

# KEY TRENDS IN THE SIZE AND COMPOSITION OF OTC DERIVATIVES MARKETS IN THE FIRST HALF OF 2022

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The latest data from the Bank for International Settlements (BIS) over-the-counter (OTC) derivatives statistics shows a significant increase in gross market value and gross credit exposure of OTC derivatives during the first half of 2022 compared to the first half of 2021. The increase in market value was driven by elevated global uncertainty and market volatility related to higher-than-expected inflation and the war in Ukraine.

The gross market value of OTC derivatives contracts increased by 45.4% at mid-year 2022 compared to mid-year 2021. Gross credit exposure – gross market value after netting – rose by 21.5%. At the same time, global OTC derivatives notional outstanding increased modestly by 3.6% at mid-year 2022 compared to mid-year 2021.

Market participants reduced their mark-to-market exposure by 82.0% at mid-year 2022 due to close-out netting. This credit exposure was further reduced by the collateral that market participants posted for cleared and non-cleared derivatives transactions.

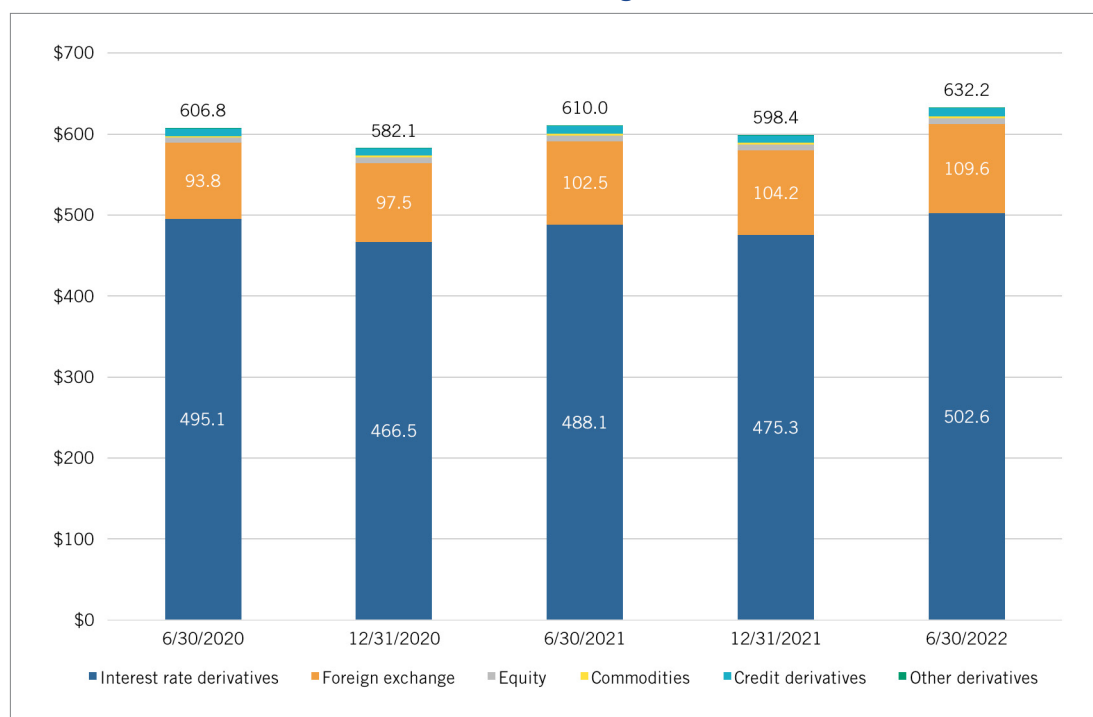
Firms posted \$359.7 billion of initial margin (IM) for cleared IRD and single-name and index credit default swaps (CDS) at all major central counterparties (CCPs) at mid-year 2022.

## KEY TRENDS

Global OTC derivatives notional outstanding was \$632.2 trillion at the end of June 2022, 3.6% higher compared to mid-year 2021 and 5.7% higher compared to year-end 2021<sup>1</sup> (see Chart 1). Some of this change reflects a seasonal pattern, where notional outstanding tends to increase in the first half of the year and decrease in the second half.

IRD notional outstanding increased by 3.0% to \$502.6 trillion at mid-year 2022 compared to \$488.1 trillion at mid-year 2021, while notional outstanding in foreign exchange (FX) derivatives grew by 6.9% to \$109.6 trillion over the same period. Credit, equity and commodity derivatives notional outstanding totaled \$9.5 trillion, \$7.0 trillion and \$3.0 trillion, respectively, at mid-year 2022.

**Chart 1: Global OTC Derivatives Notional Outstanding (US\$ trillions)**



Source: BIS OTC Derivatives Statistics

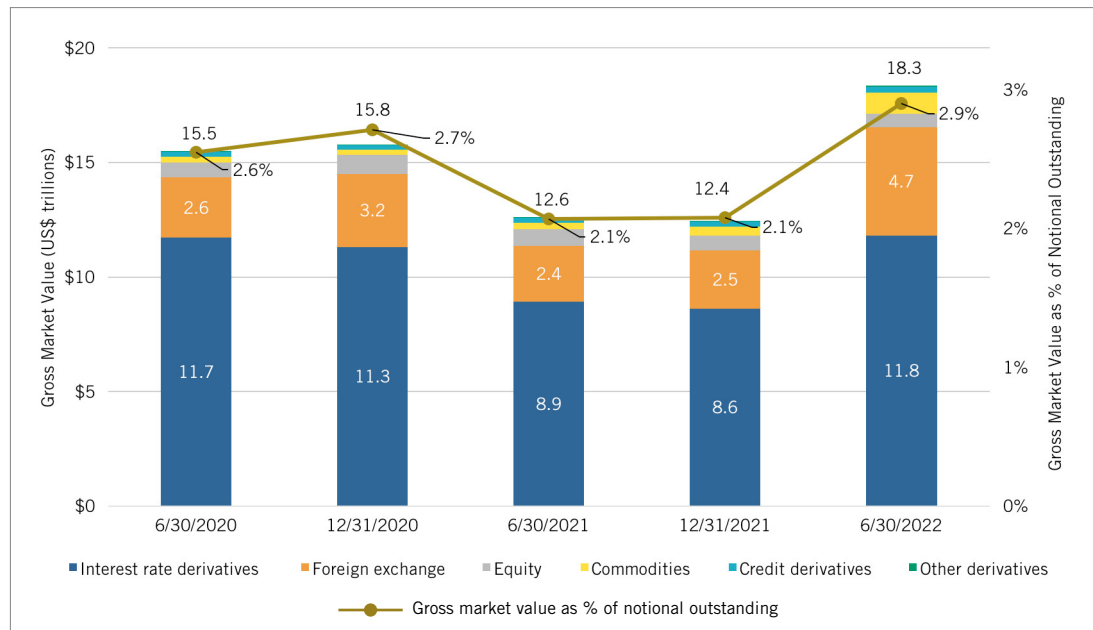
The gross market value of OTC derivatives rose by 45.4% to \$18.3 trillion at mid-year 2022 compared to mid-year 2021<sup>2</sup>. The increase in market value was driven by elevated global uncertainty and market volatility related to higher-than-expected inflation and the war in Ukraine. Gross market value equaled 2.9% of notional outstanding at mid-year 2022 compared to 2.1% at mid-year 2021 (see Chart 2).

The gross market value of IRD increased by 32.2% to \$11.8 trillion at mid-year 2022 compared to \$8.9 trillion at mid-year 2021, while the gross market value of FX derivatives nearly doubled, rising by 95.6% to \$4.7 trillion from \$2.4 trillion over the same period.

<sup>1</sup> BIS OTC Derivatives Statistics [www.bis.org/statistics/derstats.htm](http://www.bis.org/statistics/derstats.htm)

<sup>2</sup> Gross market value is the 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. See BIS Glossary [www.bis.org/statistics/glossary.htm?&selection=312&scope=Statistics&c=a&base=term](http://www.bis.org/statistics/glossary.htm?&selection=312&scope=Statistics&c=a&base=term)

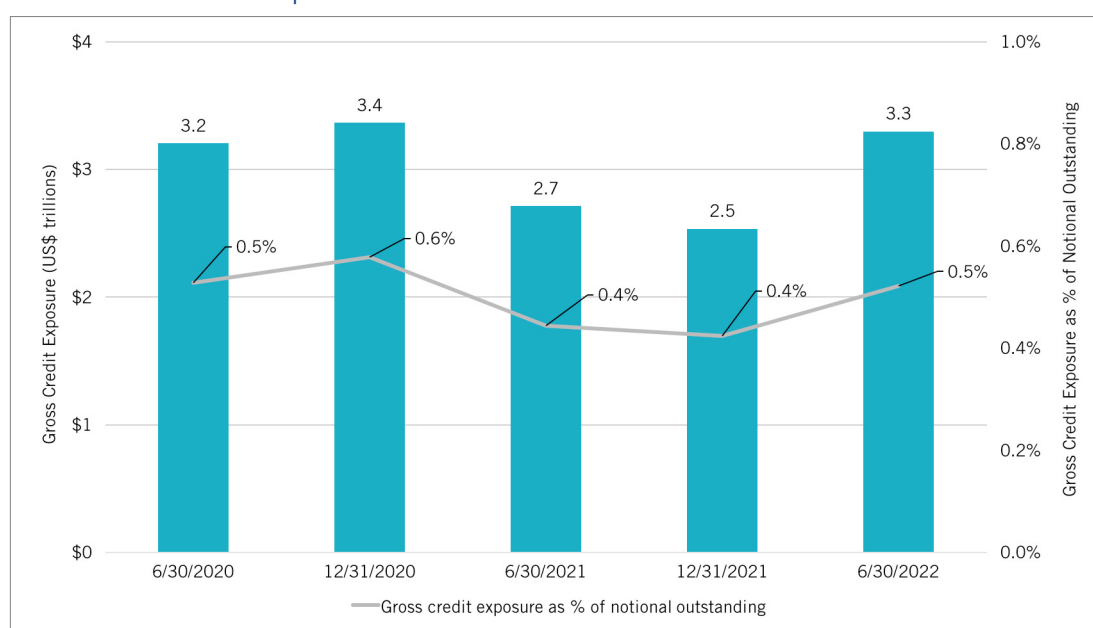
**Chart 2: Gross Market Value of Global OTC Derivatives**



Source: BIS OTC Derivatives Statistics

Gross credit exposure of OTC derivatives, which is a more accurate measure of counterparty credit risk, increased by 21.5% at mid-year 2022 compared to mid-year 2021 (see Chart 3). It totaled \$3.3 trillion and accounted for 0.5% of notional outstanding at mid-year 2022<sup>3</sup>.

**Chart 3: Gross Credit Exposure of Global OTC Derivatives**

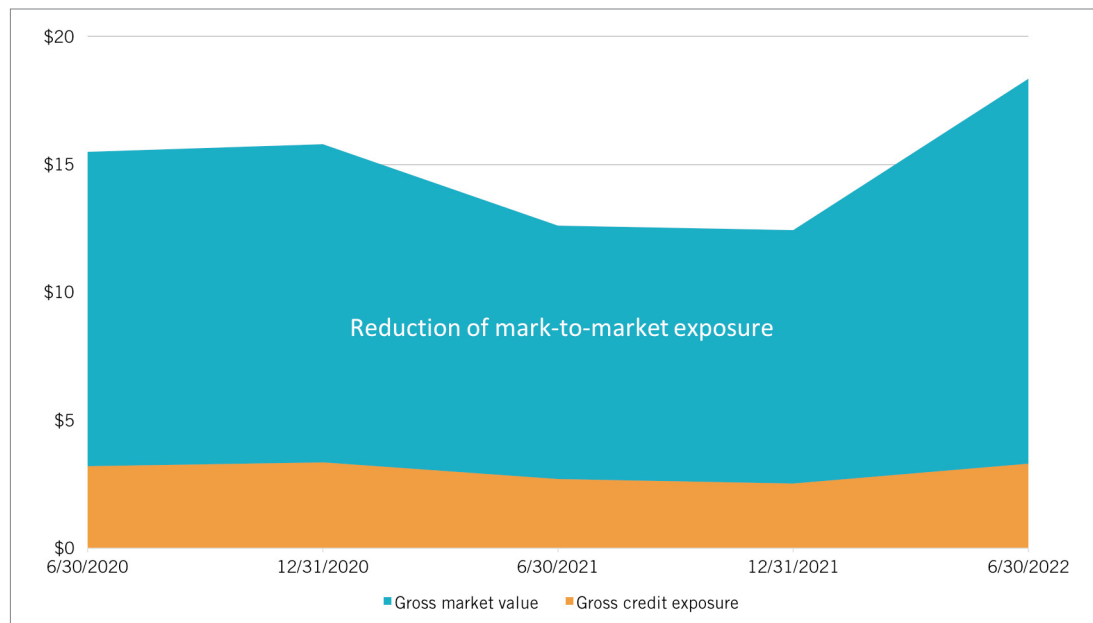


Source: BIS OTC Derivatives Statistics

Market participants reduced their mark-to-market exposure by 82.0% at mid-year 2022 as a result of close-out netting (see Chart 4). This credit exposure is further reduced by the collateral market participants post for cleared and non-cleared derivatives transactions.

<sup>3</sup> Gross credit exposure adjusts gross market value for legally enforceable netting agreements, but not for collateral. BIS Glossary [www.bis.org/statistics/glossary.htm?selection=312&scope=Statistics&c=a&base=term](https://www.bis.org/statistics/glossary.htm?selection=312&scope=Statistics&c=a&base=term)

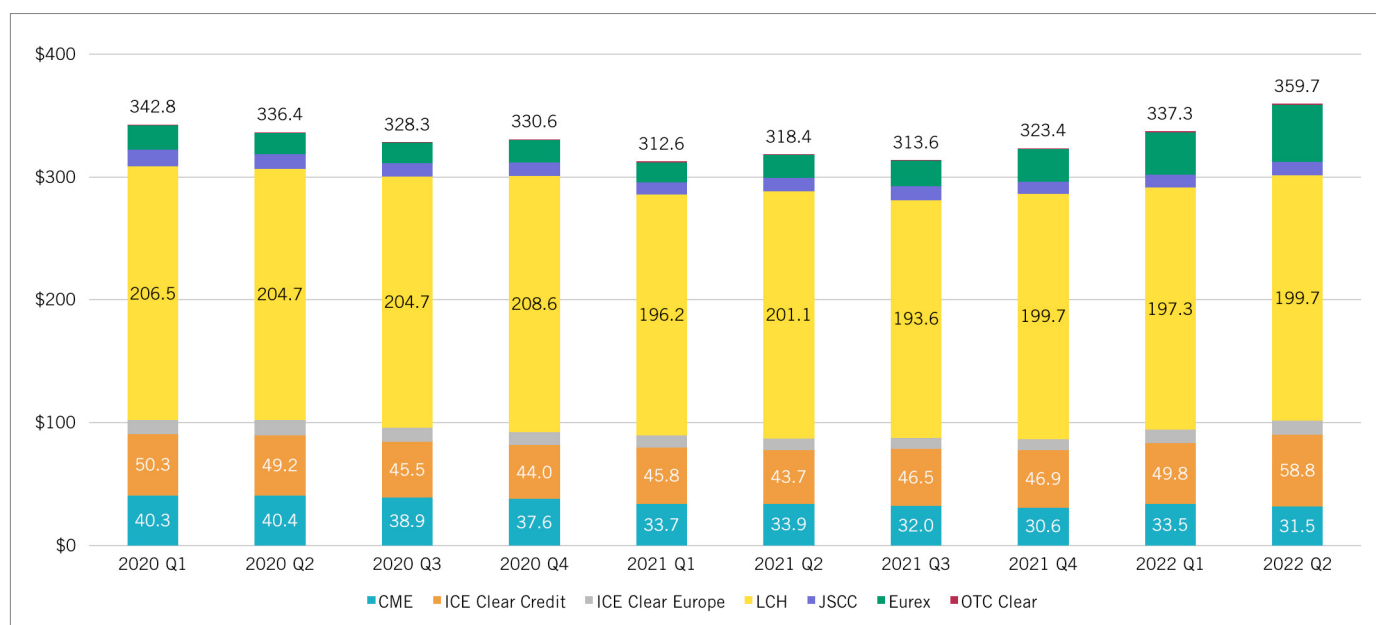
**Chart 4:** Reduction of Mark-to-market Exposure (US\$ trillions)



Source: BIS OTC Derivatives Statistics

Firms posted \$359.7 billion of IM for cleared IRD and single-name and index CDS at all major CCPs in the second quarter of 2022<sup>4,5</sup>. This represents a 13.0% increase compared to \$318.4 billion in the second quarter of 2021 (see Chart 5).

**Chart 5:** IM for IRD and CDS (US\$ billions)



Source: CCP disclosure

<sup>4</sup> All numbers are converted to US dollars based on the exchange rates at the end of each quarter: [www.x-rates.com/historical](http://www.x-rates.com/historical)

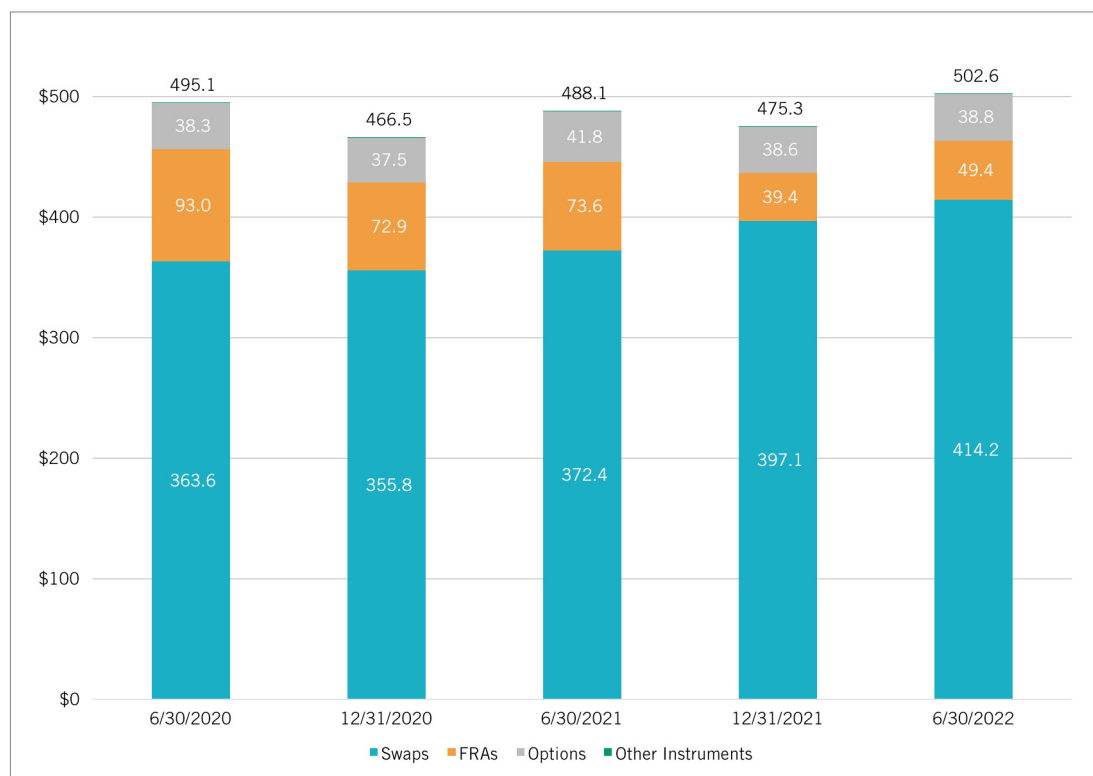
<sup>5</sup> LCH includes LCH Ltd and LCH SA

## INTEREST RATE DERIVATIVES

IRD notional outstanding totaled \$502.6 trillion and accounted for 79.5% of total notional outstanding at mid-year 2022. IRD notional outstanding increased by 3.0% versus mid-year 2021 and rose by 5.7% compared to year-end 2021 (see Chart 1).

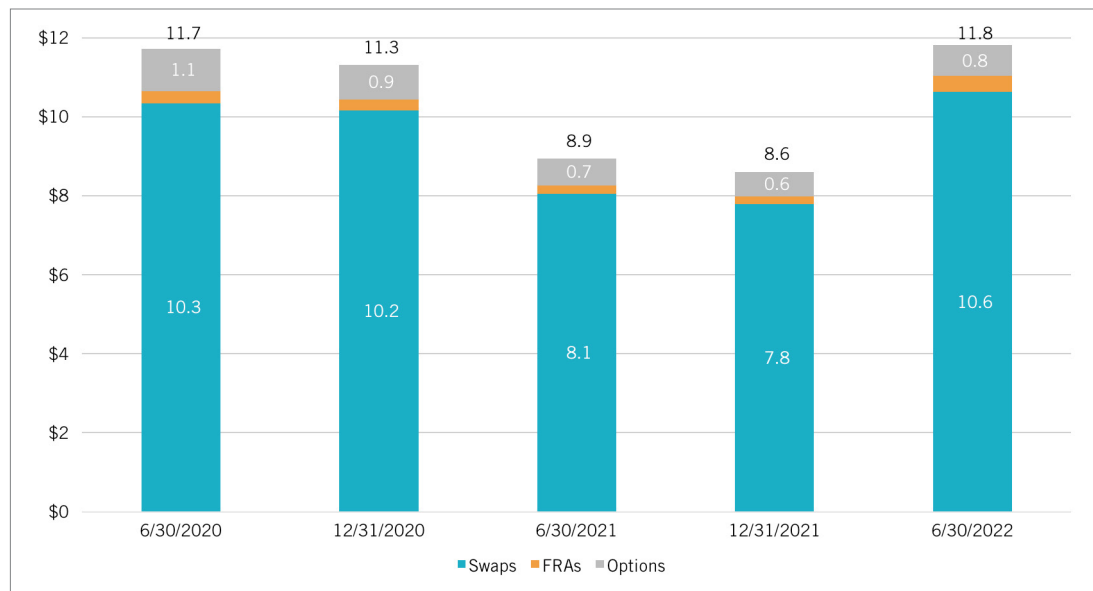
Interest rate swaps notional outstanding increased by 11.2% to \$414.2 trillion and accounted for 82.4% of total IRD notional outstanding at mid-year 2022. Forward rate agreements (FRAs) notional outstanding declined by 33.0% at mid-year 2022 compared to mid-year 2021. FRAs and options notional outstanding was \$49.4 trillion and \$38.8 trillion, respectively (see Chart 6).

**Chart 6:** Global IRD Notional Outstanding by Product (US\$ trillions)



Source: BIS OTC Derivatives Statistics

The gross market value of IRD increased by 32.2% to \$11.8 trillion at mid-year 2022 compared to \$8.9 at mid-year 2021. Swaps gross market value increased to \$10.6 trillion at mid-year 2022, up by 32.0% compared to \$8.1 trillion at mid-year 2021. FRAs and options gross market value increased by 91.9% and 16.1%, respectively, over the same period (see Chart 7).

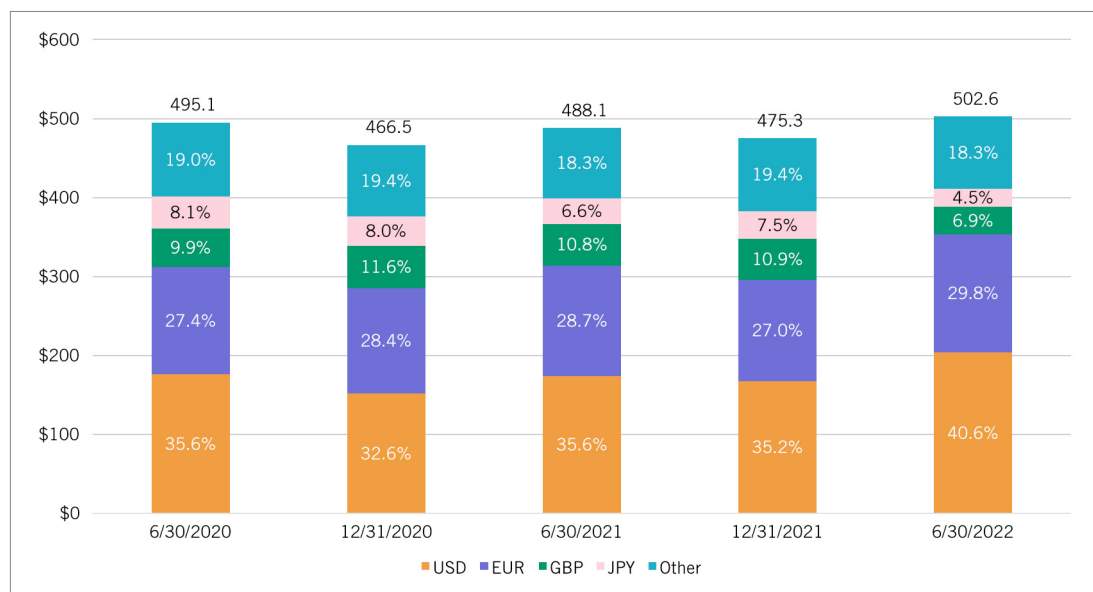
**Chart 7: Gross Market Value of Global IRD by Product (US\$ trillions)**

Source: BIS OTC Derivatives Statistics

US dollar-denominated IRD notional outstanding totaled \$203.9 trillion at mid-year 2022, an increase of 17.3% compared to mid-year 2021. US dollar trades accounted for 40.6% of total IRD notional outstanding at the end of June 2022 (see Chart 8).

Euro-denominated IRD notional outstanding equaled \$149.6 trillion at mid-year 2022, up by 6.8% from mid-year 2021. Euro-denominated transactions comprised 29.8% of total IRD notional outstanding at mid-year 2022.

Sterling-denominated IRD notional outstanding was \$34.9 trillion at mid-year 2022, down by 34.0% compared to mid-year 2021. Sterling accounted for 6.9% of total IRD notional outstanding at mid-year 2022.

**Chart 8: Global IRD Notional Outstanding by Currencies (US\$ trillions)**

Source: BIS OTC Derivatives Statistics

US dollar-denominated IRD gross market value totaled \$2.9 trillion at the end of June 2022, up by 35.5% compared to mid-year 2021. US dollar accounted for 24.3% of total IRD gross market value at mid-year 2022 compared to 23.7% at mid-year 2021 (see Chart 9).

Euro-denominated IRD gross market value totaled \$5.5 trillion at mid-year 2022, an increase of 31.3% from mid-year 2021. Euro-denominated transactions comprised 46.7% of total IRD gross market value at mid-year 2022 compared to 47.0% at mid-year 2021.

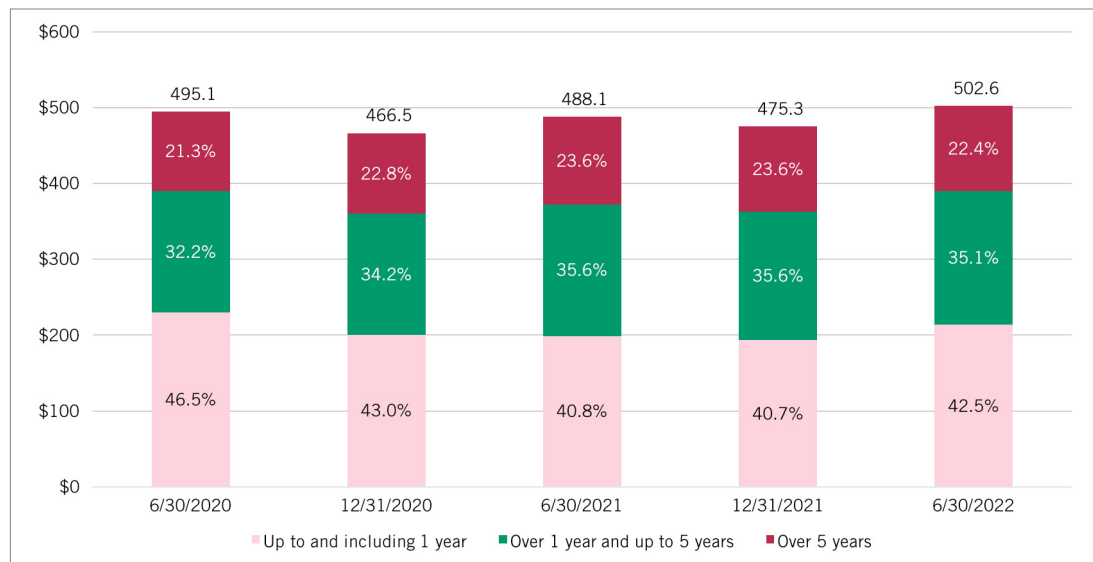
Sterling-denominated IRD gross market value equaled \$1.2 trillion at the end of June 2022, down by 0.1% compared to mid-year 2021. Sterling accounted for 10.3% of total IRD gross market value at mid-year 2022.

**Chart 9: Global IRD Gross Market Value by Currency (US\$ trillions)**



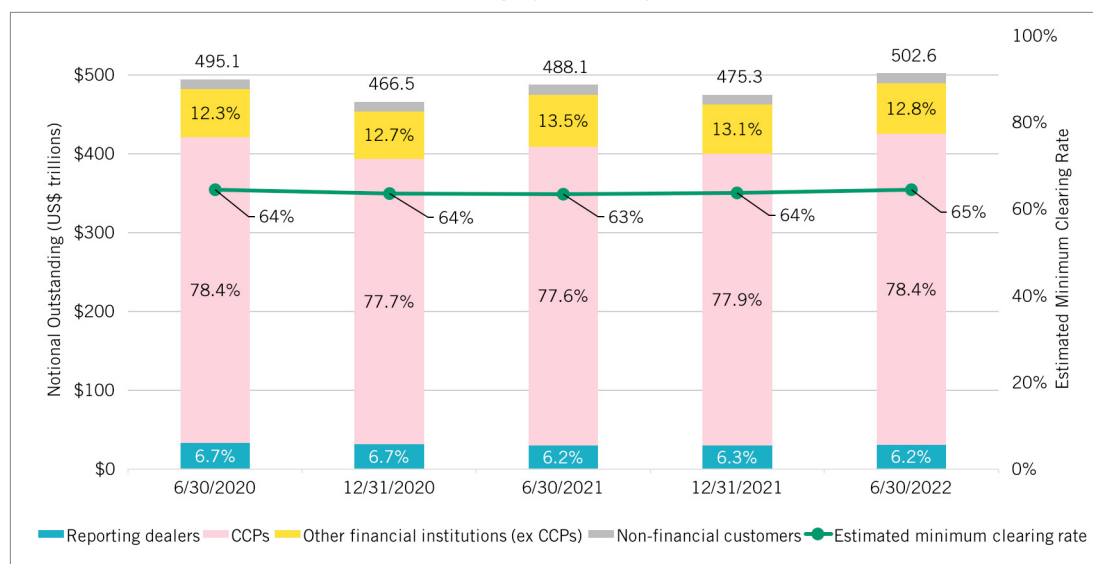
Source: BIS OTC Derivatives Statistics

IRD contracts with a remaining maturity up to and including one year totaled \$213.8 trillion and accounted for 42.5% of global IRD notional outstanding at mid-year 2022 (see Chart 10). IRD notional outstanding with a remaining maturity over one year and up to five years equaled \$176.2 trillion (35.1% of total IRD notional outstanding) and contracts with a remaining maturity over five years totaled \$112.4 trillion (22.4% of total IRD notional outstanding).

**Chart 10: Global IRD Notional Outstanding by Remaining Maturity (US\$ trillions)**

Source: BIS OTC Derivatives Statistics

The share of IRD notional with CCPs was 78.4% in the first half of 2022, equating to \$394.2 trillion. The estimated minimum clearing rate for IRD was 64.5% at the end of June 2022<sup>6</sup> (see Chart 11).

**Chart 11: Global IRD Notional Outstanding by Counterparties**

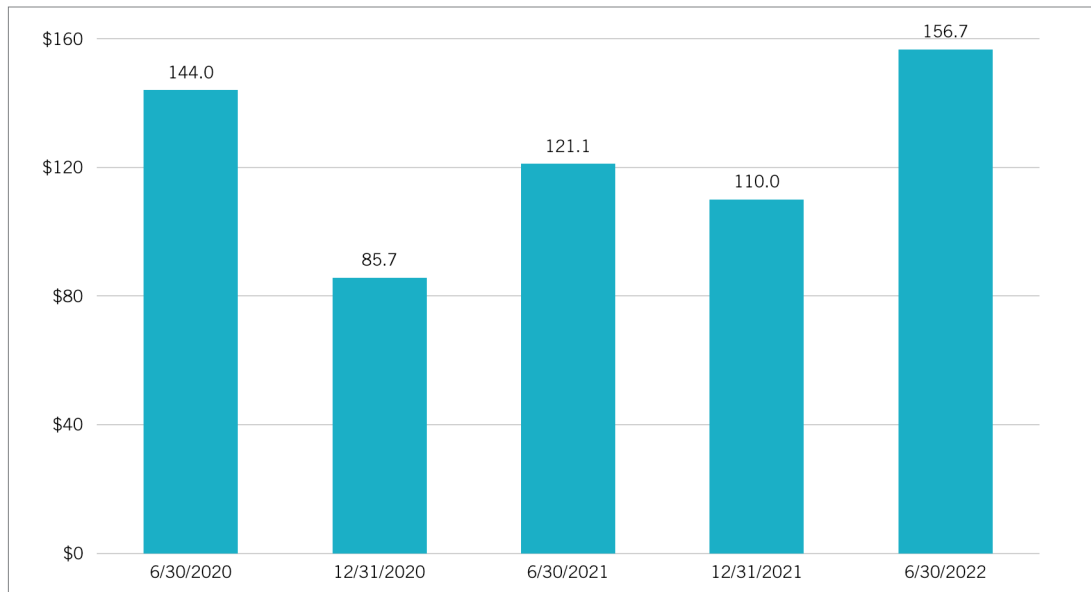
Source: BIS OTC Derivatives Statistics

ISDA SwapsInfo data shows that trading in IRD products reported in the US increased by 29.4% during the first half of 2022 compared to the first half of 2021<sup>7</sup>. IRD traded notional totaled \$156.7 trillion in the first half of 2022 compared to \$121.1 trillion in the first half of 2021 (see Chart 12).

<sup>6</sup> The estimated minimum clearing rate adjusts for potential double-counting of inter-dealer trades novated to CCPs. It is calculated as  $(CCP / 2) / (1 - (CCP / 2))$ , where CCP represents the share of notional amounts outstanding that dealers report against CCPs. The true clearing rate is likely to be higher as many trades will be initiated with CCPs

<sup>7</sup> Based on the data from the Depository Trust and Clearing Corporation (DTCC) swap data repository (SDR). This data covers only transactions required to be disclosed under the Commodity Futures Trading Commission regulations. See ISDA SwapsInfo website [www.swapsinfo.org/](http://www.swapsinfo.org/)



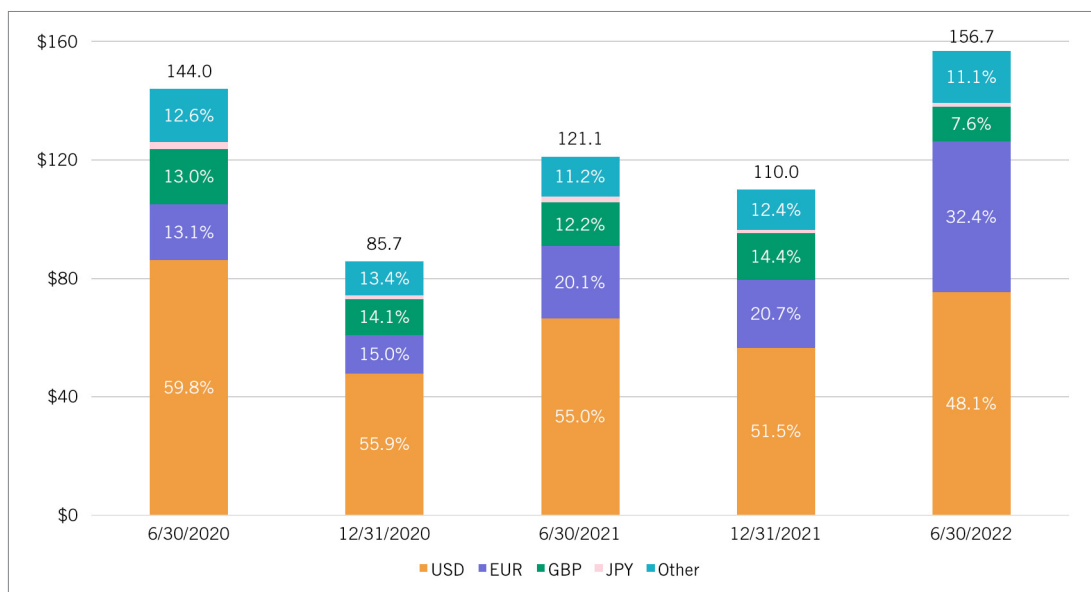
**Chart 12:** IRD Traded Notional Reported in the US (US\$ trillions)

Source: DTCC SDR

US dollar-denominated IRD traded notional totaled \$75.4 trillion in the first half of 2022, up by 13.3% compared to the first half of 2021. US dollar accounted for 48.1% of total IRD traded notional in the first half of 2022 (see Chart 13).

Euro-denominated IRD traded notional equaled \$50.8 trillion in the first half of 2022, up by 108.7% compared to the first half of 2021. Euro-denominated transactions represented 32.4% of total IRD traded notional in the first half of 2022, a significant increase from 20.1% in the first half of 2021.

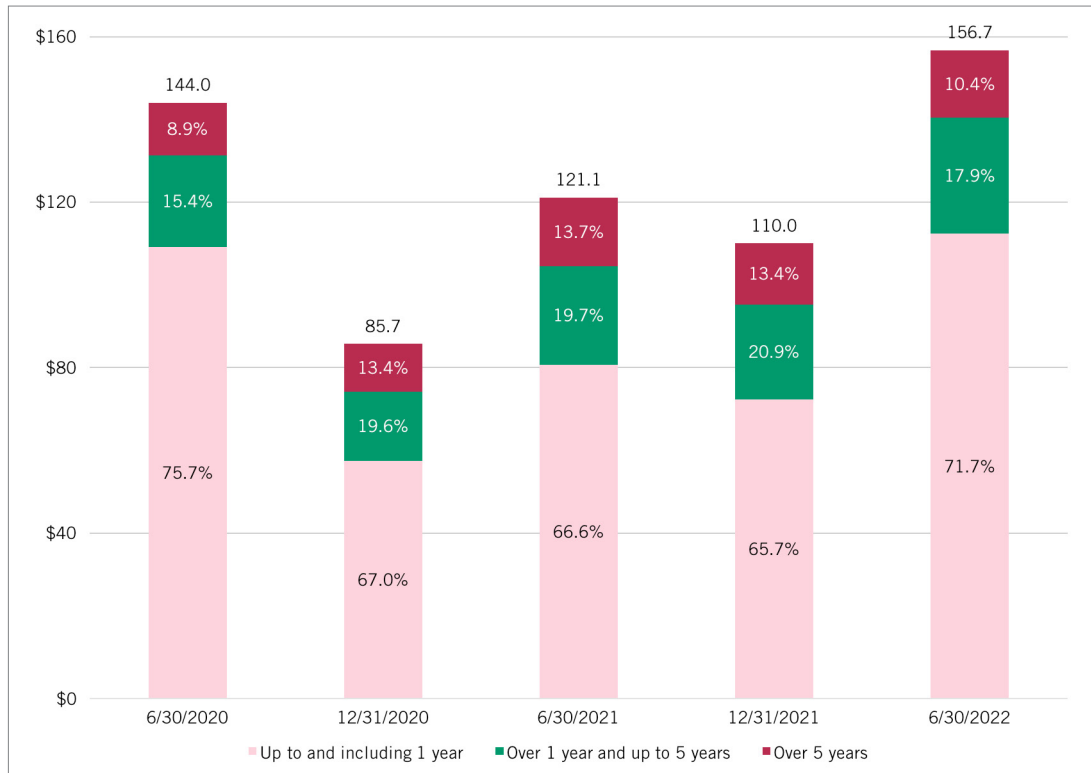
Sterling-denominated IRD traded notional totaled \$11.9 trillion in the first half of 2022, a decrease of 19.5% versus the first half of 2021. Sterling represented 7.6% of total IRD traded notional in the first half of 2022.

**Chart 13:** IRD Traded Notional Reported in the US by Currency (US\$ trillions)

Source: DTCC SDR

In the first half of 2022, 71.7% of total IRD trading comprised contracts with a tenor up to and including one year, a significant increase compared to 66.6% in the first half of 2021<sup>9</sup>. Contracts with a tenor over one year and up to five years accounted for 17.9% of total IRD traded notional, while contracts with a tenor over five years totaled 10.4% (see Chart 14).

**Chart 14: IRD Traded Notional Reported in the US by Tenor (US\$ trillions)**



Source: DTCC SDR

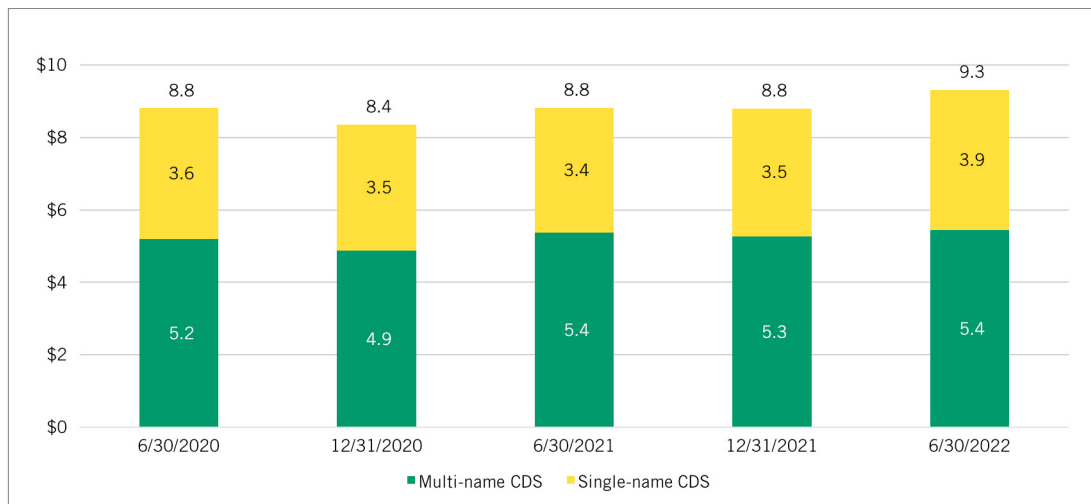
<sup>9</sup> Tenor is calculated as the difference between the effective date and the end date

## CREDIT DEFAULT SWAPS

According to the BIS data, CDS notional outstanding (including single-name and index CDS) increased by 5.7% to \$9.3 trillion at the end of June 2022 versus mid-year 2021 and was up by 10.0% compared to year-end 2021 (see Chart 15).

Single-name CDS notional outstanding increased by 12.7% to \$3.9 trillion at mid-year 2022 compared to \$3.4 trillion at mid-year 2021, while multiple-name CDS notional outstanding increased by 1.2% to \$5.4 trillion.

**Chart 15:** Global CDS Notional Outstanding (US\$ trillions)

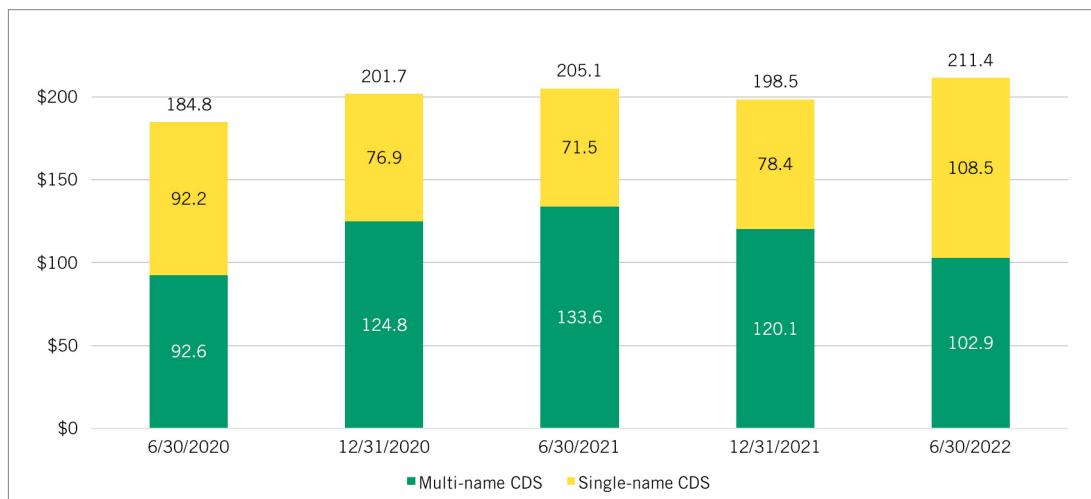


Source: BIS OTC Derivatives Statistics

The gross market value of CDS increased by 3.1% to \$211.4 billion at mid-year 2022 from \$205.1 billion at mid-year 2021 (see Chart 16).

Single-name CDS gross market value increased to \$108.5 billion at mid-year 2022, up by 51.8% compared to \$71.5 billion at mid-year 2021. Multiple-name CDS notional decreased by 23.0% to \$102.9 billion at mid-year 2022 compared to \$133.6 billion at mid-year 2021.

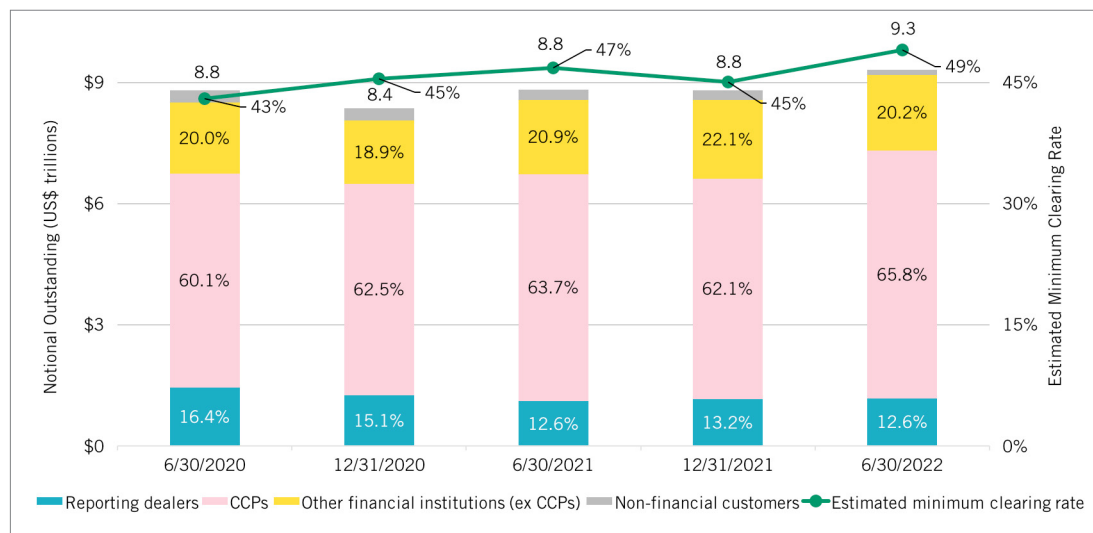
**Chart 16:** Global CDS Gross Market Value (US\$ billions)



Source: BIS OTC Derivatives Statistics

The share of CDS notional outstanding with CCPs was 65.8% in the first half of 2022, totaling \$6.1 trillion (Chart 17). The estimated minimum clearing rate for CDS contracts increased to 49.0%<sup>9</sup>.

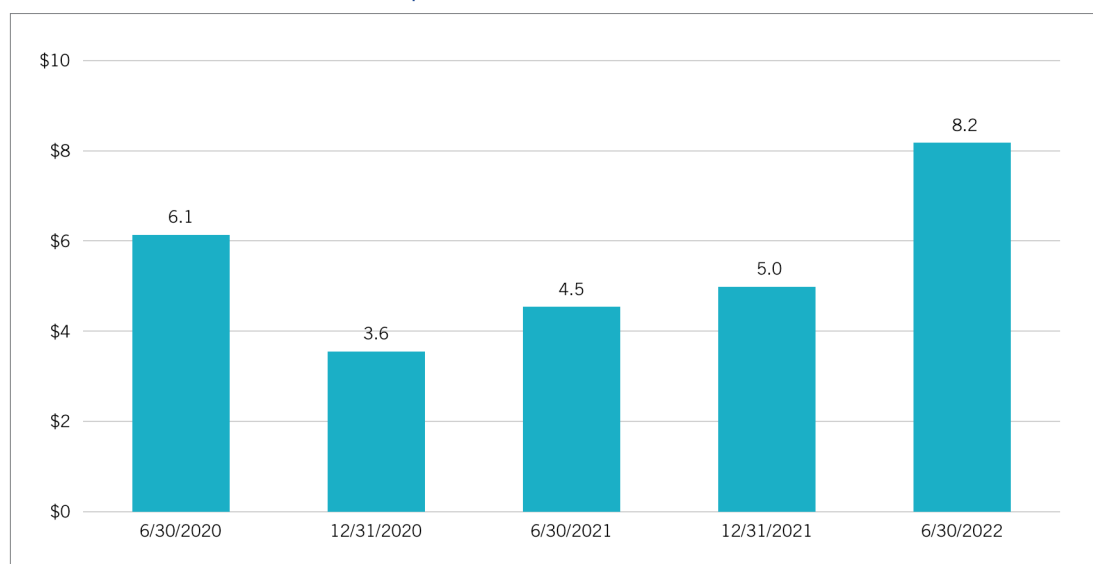
**Chart 17: Global CDS Notional Outstanding by Counterparties**



Source: BIS OTC Derivatives Statistics

In the US, CDS traded notional increased by 80.1% during the first half of 2022 compared to the first half of 2021<sup>10</sup>. CDS traded notional totaled \$8.2 trillion in the first half of 2022 compared to \$4.5 trillion in the first half of 2021 (see Chart 18).

**Chart 18: CDS Traded Notional Reported in the US (US\$ trillions)**



Source: DTCC SDR

<sup>9</sup> The estimated minimum clearing rate adjusts for potential double-counting of interdealer trades novated to CCPs. It is calculated as  $(CCP / 2) / (1 - (CCP / 2))$ , where CCP represents the share of notional amounts outstanding that dealers report against CCPs. The true clearing rate is likely to be higher as many trades will be initiated with CCPs

<sup>10</sup> Based on the data from the DTCC SDR. This data covers only transactions required to be disclosed under the Commodity Futures Trading Commission regulations. Credit derivatives mostly comprise CDS indices, but also include CDS index tranches, credit swaptions, exotic products, total return swaps and an insignificant amount of single-name CDS



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[www.isda.org/a/9TxgE/ISDA-Clarus-RFR-Adoption-Indicator-November-2022.pdf](http://www.isda.org/a/9TxgE/ISDA-Clarus-RFR-Adoption-Indicator-November-2022.pdf)

- ***Insights into Global OTC IRD Markets Based on the 2022 BIS Triennial Central Bank Survey***

[www.isda.org/a/LdcgE/Insights-into-Global-OTC-IRD-Markets-Based-on-the-2022-BIS-Triennial-Central-Bank-Survey.pdf](http://www.isda.org/a/LdcgE/Insights-into-Global-OTC-IRD-Markets-Based-on-the-2022-BIS-Triennial-Central-Bank-Survey.pdf)

- ***Interest Rate Derivatives Trading Activity Reported in EU, UK and US Markets: Third Quarter of 2022***

[www.isda.org/a/Q9cgE/Interest-Rate-Derivatives-Trading-Activity-Reported-in-EU-UK-and-US-Markets-Third-Quarter-of-2022.pdf](http://www.isda.org/a/Q9cgE/Interest-Rate-Derivatives-Trading-Activity-Reported-in-EU-UK-and-US-Markets-Third-Quarter-of-2022.pdf)

**For questions on ISDA Research, please contact:**

Olga Roman

Head of Research

International Swaps and Derivatives Association, Inc. (ISDA)

Office: 212-901-6017

[oroman@isda.org](mailto:oroman@isda.org)

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