

# KEY TRENDS IN THE SIZE AND COMPOSITION OF OTC DERIVATIVES MARKETS IN THE FIRST HALF OF 2020

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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 the gross market value and gross credit exposure of OTC derivatives during the first half of 2020, while notional outstanding remained relatively stable. The increase was driven by a surge in the gross market value of interest rate derivatives (IRD) due to central bank measures to support economic activity in response to the COVID-19 pandemic.

OTC derivatives notional outstanding at mid-year 2020 fell by 5.2% compared with the same period in 2019 and increased by 8.6% versus year-end 2019. Some of this change reflects a seasonal pattern, under which notional outstanding tends to increase in the first half of the year and decrease in the second half.

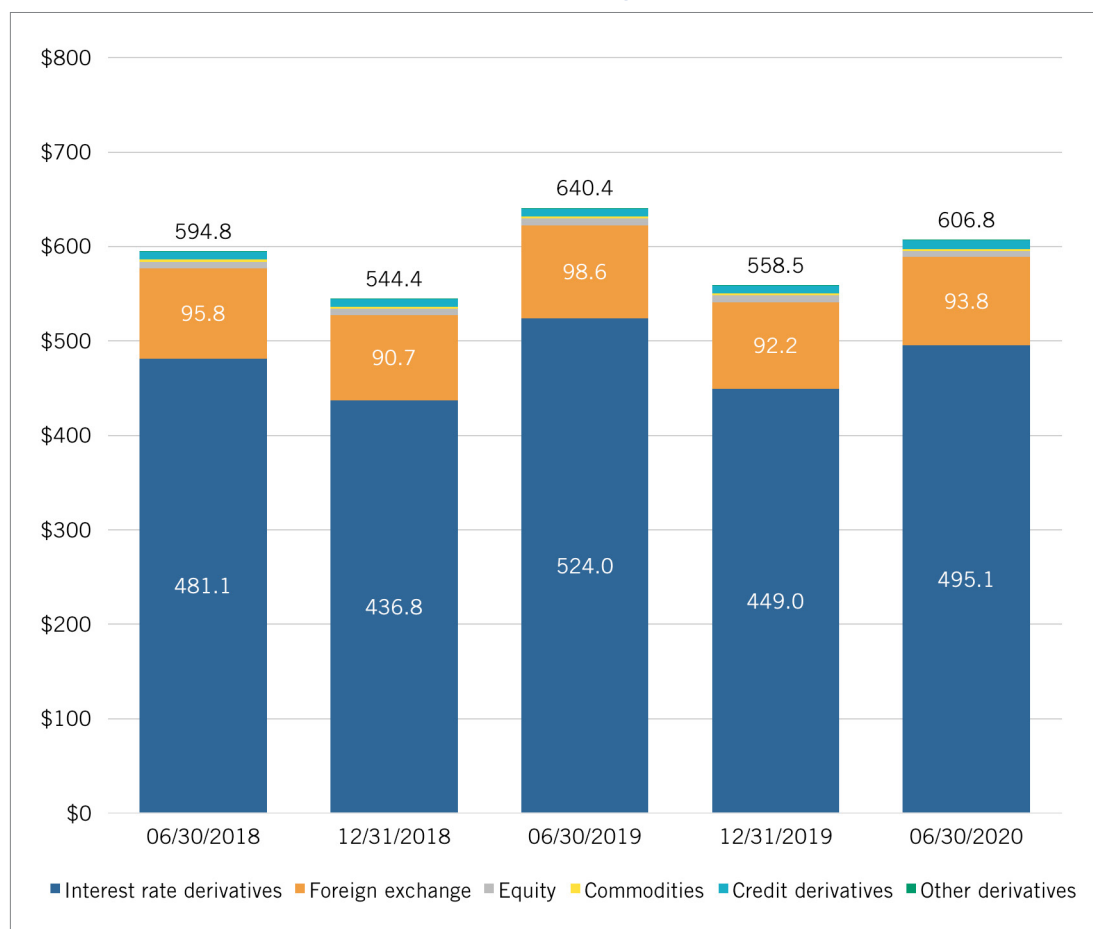
The gross market value of OTC derivatives contracts was 28.4% higher compared with mid-year 2019 and 33.5% higher versus year-end 2019. Gross credit exposure – gross market value after netting – increased by 20.3% compared to mid-year 2019 and by 35.7% versus year-end 2019.

Market participants reduced their mark-to-market exposure by about 79.3% at mid-year 2020 as a result of close-out netting. This credit exposure is further reduced by the collateral that market participants post for cleared and non-cleared derivatives transactions. At mid-year 2020, market participants posted \$336.4 billion of initial margin (IM) for cleared IRD and both single-name and index credit default swaps (CDS) at all major central counterparties (CCPs).

## KEY TRENDS

OTC derivatives notional outstanding was \$606.8 trillion at the end of June 2020, 5.2% lower compared with mid-year 2019 and 8.6% higher versus year-end 2019<sup>1,2</sup> (see Chart 1).

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



Source: BIS OTC Derivatives Statistics

The gross market value of OTC derivatives totaled \$15.5 trillion at mid-year 2020, 28.4% higher compared with mid-year 2019 and an increase of 33.5% versus year-end 2019<sup>3</sup> (see chart 2). Gross market value equaled 2.6% of notional outstanding at mid-year 2020 compared with 1.9% at mid-year 2019.

The surge in gross market value was driven by a 40.3% jump in IRD gross market value to \$11.7 trillion compared to \$8.4 trillion at year-end 2019 and \$8.8 trillion at mid-year 2019. As noted in the BIS commentary, that increase was driven by central bank measures to support economic activity in response to the COVID-19 pandemic.

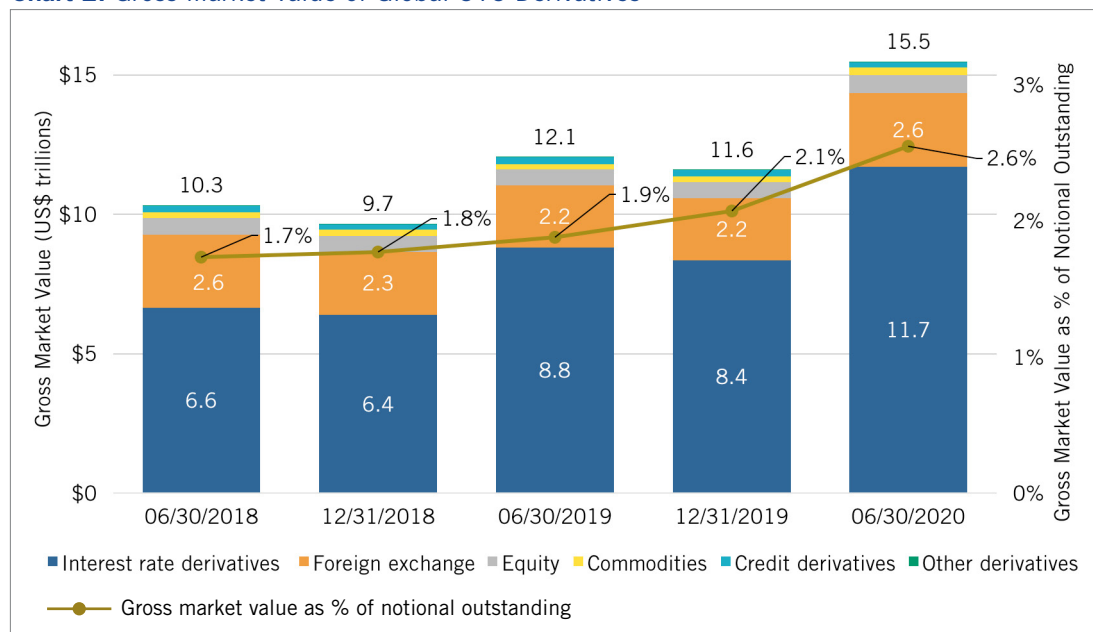
Unanticipated changes in interest rates generated the gap between market interest rates on the reporting date and rates prevailing at contract inception, therefore boosting the reported gross market value<sup>4</sup>.

<sup>1</sup> BIS OTC Derivatives Statistics <https://www.bis.org/statistics/derstats.htm>

<sup>2</sup> This change reflects a seasonal pattern evident in the data since 2016. Notional amount outstanding tends to be higher in the first half of the year compared with year-end values

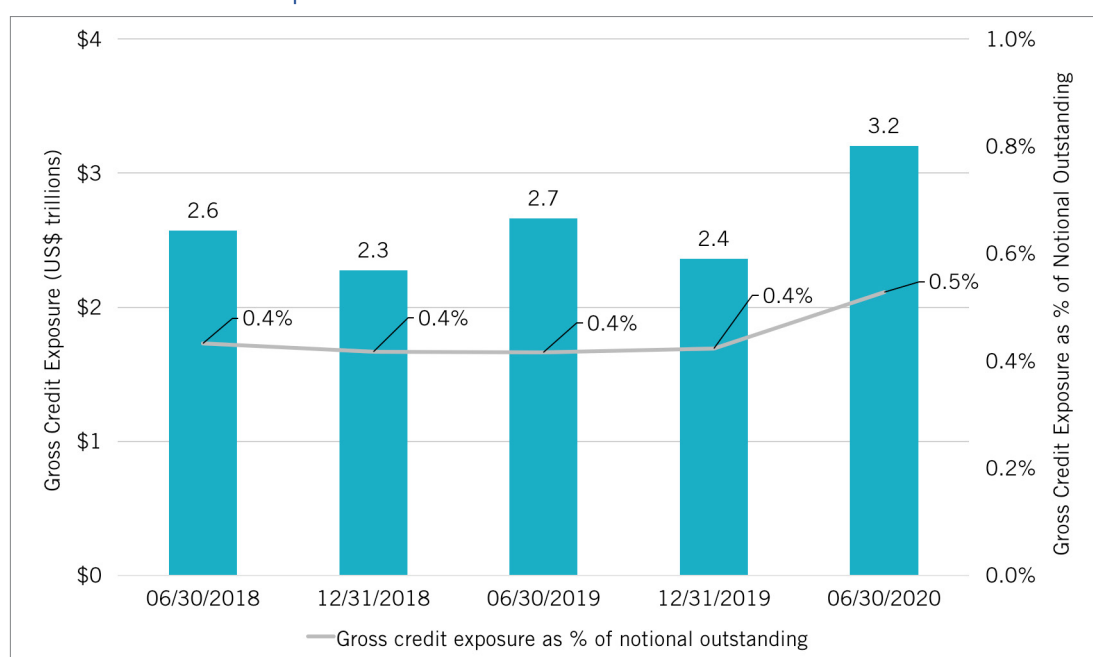
<sup>3</sup> Gross market value is the sum of the absolute values of all outstanding derivatives contracts with either positive or negative replacement values evaluated at market prices prevailing on the reporting date. See [BIS Glossary](#)

<sup>4</sup> BIS Statistical Release: OTC Derivatives Statistics at end-June 2020 [https://www.bis.org/publ/otc\\_hy2011.pdf](https://www.bis.org/publ/otc_hy2011.pdf)

**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 20.3% compared to mid-year 2019 and by 35.7% versus year-end 2019 (see Chart 3). It totaled \$3.2 trillion and accounted for 0.5% of notional outstanding at mid-year 2020<sup>5</sup>.

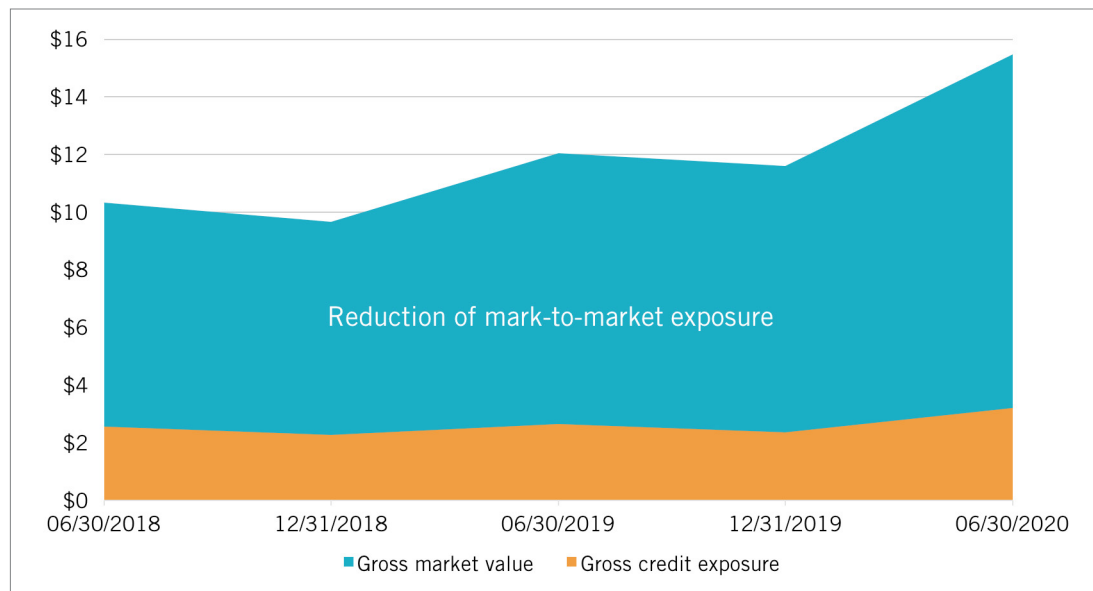
**Chart 3: Gross Credit Exposure of Global OTC Derivatives**

Source: BIS OTC Derivatives Statistics

Market participants reduced their mark-to-market exposure by 79.3% at mid-year 2020 as a result of close-out netting (see Chart 4). This credit exposure is further reduced by the collateral that market participants post for cleared and non-cleared derivatives transactions.

<sup>5</sup> Gross credit exposure adjusts gross market value for legally enforceable netting agreements, but not for collateral. See [BIS Glossary](#)

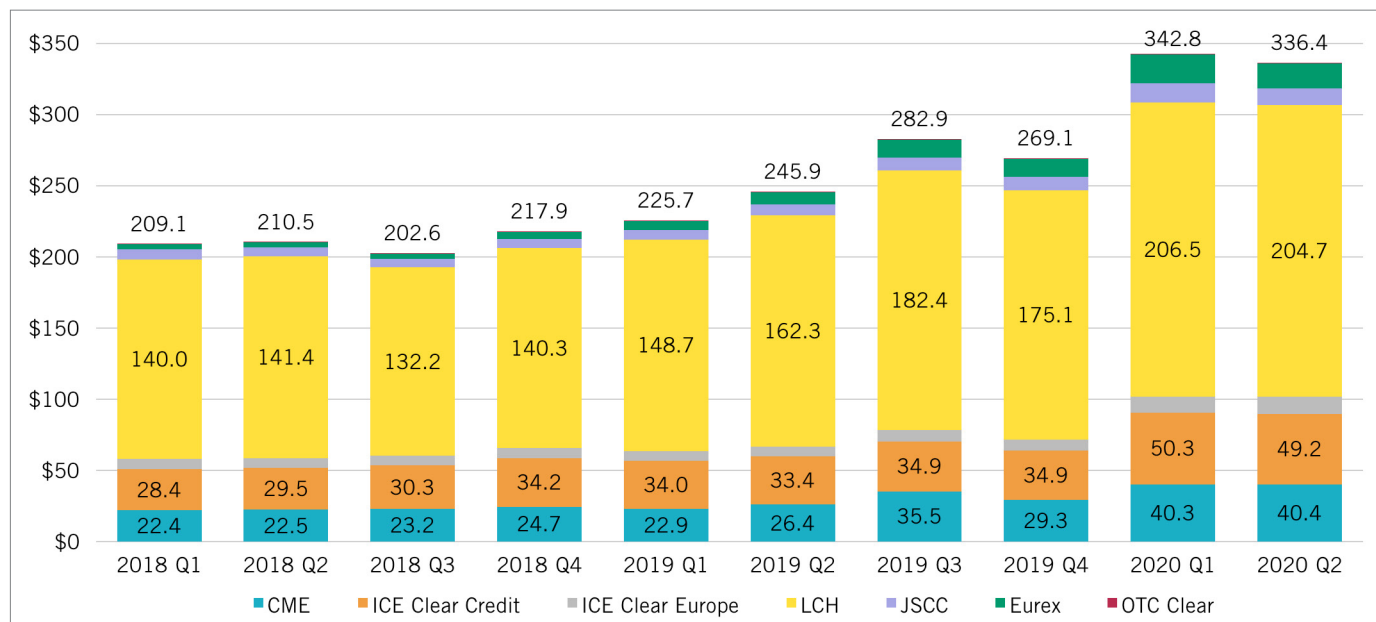
**Chart 4:** Reduction of Mark-to-market Exposure (US\$ trillions)



Source: BIS OTC Derivatives Statistics

The amount of IM for cleared derivatives, including IRD and CDS, significantly increased in 2020. Market participants posted \$336.4 billion of IM for cleared IRD and both single-name and index CDS at all major CCPs at mid-year 2020 (see Chart 5)<sup>6,7</sup>.

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



Source: CCP disclosure

<sup>6</sup> All numbers are converted to US dollars based on the exchange rates at the end of each quarter: <https://www.x-rates.com/historical>

<sup>7</sup> LCH includes LCH Ltd and LCH SA

## Interest Rate Derivatives

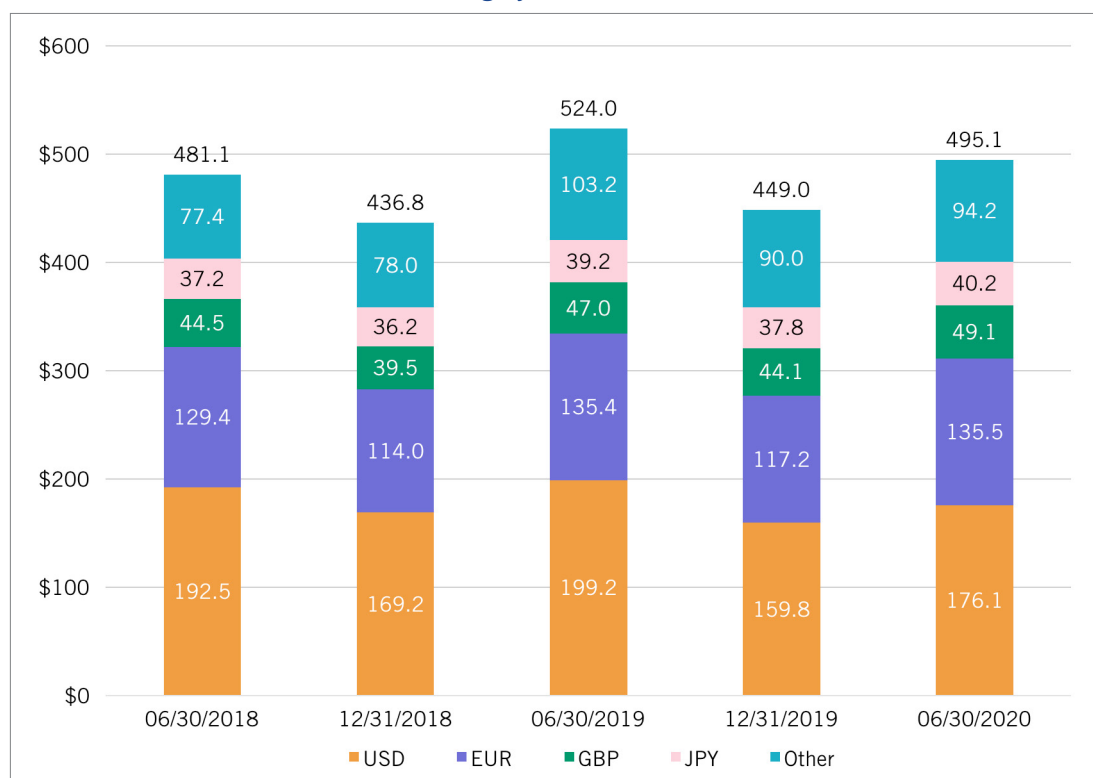
IRD notional outstanding totaled \$495.1 trillion and accounted for 81.6% of total notional outstanding at mid-year 2020. IRD notional outstanding fell by 5.5% versus mid-year 2019 and increased by 10.3% compared to year-end 2019, essentially mirroring the growth of total derivatives notional.

US dollar-denominated IRD notional outstanding totaled \$176.1 trillion, down by 11.6% compared to mid-year 2019 and up by 10.2% versus year-end 2019 (see Chart 6). It accounted for 35.6% of total IRD notional outstanding at mid-year 2020, compared to 38.0% at mid-year 2019.

Euro-denominated IRD notional outstanding equaled \$135.5 trillion, up by 0.1% from mid-year 2019 and by 15.7% compared with year-end 2019. It accounted for 27.4% of total IRD notional outstanding at mid-year 2020, higher than mid-year 2019.

IRD notional outstanding denominated in other currencies totaled \$94.2 trillion and accounted for 19.0% of total IRD notional outstanding. In comparison, it totaled \$103.2 trillion representing 19.7% of total IRD notional outstanding at mid-year 2019.

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



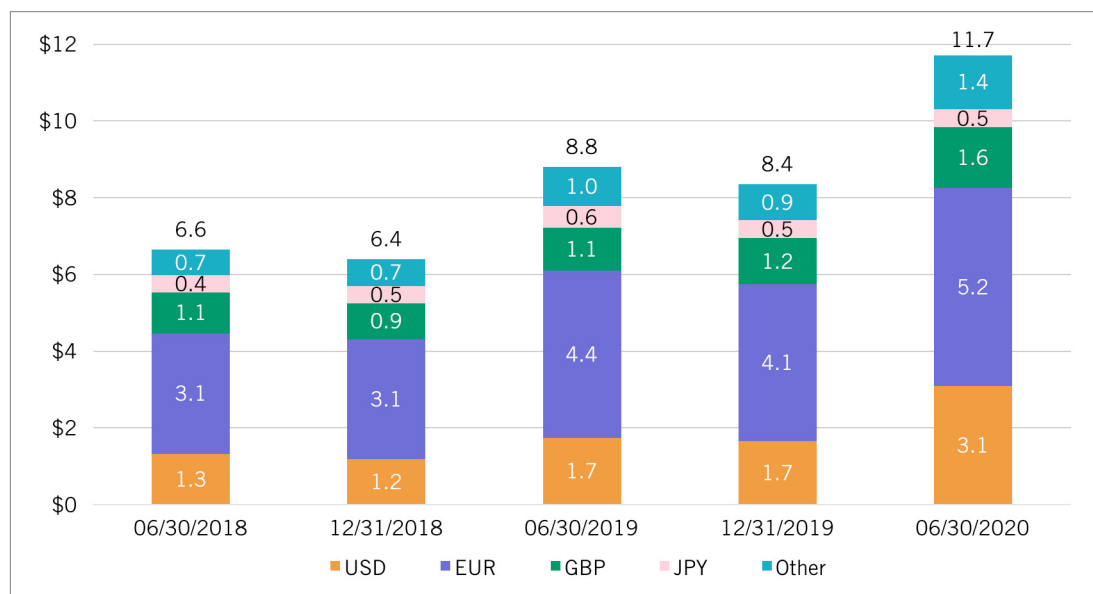
Source: BIS OTC Derivatives Statistics

Gross market value of global IRD totaled \$11.7 trillion and accounted for 75.7% of total gross market value at mid-year 2020. IRD gross market value increased by 33.1% versus mid-year 2019 and by 40.3% compared to year-end 2019.

US dollar-denominated IRD gross market value totaled \$3.1 trillion, up by 76.8% compared to mid-year 2019 and by 86.2% compared to year-end 2019 (see Chart 7). It accounted for 26.3% of total IRD gross market value at mid-year 2020 compared to 19.8% at mid-year 2019.

Euro-denominated IRD gross market value equaled \$5.2 trillion, up by 18.8% from mid-year 2019 and by 26.3% compared with year-end 2019. It accounted for 44.1% of total IRD gross market value at mid-year 2020 compared to 49.4% mid-year 2019.

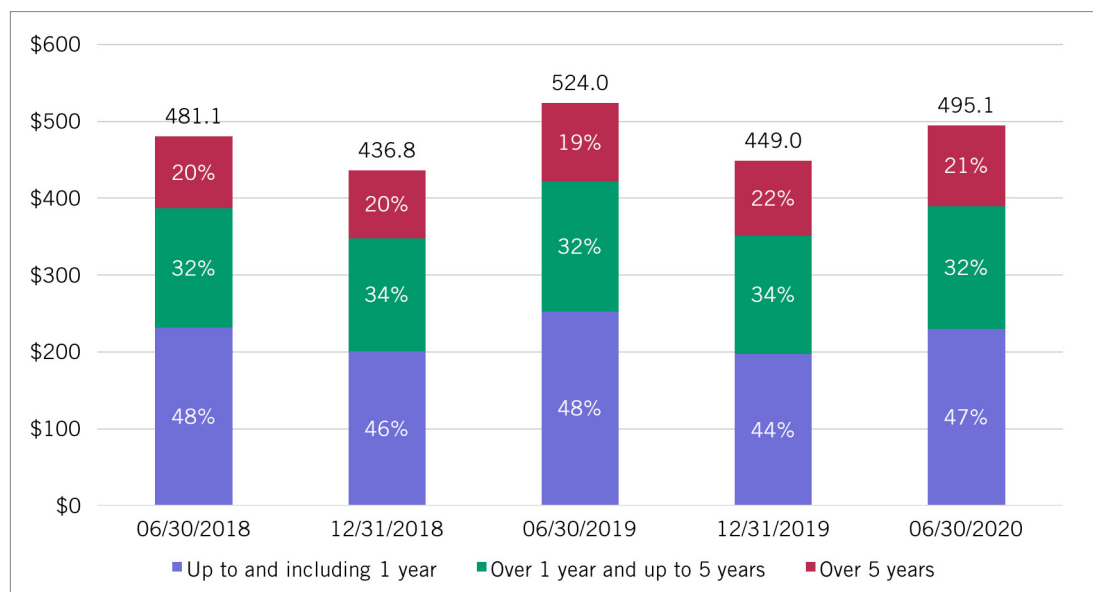
**Chart 7: Global IRD Gross Market Value by Currencies (US\$ trillions)**



Source: BIS OTC Derivatives Statistics

IRD contracts with a remaining maturity up to and including one year totaled \$230.3 trillion and accounted for 46.5% of total IRD notional outstanding at mid-year 2020 (see Chart 8). IRD notional outstanding with a remaining maturity over one year and up to five years was \$159.3 trillion (32.2% of total IRD notional outstanding) and the contracts with a remaining maturity over five years totaled \$105.2 trillion (21.3% of total IRD notional outstanding).

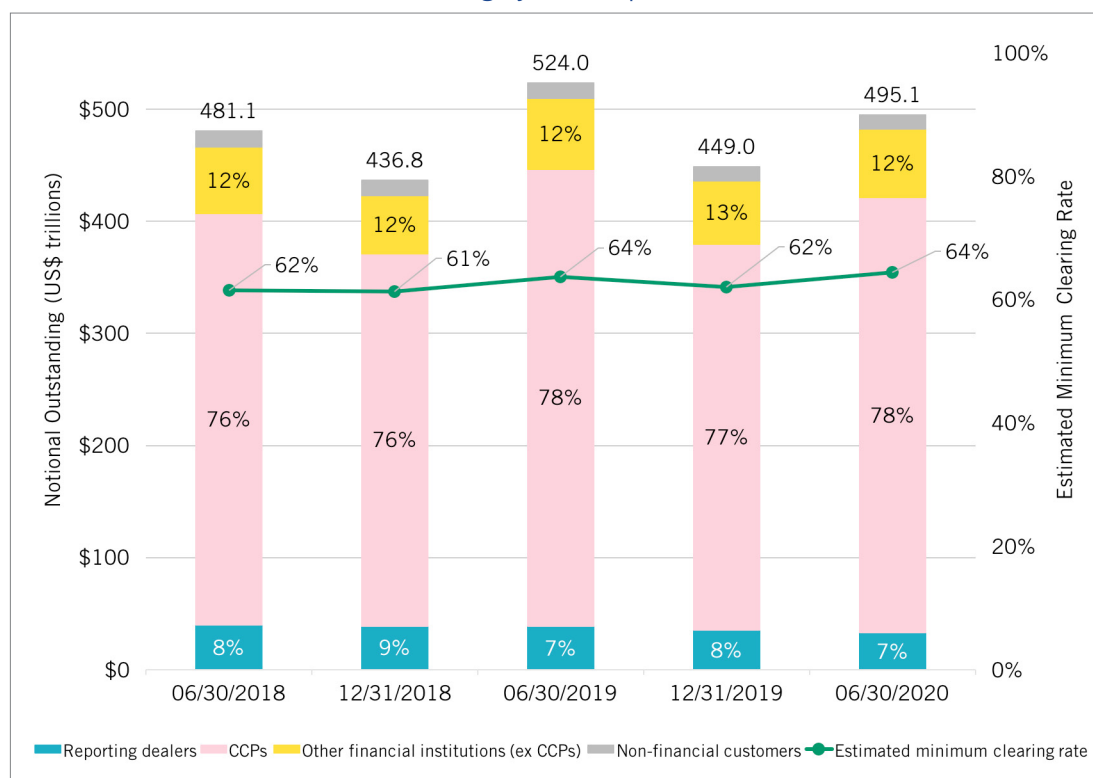
**Chart 8: Global IRD Notional Outstanding by Remaining Maturity (US\$ trillions)**



Source: BIS OTC Derivatives Statistics

The share of IRD notional with CCPs was 78.4% in the first half of 2020 and totaled \$388.0 trillion. The estimated minimum clearing rate for IRD was 64.4% at mid-year 2020<sup>8</sup> (see Chart 9). In comparison, the share of IRD notional with CCPs was 77.8% and the estimated minimum clearing rate for IRD was 63.7% at mid-year 2019.

**Chart 9: Global IRD Notional Outstanding by Counterparties (US\$ trillions)**



Source: BIS OTC Derivatives Statistics

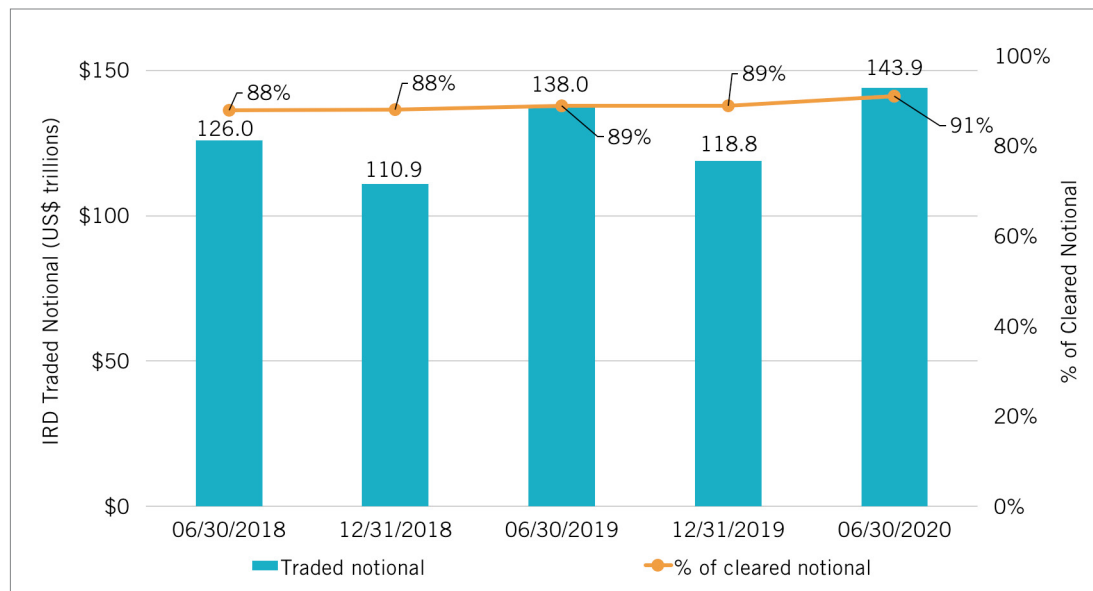
The increase in IRD global notional outstanding during the first half of 2020 can also be seen in swap trading volumes in the US. ISDA SwapsInfo data shows that trading in IRD products increased by 4.3% during the first half of 2020 compared to the first half of 2019 and grew by 21.2% versus the second half of 2019<sup>9</sup>.

IRD traded notional totaled \$143.9 trillion in the first half of 2020 compared to \$138.0 trillion in the first half of 2019 and \$118.8 trillion in the second half of 2019 (see Chart 10).

The clearing rate in the US has been fluctuating between 88% and 91% since mid-year 2018. In the first half of 2020, about 91% of IRD traded notional was cleared.

<sup>8</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>9</sup> Based on the data from the Depository Trust and Clearing Corporation (DTCC) and Bloomberg swap data repositories (SDRs). See ISDA SwapsInfo website [www.swapsinfo.org](http://www.swapsinfo.org)

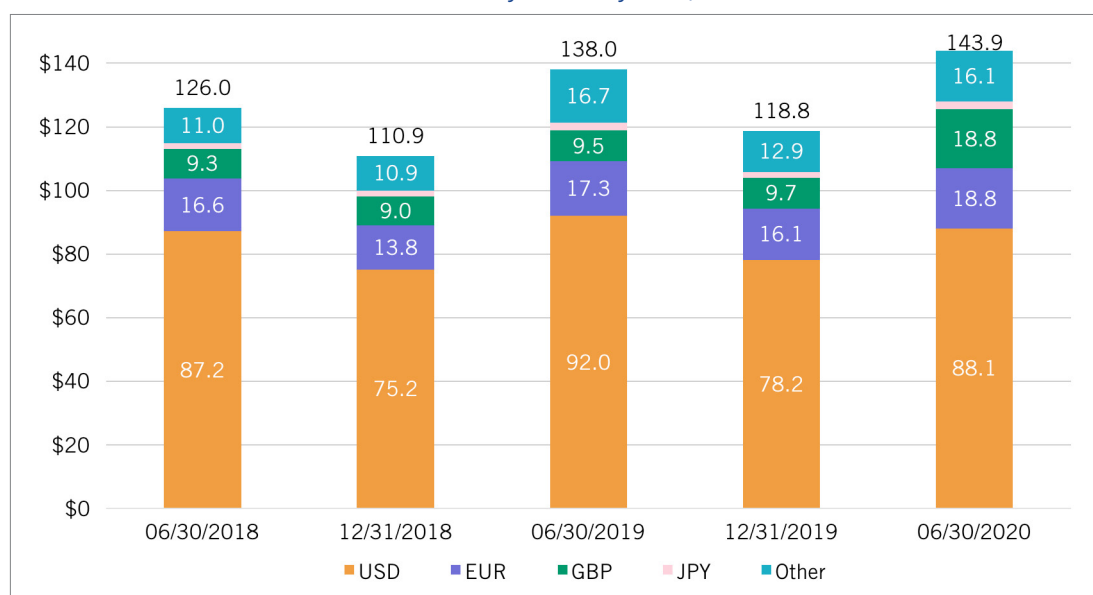
**Chart 10:** IRD Traded Notional and Percentage of Cleared Notional in the US

Source: DTCC and Bloomberg SDRs

US dollar-denominated IRD trading volume in the US totaled \$88.1 trillion in the first half of 2020, down 4.2% compared to the first half of 2019 (\$92.0 trillion) and up 12.7% versus the second half of 2019 (see Chart 11). It accounted for 61.2% of total IRD traded notional in the first half of 2020.

Euro-denominated IRD trading volume in the US totaled \$18.8 trillion in the first half of 2020, up by 8.5% compared to the first half of 2019 (\$17.3 trillion) and by 16.6% compared to the second half of 2019 (\$16.1 trillion). It represented 13.1% of total IRD traded notional in the first half of 2020.

IRD traded notional denominated in other currencies totaled \$16.1 trillion in the first half of 2020, accounting for 11.2% of total IRD traded notional. In comparison, it was \$16.7 trillion in the first half of 2019, representing 12.1% of total IRD traded notional.

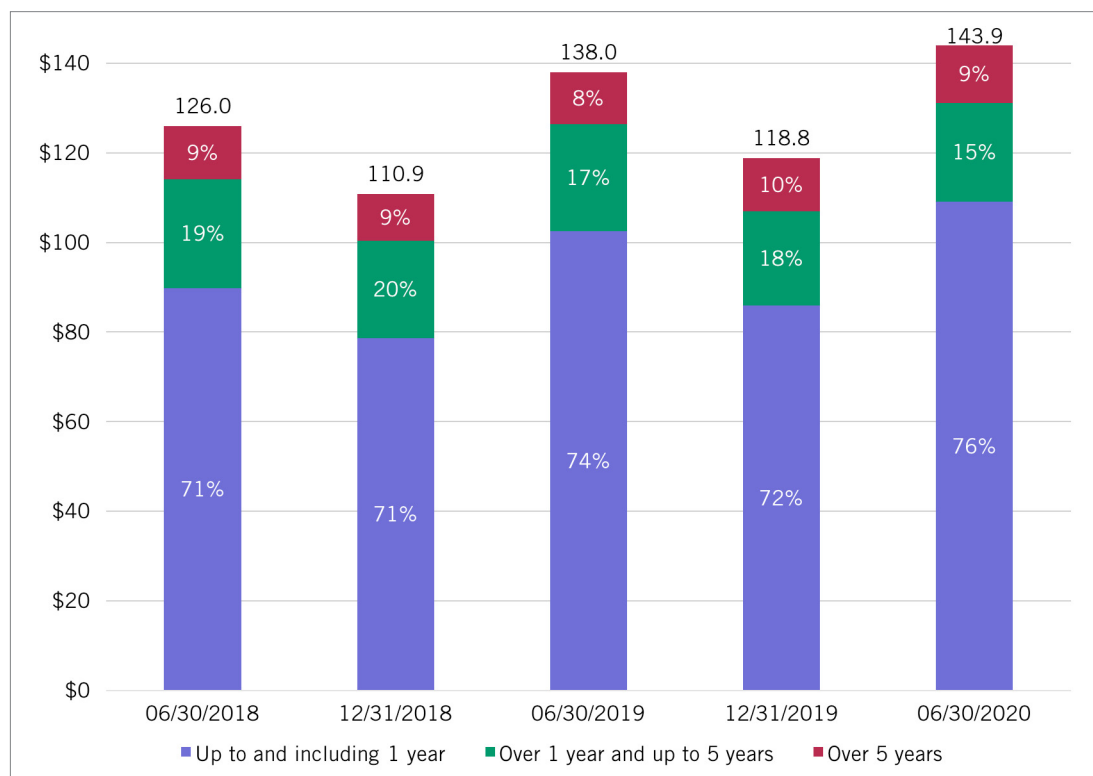
**Chart 11:** IRD Traded Notional in the US by Currency (US\$ trillions)

Source: DTCC and Bloomberg SDRs



In the first half of 2020, 75.8% of total IRD trading was in contracts with a tenor up to and including one year<sup>10</sup>. Contracts with a tenor over one year and up to five years accounted for 15.4% of total IRD traded notional, while contracts with a tenor over five years totaled 8.9% (see Chart 12).

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



Source: DTCC and Bloomberg SDRs

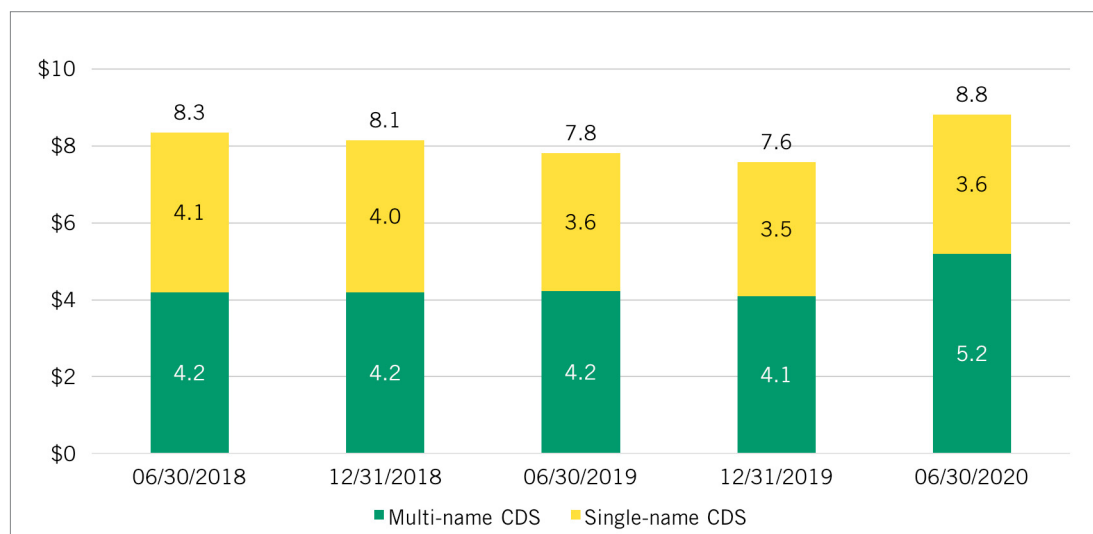
<sup>10</sup> Tenor is calculated as the difference between the effective date and the end date

## Credit Default Swaps

According to the BIS data, CDS notional outstanding (including single name and index CDS) increased to \$8.8 trillion at mid-year 2020, up by 12.8% from \$7.8 trillion at mid-year 2019 and by 16.2% from \$7.6 trillion at year-end 2019 (see Chart 13).

Single-name CDS notional remained almost unchanged at \$3.6 trillion, while multiple-name CDS notional increased by 22.8% to \$5.2 trillion versus \$4.2 trillion at mid-year 2019.

**Chart 13:** Global CDS Notional Outstanding (US\$ trillions)

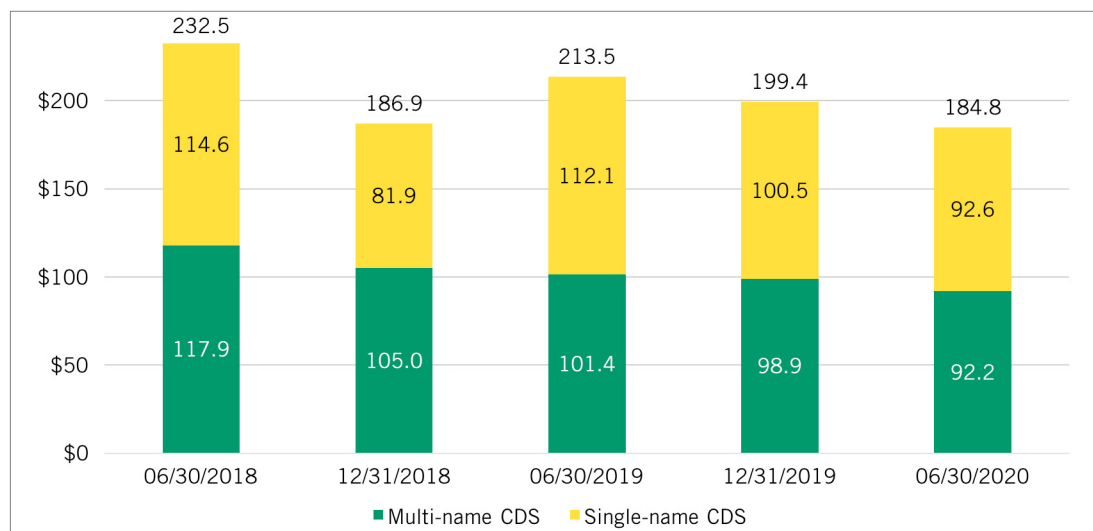


Source: BIS OTC Derivatives Statistics

Gross market value of CDS decreased to \$184.8 billion at mid-year 2020, down by 13.5% from \$213.5 billion at mid-year 2019 and by 7.3% from \$199.4 billion at year-end 2019 (see Chart 14).

Single-name CDS gross market value decreased to \$92.6 billion at mid-year 2020, down by 17.4% versus \$112.1 billion at mid-year 2019. Multiple-name CDS notional decreased by 9.1% to \$92.2 billion at mid-year 2020 compared to \$101.4 billion at mid-year 2019.

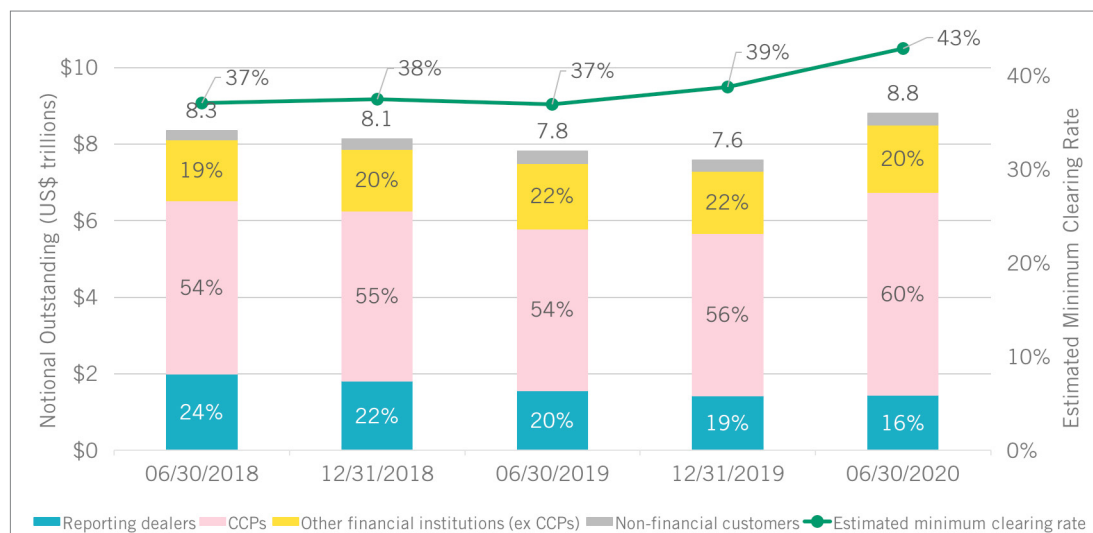
**Chart 14:** Global CDS Gross Market Value (US\$ billions)



Source: BIS OTC Derivatives Statistics

The share of CDS notional outstanding with CCPs increased to 60.1% in the first half of 2020 and totaled \$5.3 trillion (Chart 15). The estimated minimum clearing rate for CDS contracts increased to 43.0%<sup>11</sup>. In comparison, the share of CDS notional outstanding with CCPs was 54.0% and the estimated minimum clearing rate for CDS was 37.0% at mid-year 2019.

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



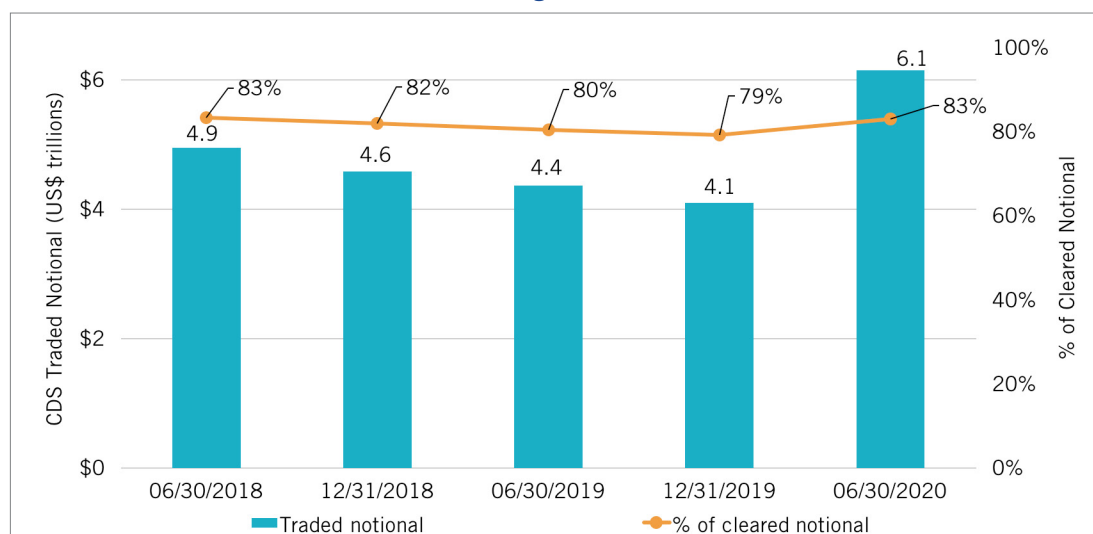
Source: BIS OTC Derivatives Statistics

In the US, CDS traded notional increased by 40.6% during the first half of 2020 compared to the first half of 2019 and grew by 49.9% versus the second half of 2019.

CDS traded notional totaled \$6.1 trillion in the first half of 2020 compared to \$4.4 trillion in the first half of 2019 and \$4.1 trillion in the second half of 2019 (see Chart 16).

In the first half of 2020, 83.0% of CDS traded notional was cleared compared to 80.4% in the first half of 2019.

**Chart 16: CDS Traded Notional and Percentage of Cleared Notional in the US**



Source: DTCC and Bloomberg SDRs

<sup>11</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



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- ***Transition to RFRs Review: Third Quarter of 2020 and Year-to-September 30, 2020***

<https://www.isda.org/a/Bi4TE/Transition-to-RFRs-Review-Q3-of-2020-and-Year-to-September-30-2020.pdf>

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