business between affiliates of the same corporate group. See also “ <a href="#">own office</a> ”.

## L

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<b>long-term</b>	Having a maturity greater than one year.
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## M

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<b>master netting agreement</b>	An agreement that permits netting of amounts owed under transactions governed by different agreements, often including one or more ISDA Master Agreements. Master netting agreements take different forms and may permit netting of payments to be made under a variety of master or other trading agreements between the same parties and often between their affiliates that may have master or other trading agreements in place between one another.
<b>multi-name CDS</b>	CDS contract that references more than one name – for example, portfolio or basket CDS, or CDS index.

## N

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<b>net market value</b>	Similar to gross credit exposure, with the difference that netting is restricted to one type of derivative product instead of across all products. In the OTC derivatives statistics, net market values are reported for CDS only.
<b>netting agreement</b>	See “ <a href="#">master netting agreement</a> ”.
<b>non-financial customer</b>	See “ <a href="#">non-financial sector</a> ”.
<b>non-financial sector</b>	Sectoral classification that refers collectively to non-financial corporations, general



	government and households.
<b>notional amount outstanding</b>	Gross nominal or notional value of all derivatives contracts concluded and not yet settled on the reporting date.
<b>novation</b>	Process in which a bilateral derivatives contract between two market participants is replaced by two bilateral contracts between each of the market participants and a CCP.
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<b>official financial institutions</b>	Sectoral classification that refers collectively to central banks, sovereign wealth funds, international organisations, development banks and other public financial agencies.
<b>original maturity</b>	Period from issue until the final contractually scheduled payment.
<b>outright forward</b>	See " <a href="#">forward contract</a> ".
<b>own office</b>	Entity owned or otherwise controlled by a banking group, including head office, branch office or subsidiary.
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<b>position</b>	Asset or liability.
<b>proprietary trading</b>	When a financial institution trades for direct gain instead of commission. Essentially, the institution has decided to profit from the market rather than from commissions from processing trades.
<b>proprietary trading firm (PTF)</b>	Entity that engages mainly in proprietary trading. PTFs include high-frequency trading firms.
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<b>remaining maturity</b>	Period from the reference date until the final contractually scheduled payment.
<b>reporting country</b>	See " <a href="#">BIS reporting country</a> ".
<b>reporting dealer</b>	Financial institution that participates in the compilation of the OTC derivatives statistics or the Triennial Central Bank Survey. See also " <a href="#">BIS reporting institution</a> ".
<b>retail-driven transactions</b>	Transactions with financial institutions that cater to retail investors – for example, electronic retail trading platforms and retail margin brokerage firms. Retail-driven transactions also include reporting dealers' direct transactions with "non-wholesale" investors (ie private individuals) executed online or by other means (eg phone).
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<b>single-name CDS</b>	Credit derivative where the reference entity is a single name.
<b>special purpose entity (SPE)</b>	Entity established for the sole purpose of carrying out a single transaction, such as in the context of asset securitisation through the issuance of asset-backed and mortgage-backed securities. Also referred to as a special purpose corporation (SPC) or special purpose vehicle (SPV).
<b>spot transaction</b>	Outright transaction involving the exchange of two currencies at a rate agreed on the date of the contract for value or delivery (cash settlement) in two business days or less.
<b>stock</b>	See " <a href="#">amount outstanding</a> ".
<b>swap</b>	Financial derivative in which two parties agree to exchange payment streams based on a specified notional amount for a specified period.