



OTC derivatives statistics at end-June 2022

- The notional value of outstanding over-the-counter (OTC) derivatives rose to [\\$632 trillion](#) at end-June 2022, up from \$598 trillion at end-2021. This marks a continuation of the moderate upward trend evident since end-2016.
- The gross market value of outstanding OTC derivatives, summing positive and negative values, rose noticeably in the first half of 2022, to [\\$18.3 trillion](#), led by increases in interest rate derivatives. The value of some commodity derivatives surged against the background of rising food and energy prices.
- The end-June 2022 derivatives data benefit from data reported by a broader set of reporting dealers, as part of the BIS Triennial Central Bank Survey.¹ Dealers that report only every three years accounted for 9% of the notional value of outstanding derivatives at end-June 2022, unchanged from the 2019 Survey.

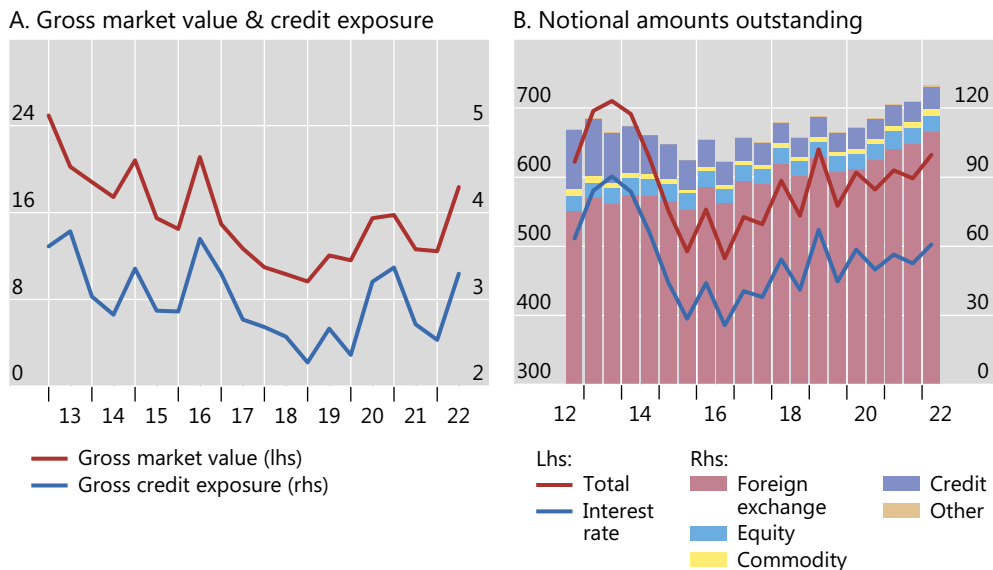
Surge in market values of interest rate and commodities derivatives

Elevated uncertainty related to higher than expected inflation readings in many economies and the outbreak of war in Ukraine drove developments in derivatives markets in the first half of 2022. The gross market value of outstanding derivatives –

Outstanding OTC derivatives

In trillions of US dollars

Graph 1



Source: BIS OTC derivatives statistics (Tables D5.1 and D5.2).

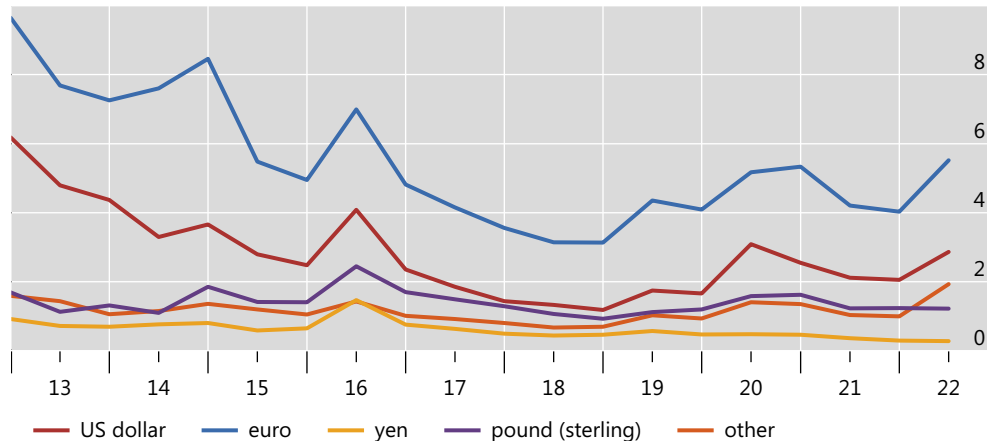
¹ The semiannual survey covers dealers headquartered in 12 countries. Every three years as part of the BIS Triennial Survey, dealers from an additional 30+ countries provide data, which are used to scale up the semiannual data to more accurately reflect the size of the global OTC derivatives market.

summing positive and negative values – surged from \$12.4 trillion at end-2021 to [\\$18.3 trillion](#) at end-June 2022, a 47% increase within six months (Graph 1.A). Similarly, gross credit exposure – which adjusts gross market values for legally enforceable bilateral netting agreements (not for collateral as such) – also saw a large increase, from \$2.5 trillion at end-2021 to [\\$3.3 trillion](#) at end-June 2022. This was the largest rise since the first half of 2020, when the Covid-19 pandemic went global.

Outstanding interest rate derivatives, gross market values

In trillions of US dollars

Graph 2



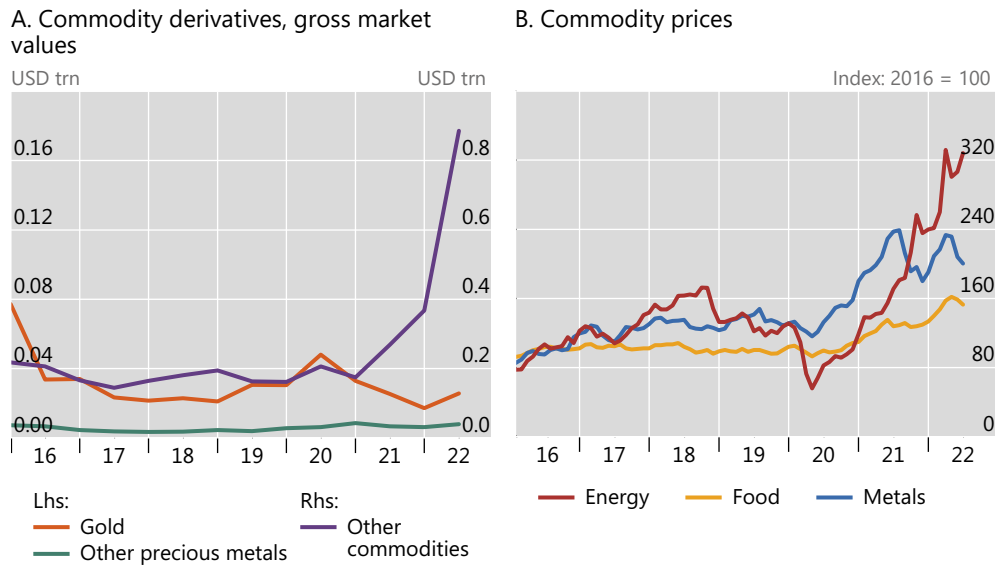
Source: BIS OTC derivatives statistics (Tables [D5.1](#) and [D5.2](#)).

With higher than expected inflation in early 2022, market participants adjusted their expectations of the path of monetary policy for major currencies upward. These unanticipated changes raised market interest rates on the reporting date above the rates prevailing at contract inception, thus boosting the reported gross market value of outstanding interest rate derivatives (IRDs).² Overall, this increased by 37% in the first half of 2022, led by euro- and US dollar-denominated contracts (Graph 2, red line). In particular, euro contracts rose by 37% to \$5.5 trillion at end-June 2022 (Graph 2, blue line), and dollar contracts jumped by 40% to \$2.9 trillion (red line).

Against a backdrop of rising prices for commodities (Graph 3.B), the gross market value of outstanding commodity derivatives surged to [\\$920 billion](#). This was driven by derivatives on commodities other than precious metals, whose gross market value went up by [141%](#) in the first half of 2022, following a 54% increase in the first and 37% in the second half of 2021 (Graph 3.A, purple line; see also Annex Graph A.5).

These sharp rises in gross market values stand in contrast to the more moderate increase in the notional value of outstanding derivatives, which rose in line with the upward trend observed since the mid-2010s. It increased to [\\$632 trillion](#) at end-June 2022, 6% above its end-December 2021 value (Graph 1.B). This was driven by interest rate derivatives, mainly attributable to a seasonal pattern, and commodities derivatives (Annex Graph A5). The notional amounts of other contracts remained relatively flat over the same period.

² The BIS international banking statistics (IBS) also show a significant increase in the market value of banks' derivatives positions in the first half of 2022. See the [October 2022 IBS statistical release](#).



Sources: IMF Primary Commodity Prices; BIS OTC derivatives statistics (Table D5.2)

Libor reform and outstanding interest rate derivatives

The reform of benchmark interest rates is reshaping the IRD landscape, resulting in sharp reductions in some types of derivatives. From January 2022, Libor reference rates for some currencies³ have been replaced by overnight risk-free rates (RFRs), which are backward-looking rates that are no longer compatible with the structure of forward rate agreements (FRAs). In anticipation of these changes, outstanding notional amounts of FRAs denominated in the affected currencies had already declined substantially last year. Those denominated in Swiss francs and sterling contracted by 77% each from mid-2021 to end-2021, and those in US dollars by 60% (Graph 4.A). By contrast, euro-denominated FRAs, which typically reference Euribor (which is not being phased out), have not trended downwards.⁴

The first half of 2022 saw further declines in outstanding FRAs for some currencies and a continued shift to other types of contracts. Outstanding Swiss franc and sterling FRAs fell by 90% each. By contrast, dollar-denominated FRAs seemed to stabilise. At the same time, the notional amount of dollar-denominated interest rate swaps (IRS) continued its rise in the first half of 2022, by 25% (Graph 4.B), possibly reflecting greater use of single period IRS as a replacement for FRAs.⁵

³ Publication of sterling, euro, Swiss franc and Japanese yen Libor panels and the one-week and two-month US dollar Libor settings ceased at end-2021. No new contracts should reference dollar Libor except for certain key US dollar rates (that will cease by end-June 2023) that support the rundown of legacy contracts. See [FSB Statement to Support Preparations for LIBOR Cessation](#).

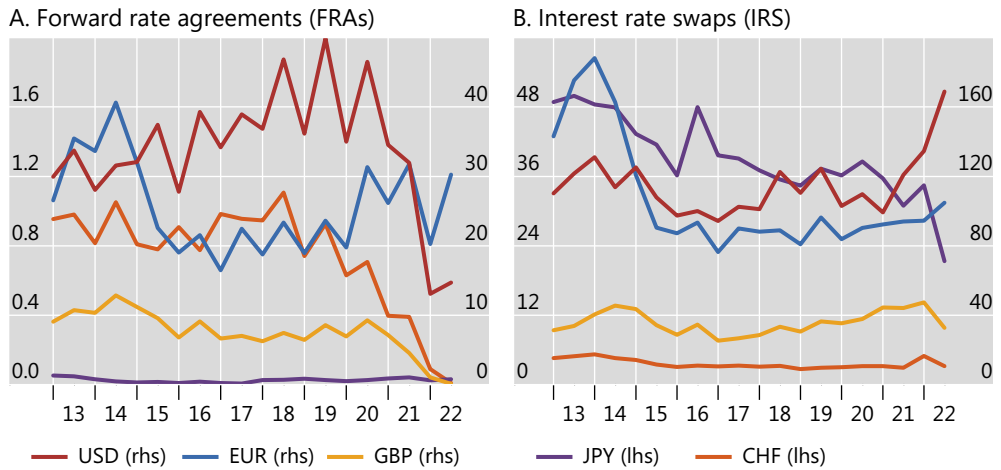
⁴ Euribor, or the euro interbank offered rate, is a reference rate constructed from the average interest rate at which euro area banks offer unsecured short-term lending on the interbank market. It is different from euro Libor, the unsecured short-term euro lending rate in the London interbank market. Although euro Libor has been discontinued, there is no plan to discontinue Euribor.

⁵ FRAs reference forward-looking term rates and pay out at the start of an interest period, to mitigate credit risk. Single-period IRS reference backward-looking rates and pay out at the end of a period.

Interest rate derivatives, notional amounts outstanding

By instrument and currency, in trillions of US dollars

Graph 4



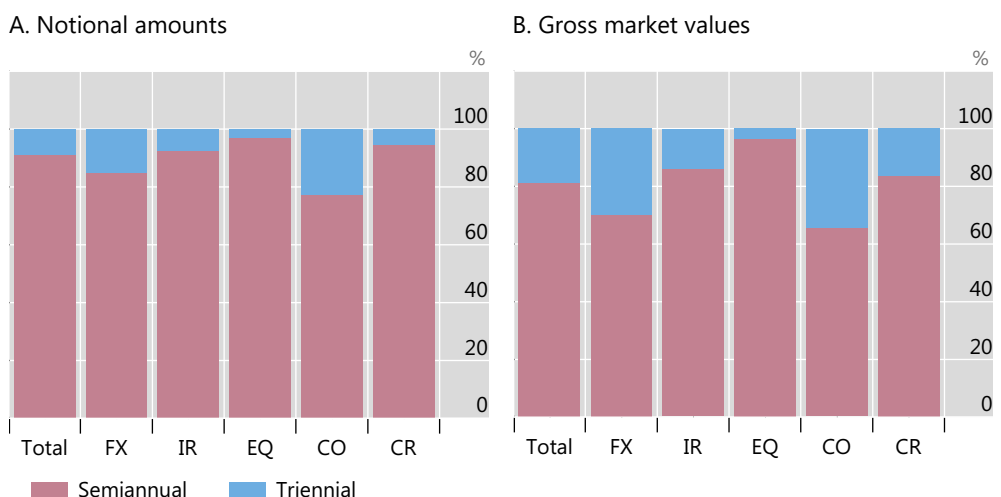
Source: BIS OTC derivatives statistics (Table D7).

Role of Triennial Survey reporters in outstanding derivatives

The derivatives statistics published by the BIS are based on semiannual data from 67 large dealers in 12 jurisdictions and, every three years, additional data from the BIS Triennial Survey, which covers dealers from over 30 additional jurisdictions. Data from the latest 2022 Triennial Survey have been used to scale up the semiannual data to more accurately reflect the global size and composition of OTC derivatives markets.

Semiannual reporters dominate

Graph 5



FX = foreign exchange derivatives; IR = interest rate derivatives; EQ = equity derivatives; CO = commodity derivatives; CR = credit derivatives.

Source: BIS OTC derivatives statistics.

At end-June 2022, dealers from the 12 jurisdictions that report semiannually accounted for more than 90% of global notional amounts outstanding, and 80% of

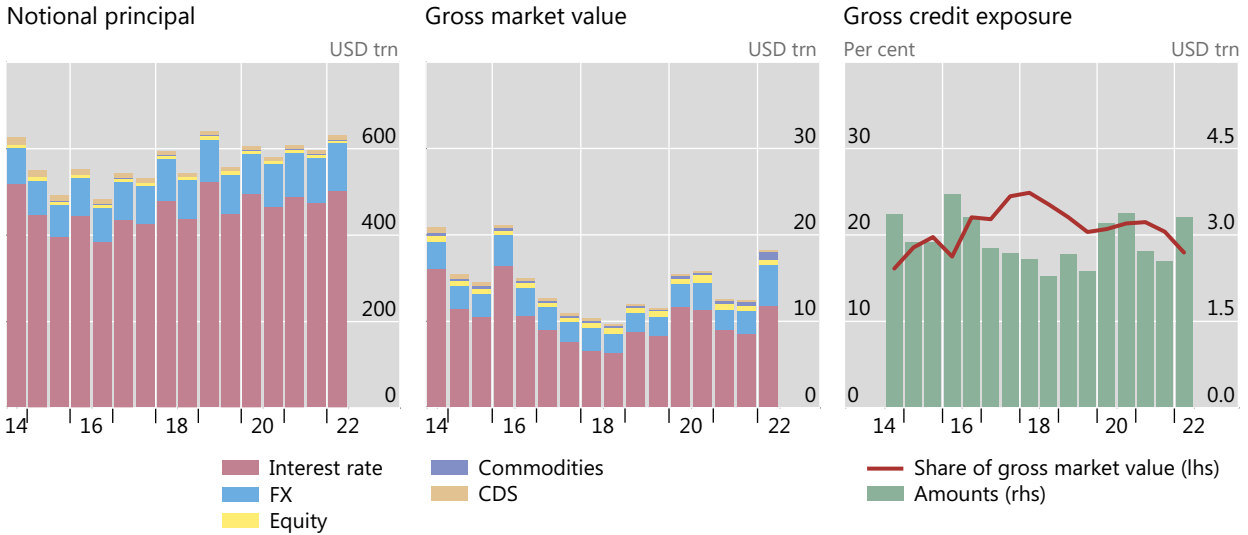
gross market value (Graph 5).⁶ That said, the contribution of the smaller dealers which report data only once every three years was significant in some segments. They accounted for 15% of the notional amount outstanding of foreign exchange derivatives (unchanged from 2019), and a full 23% of outstanding commodity derivatives (up from 18%).

⁶ Outstanding amounts are collected on a consolidated rather than residence basis. The dealer banks headquartered in the 12 semiannual reporting jurisdictions have relatively large market shares, and thus account for the bulk of outstanding positions.

Annex

Global OTC derivatives markets¹

Graph A.1



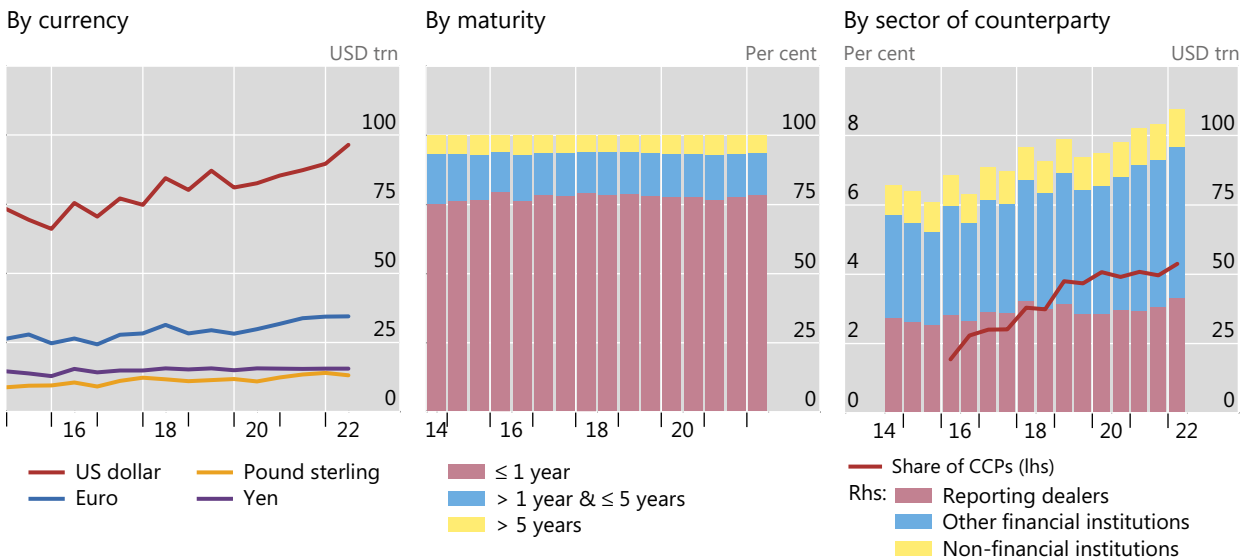
¹ At half-year end (end-June and end-December). Amounts denominated in currencies other than the US dollar are converted to US dollars at the exchange rate prevailing on the reference date.

Source: BIS OTC derivatives statistics (available at www.bis.org/statistics/derstats.htm).

OTC foreign exchange derivatives¹

Notional principal

Graph A.2



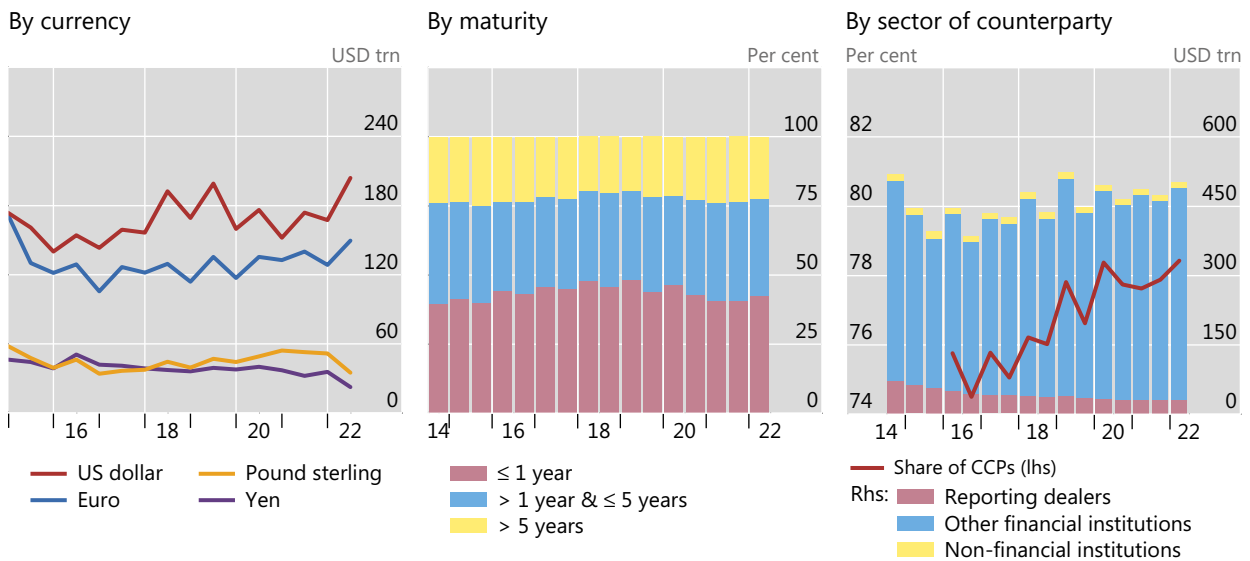
¹ At half-year end (end-June and end-December). Amounts denominated in currencies other than the US dollar are converted to US dollars at the exchange rate prevailing on the reference date.

Source: BIS OTC derivatives statistics (available at www.bis.org/statistics/derstats.htm).

OTC interest rate derivatives¹

Notional principal

Graph A.3



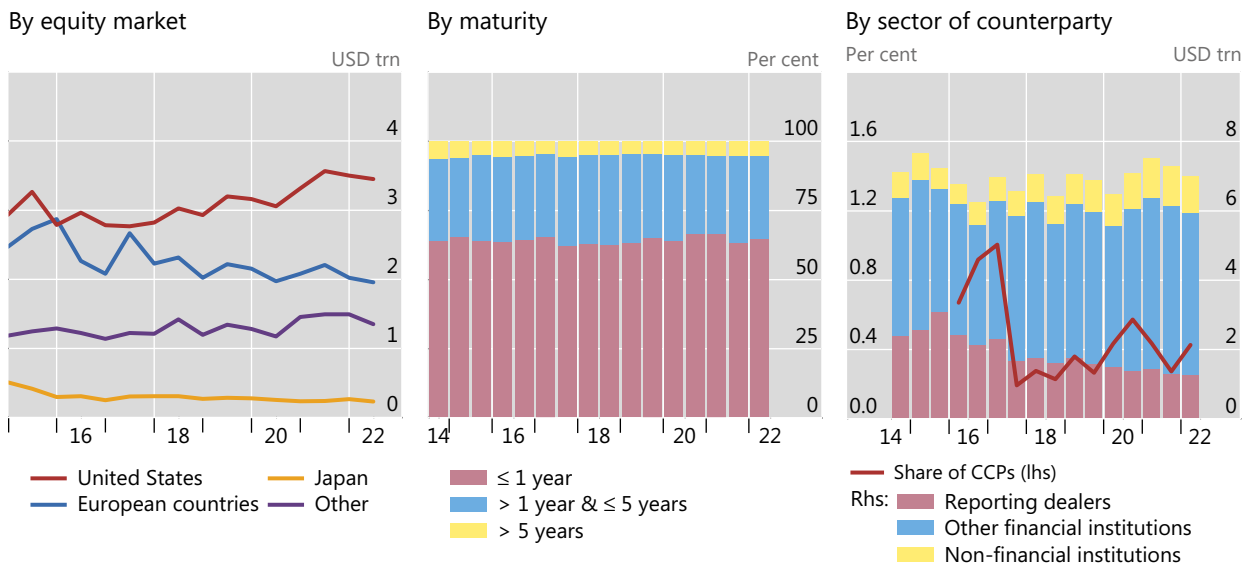
¹ At half-year end (end-June and end-December). Amounts denominated in currencies other than the US dollar are converted to US dollars at the exchange rate prevailing on the reference date.

Source: BIS OTC derivatives statistics (available at www.bis.org/statistics/derstats.htm).

OTC equity-linked derivatives¹

Notional principal

Graph A.4

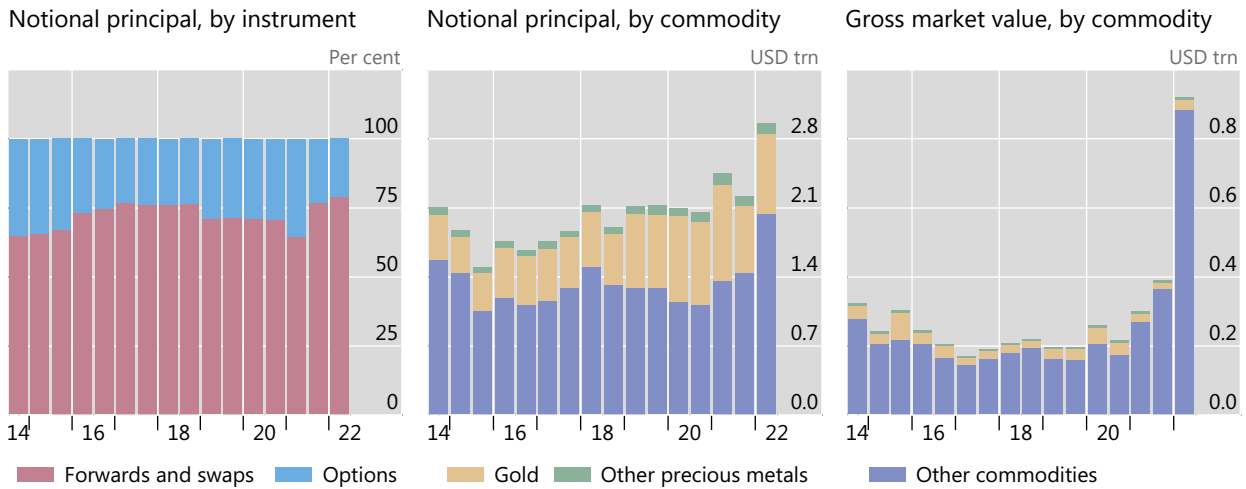


¹ At half-year end (end-June and end-December). Amounts denominated in currencies other than the US dollar are converted to US dollars at the exchange rate prevailing on the reference date.

Source: BIS OTC derivatives statistics (available at www.bis.org/statistics/derstats.htm).

OTC commodity derivatives¹

Graph A.5

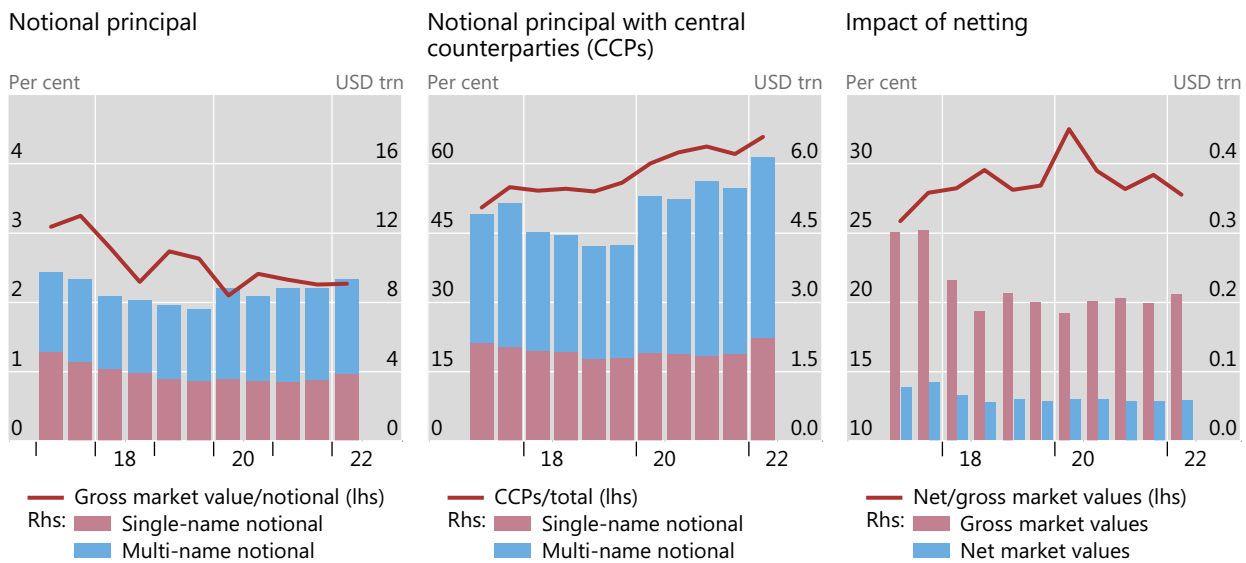


¹ At half-year end (end-June and end-December). Amounts denominated in currencies other than the US dollar are converted to US dollars at the exchange rate prevailing on the reference date.

Source: BIS OTC derivatives statistics (available at www.bis.org/statistics/derstats.htm).

Credit default swaps¹

Graph A.6



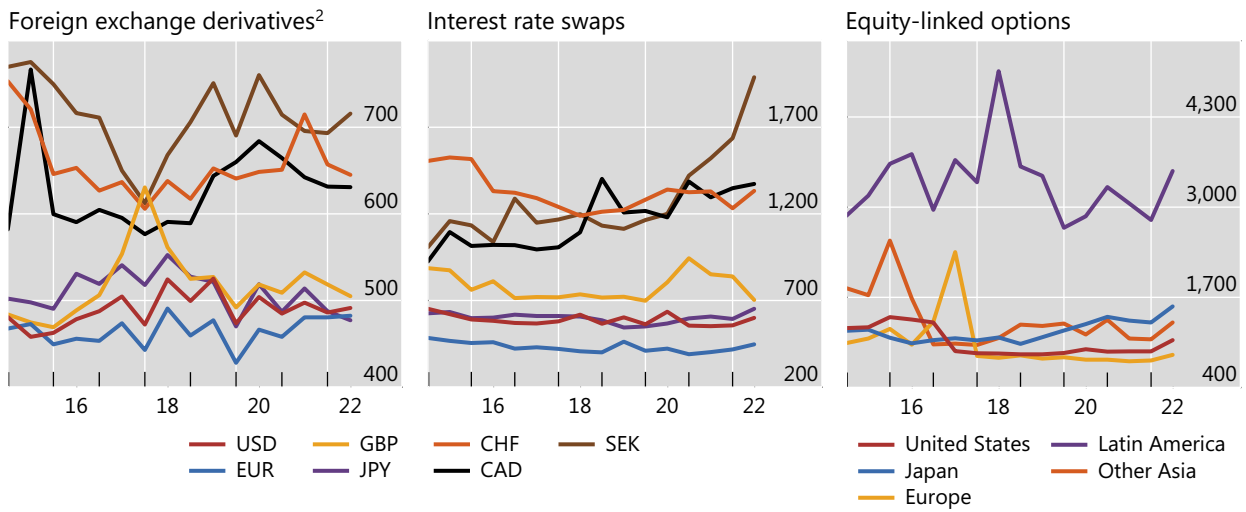
¹ At half-year end (end-June and end-December). Amounts denominated in currencies other than the US dollar are converted to US dollars at the exchange rate prevailing on the reference date.

Source: BIS OTC derivatives statistics (available at www.bis.org/statistics/derstats.htm).

Concentration in global OTC derivatives markets

Herfindahl index¹

Graph A.7



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

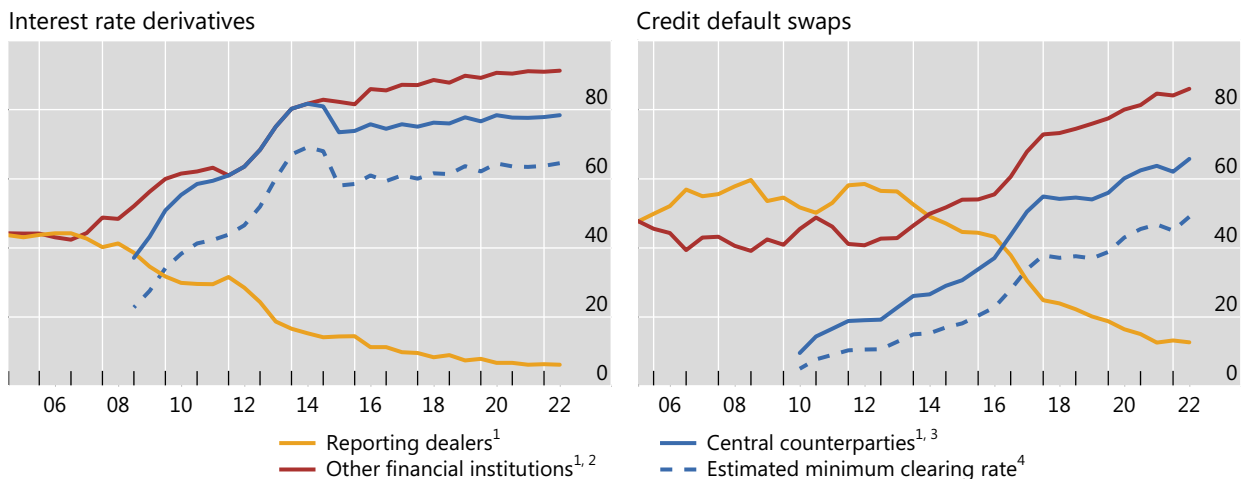
¹ The index ranges from 0 to 10,000, where a lower number indicates that there are many dealers with similar market shares (as measured by notional principal) and a higher number indicates that the market is dominated by a few reporting dealers. ² Foreign exchange forwards, foreign exchange swaps and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

Source: BIS OTC derivatives statistics (available at www.bis.org/statistics/derstats.htm).

Growth of central clearing

Notional amounts outstanding by counterparty, in per cent

Graph A.8



¹ As a percentage of notional amounts outstanding against all counterparties. ² Including central counterparties but excluding reporting dealers. ³ For interest rate derivatives, data for CCPs prior to end-June 2016 are estimated by indexing the amounts reported at end-June 2016 to the growth since 2008 of notional amounts outstanding cleared through LCH's SwapClear service. ⁴ Proportion of trades that are cleared, estimated as $(CCP / 2) / (1 - (CCP / 2))$, where CCP represents the share of notional amounts outstanding that dealers report against CCPs. The CCP share is halved to adjust for the potential double-counting of inter-dealer trades novated to CCPs.

Sources: LCH.Clearnet Group Ltd; BIS OTC derivatives statistics (Table D7 and Table D10.1); BIS calculations.