



Research Note

Interest Rate Derivatives Trading Activity Reported in EU, UK and US Markets: First Half of 2023 and the Second Quarter of 2023

This report analyzes interest rate derivatives (IRD) trading activity reported in Europe. The analysis shows European IRD transactions based on the location of reporting venues (EU versus UK), currency, product taxonomy and execution venue. The report also compares European-reported IRD trading activity to what is reported in the US.

The analysis is based on transactions publicly reported by 30 European approved publication arrangements (APAs) and trading venues (TVs). US trading activity analysis is based on information from the Depository Trust & Clearing Corporation's (DTCC) swap data repository (SDR), which only includes trades that are required to be disclosed under US Commodity Futures Trading Commission (CFTC) regulations.

EXECUTIVE SUMMARY

European IRD Trading Activity¹

In the first half of 2023:

- European IRD traded notional reported by APAs and TVs in the EU and UK rose by 72.7% to \$176.2 trillion in the first half of 2023 from \$102.0 trillion in the first half of 2022.
- Euro-denominated IRD traded notional increased by 62.7% to \$79.3 trillion in the first half of 2023 compared to \$48.7 trillion in the first half of 2022 and accounted for 45.0% of total European IRD traded notional. Sterling-denominated traded notional grew by 162.0% to \$46.7 trillion from \$17.8 trillion over the same period and comprised 26.5% of the European total. Contracts denominated in US dollars increased by 2.9% to \$23.3 trillion from \$22.7 trillion, equating to 13.2% of European IRD traded notional. Other currencies made up 15.3% of total European IRD traded notional².
- Overnight index swaps (OIS) traded notional grew by 108.9% to \$98.6 trillion from \$47.2 trillion and accounted for 56.0% of the European total. Fixed-for-floating interest rate swaps (IRS) traded notional rose by 34.2% to \$42.8 trillion from \$31.9 trillion and comprised 24.3% of European IRD traded notional. Forward rate agreement (FRA) traded notional increased by 7.8% to \$19.9 trillion from \$18.4 trillion and represented 11.3% of the European total.
- 62.0% of European IRD traded notional took place on TVs and 26.0% was executed by systematic internalizers (SIs)³. The remaining 12.0% of IRD traded notional was reported as XOFF⁴.

In the second quarter of 2023:

- European IRD traded notional reported by APAs and TVs in the EU and UK increased by 62.0% to \$87.8 trillion in the second quarter of 2023 from \$54.2 trillion in the second quarter of 2022.
- Euro-denominated IRD traded notional rose by 34.1% to \$36.5 trillion in the second quarter of 2023 versus \$27.2 trillion in the second quarter of 2022 and accounted for 41.6% of total European IRD traded notional. Sterling-denominated traded notional grew by 177.6% to \$25.7 trillion from \$9.3 trillion over the same period and made up 29.3% of European IRD traded notional. Contracts denominated in US dollars increased by 35.1% to \$13.1 trillion from \$9.7 trillion, accounting for 14.9% of the European total. Other currencies comprised 14.3% of total European IRD traded notional.
- OIS traded notional rose by 97.5% to \$48.6 trillion from \$24.6 trillion and accounted for 55.3% of the European total. Fixed-for-floating IRS traded notional grew by 27.9% to \$19.8 trillion from \$15.4 trillion and comprised 22.5% of European IRD traded notional. FRA traded notional fell by 22.5% to \$9.3 trillion from \$12.0 trillion and represented 10.6% of total European IRD traded notional.
- 64.0% of European IRD traded notional occurred on TVs and 22.4% was executed by SIs. The remaining 13.6% of IRD traded notional was reported as XOFF.

¹ European interest rate derivatives (IRD) trading activity is measured by IRD traded notional and trade count reported by approved publication arrangements (APAs) and trading venues (TVs) in the EU and UK. The list of APAs and TVs is included in Appendix 1

² Other currencies include Czech koruna, Japanese yen, Norwegian krone, Polish zloty, South African rand, Swedish krona and 'other'. Cross-currency swaps are also included in other currencies

³ This includes financial instruments admitted to trading or traded on a trading venue, where a transaction on that financial instrument is executed by a systematic internalizer (SI). SIs are investment firms that deal on their own account by executing client orders outside a regulated market (RM) or TV

⁴ The XOFF market identifier code is used for financial instruments admitted to trading or traded on a trading venue or for which a request for admission was made, where the transaction on that financial instrument is not executed on a trading venue, SI or organized trading platform outside of the EU and UK, or where an investment firm does not know it is trading with another investment firm acting as an SI

UK IRD Trading Activity

In the first half of 2023:

- IRD traded notional reported by APAs and TVs in the UK rose by 66.9% to \$127.6 trillion in the first half of 2023 versus \$76.5 trillion in the first half of 2022, representing 72.4% of total European IRD traded notional.
- Euro-denominated IRD traded notional increased by 43.4% to \$41.8 trillion in the first half of 2023 compared to \$29.2 trillion in the first half of 2022. Sterling-denominated IRD traded notional grew by 166.1% to \$46.4 trillion from \$17.4 trillion, while US dollar-denominated IRD rose by 6.9% to \$20.8 trillion from \$19.5 trillion. Euro- and sterling- and US-denominated transactions accounted for 32.8%, 36.4% and 16.3% of total UK IRD traded notional, respectively. Other currencies made up 14.5% of UK IRD traded notional.
- OIS traded notional rose by 101.3% to \$82.7 trillion in the first half of 2023 from \$41.1 trillion in the first half of 2022. Fixed-for-floating IRS traded notional fell by 7.3% to \$17.9 trillion from \$19.3 trillion, while FRA transactions increased by 7.5% to \$12.9 trillion from \$12.0 trillion over the same period. OIS accounted for 64.8% of total UK IRD traded notional, fixed-for-floating IRS comprised 14.0% and FRAs represented 10.1%.
- 63.5% of UK IRD traded notional took place on TVs, 27.4% was executed by SIs and 9.1% was reported as XOFF.

In the second quarter of 2023:

- IRD traded notional reported by APAs and TVs in the UK grew by 57.8% to \$63.9 trillion in the second quarter of 2023 compared to \$40.5 trillion in the second quarter of 2022, accounting for 72.7% of total European IRD traded notional.
- Euro-denominated IRD traded notional grew by 10.6% to \$18.1 trillion versus \$16.4 trillion. Sterling-denominated IRD traded notional increased by 182.7% to \$25.6 trillion from \$9.1 trillion, while US dollar-denominated IRD rose by 45.1% to \$11.9 trillion from \$8.2 trillion. Euro-, sterling- and US-denominated transactions made up 28.4%, 40.1% and 18.6% of total UK IRD traded notional, respectively. Other currencies comprised 13.0% of UK IRD traded notional.
- OIS traded notional grew by 92.9% to \$40.6 trillion from \$21.1 trillion. Fixed-for-floating IRS traded notional dropped by 13.2% to \$8.2 trillion from \$9.5 trillion, while FRA transactions fell by 34.6% to \$5.2 trillion from \$8.0 trillion. OIS accounted for 63.6% of total UK IRD traded notional, fixed-for-floating IRS comprised 12.9% and FRAs represented 8.2%.
- 68.5% of UK IRD traded notional occurred on TVs, 23.3% was executed by SIs and 8.3% was reported as XOFF.

EU IRD Trading Activity

In the first half of 2023:

- IRD traded notional reported by APAs and TVs in the EU grew by 90.0% to \$48.6 trillion in the first half of 2023 versus \$25.6 trillion in the first half of 2022, accounting for 27.6% of total European IRD traded notional.
- Euro-denominated IRD traded notional rose by 91.5% to \$37.4 trillion in the first half of 2023 compared to \$19.6 trillion in the first half of 2022 and accounted for 77.1% of total EU IRD traded notional. US dollar-denominated IRD fell by 21.9% to \$2.5 trillion from \$3.2 trillion and represented 5.1% of EU IRD traded notional. Sterling-denominated IRD comprised 0.6% of EU traded notional, while other currencies made up 17.2%.

- Fixed-for-floating IRS traded notional rose by 97.8% to \$24.9 trillion in the first half of 2023 from \$12.6 trillion in the first half of 2022. OIS traded notional increased by 160.1% to \$15.9 trillion compared to \$6.1 trillion, while FRA traded notional rose by 8.3% to \$7.0 trillion from \$6.4 trillion. OIS, FRAs and fixed-for-floating IRS comprised 32.8%, 14.3% and 51.2% of total EU IRD traded notional, respectively.
- 58.0% of EU IRD traded notional took place on TVs, 22.4% was executed by SIs and 19.7% was reported as XOFF.

In the second quarter of 2023:

- IRD traded notional reported by APAs and TVs in the EU rose by 74.4% to \$24.0 trillion in the second quarter of 2023 from \$13.7 trillion in the second quarter of 2022, accounting for 27.3% of total European IRD traded notional.
- Euro-denominated IRD traded notional grew by 69.6% to \$18.4 trillion compared to \$10.8 trillion and represented 76.7% of EU IRD traded notional. US dollar-denominated IRD fell by 19.0% to \$1.2 trillion from \$1.5 trillion and made up 5.1% of EU IRD traded notional. Sterling-denominated IRD comprised 0.5% of EU traded notional, while other currencies accounted for 17.8%.
- Fixed-for-floating IRS traded notional rose by 92.9% to \$11.6 trillion in the second quarter of 2023 from \$6.0 trillion in the second quarter of 2022. OIS traded notional grew by 125.4% to \$7.9 trillion versus \$3.5 trillion, while FRA traded notional increased by 1.7% to \$4.1 trillion from \$4.0 trillion. OIS, FRAs and fixed-for-floating IRS comprised 33.1%, 17.0% and 48.2% of total EU IRD traded notional, respectively.
- 52.1% of EU IRD traded notional occurred on TVs, 20.2% was executed by SIs and 27.7% was reported as XOFF.

European and US IRD Trading Activity

In the first half of 2023:

- IRD traded notional reported in the US rose by 16.8% to \$181.6 trillion in the first half of 2023 compared to \$155.5 trillion in the first half of 2022⁵. Combined EU, UK and US traded notional grew by 38.9% to \$357.8 trillion from \$257.5 trillion over the same period. US-reported traded notional accounted for 50.8% of the combined total, while the EU and UK made up 13.6% and 35.7%, respectively.
- Of the combined \$357.8 trillion in EU, UK and US IRD traded notional, 28.0% was denominated in US dollars, 39.2% was in euros and 17.8% was in sterling. Other currencies accounted for 15.1% of the total, with Australian dollar, Swedish krona and Canadian dollar representing the largest share.
- US dollar-denominated IRD traded notional increased by 1.7% to \$100.1 trillion in the first half of 2023 compared to \$98.4 trillion in the first half of 2022. 76.7% of US dollar-denominated IRD traded notional was reported in the US, 20.8% was reported in the UK and 2.5% was reported in the EU.
- Euro-denominated IRD traded notional rose by 43.3% to \$140.2 trillion from \$97.8 trillion, of which 26.7% was reported in the EU, 29.8% was reported in the UK and 43.5% was reported in the US.
- Sterling-denominated IRD traded notional grew by 114.4% to \$63.7 trillion compared to \$29.7 trillion. 72.9% of sterling-denominated IRD traded notional was reported in the UK, 26.7% was reported in the US and 0.5% was reported in the EU.
- OIS accounted for 58.0% of total EU, UK and US IRD traded notional, while single currency fixed-for-floating IRS and FRAs made up 20.1% and 11.5%, respectively.

In the second quarter of 2023:

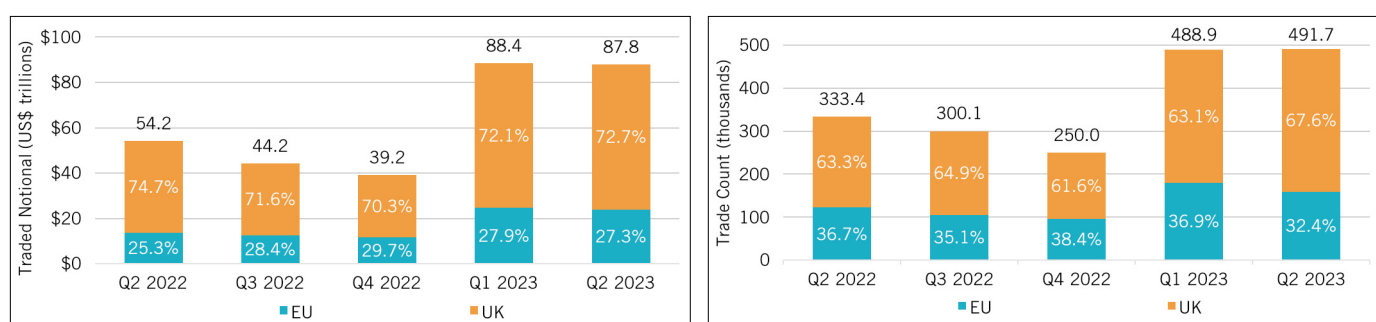
- IRD traded notional reported in the US increased by 5.7% to \$75.1 trillion in the second quarter of 2023 compared to \$71.0 trillion in the second quarter of 2022. Combined EU, UK and US traded notional rose by 30.1% to \$162.9 trillion from \$125.2 trillion over the same period. US-reported traded notional accounted for 46.1% of the combined total, while the EU and UK made up 14.7% and 39.2%, respectively.
- Of the combined \$162.9 trillion in EU, UK and US IRD traded notional, 27.0% was denominated in US dollars, 37.1% was in euros and 20.5% was in sterling. Other currencies accounted for 15.4% of the total IRD traded notional, with Australian dollar, Swedish krona and Canadian dollar representing the largest share.
- US dollar-denominated IRD traded notional rose by 6.2% to \$43.9 trillion in the second quarter of 2023 compared to \$41.3 trillion in the second quarter of 2022. 70.2% of US dollar-denominated IRD traded notional was reported in the US, 27.0% was reported in the UK and 2.8% was reported in the EU.
- Euro-denominated IRD traded notional grew by 16.5% to \$60.5 trillion from \$51.9 trillion. Reporting of euro-denominated transactions was split between the three jurisdictions, with 30.3% in the EU, 30.0% in the UK and 39.7% in the US.
- Sterling-denominated IRD traded notional rose by 122.5% to \$33.4 trillion versus \$15.0 trillion in the second quarter of 2022. 76.7% of sterling-denominated IRD traded notional was reported in the UK, 23.0% was reported in the US and 0.3% was reported in the EU.
- OIS accounted for 58.7% of total EU, UK and US IRD traded notional, while single currency fixed-for-floating IRS and FRAs comprised 19.0% and 10.1%, respectively.

EUROPEAN IRD TRADING ACTIVITY

European IRD traded notional reported by APAs and TVs in the EU and UK increased by 62.0% to \$87.8 trillion in the second quarter of 2023 versus \$54.2 trillion in the second quarter of 2022. Trade count grew by 47.5% to 491.7 thousand versus 333.4 thousand over the same period.

IRD traded notional reported in the UK accounted for 72.7% of the European total, while EU-reported traded notional comprised 27.3%. UK-reported trade count made up 67.6% of total European trade count and the EU accounted for 32.4% (see Chart 1)⁶.

Chart 1: European IRD Traded Notional and Trade Count



Source: European APAs and TVs

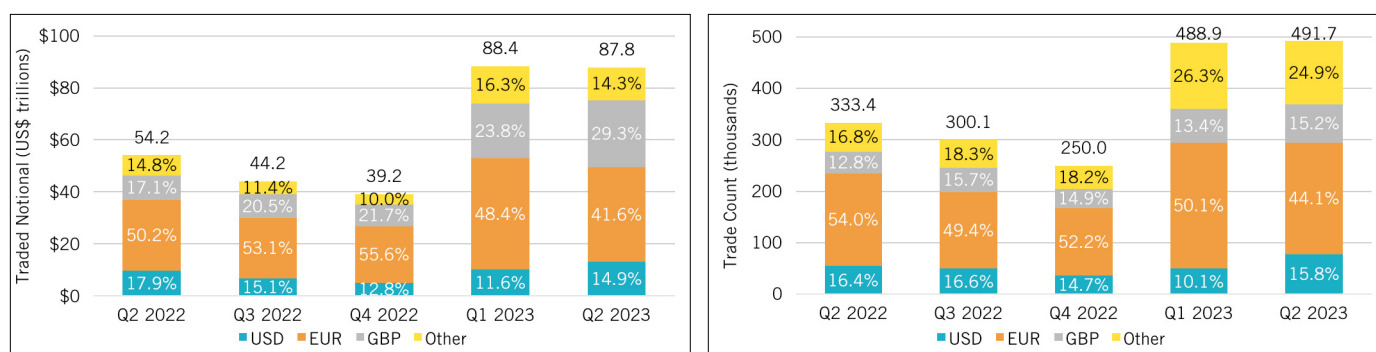
Euro-denominated IRD traded notional rose by 34.1% to \$36.5 trillion in the second quarter of 2023 from \$27.2 trillion in the second quarter of 2022 and accounted for 41.6% of total European traded notional. Euro-denominated contracts made up 44.1% of European trade count (see Chart 2).

Sterling-denominated IRD traded notional grew by 177.6% to \$25.7 trillion in the second quarter of 2023 from \$9.3 trillion in the second quarter of 2022, while US dollar IRD traded notional rose by 35.1% to \$13.1 trillion from \$9.7 trillion over the same period.

Sterling-denominated transactions comprised 29.3% of total European traded notional and 15.2% of trade count, while US dollar contracts represented 14.9% of European traded notional and 15.8% of trade count.

Other currencies accounted for 14.3% of total European IRD traded notional and 24.9% of trade count, with Swedish krona and Australian dollar representing the largest share⁷.

Chart 2: European IRD Traded Notional and Trade Count by Currency



Source: European APAs and TVs

¹ ISDA's dataset of European data starts in May 2021. See Interest Rate Derivatives Trading Activity Reported in EU, UK and US Markets: May 2021 www.isda.org/a/h6TgE/Interest-Rate-Derivatives-Trading-Activity-Reported-in-EU-UK-and-US-Markets-May-2021.pdf

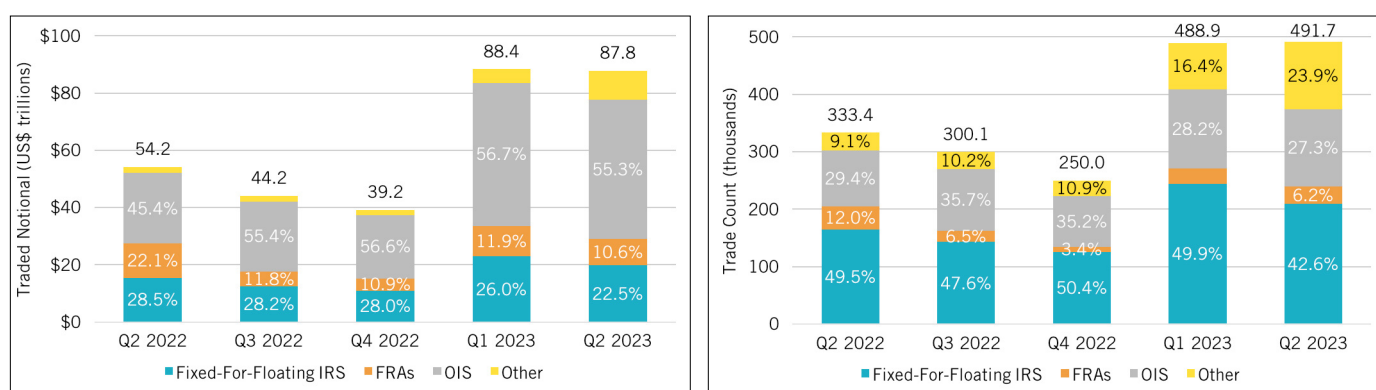
² Other currencies include South African rand, Japanese yen, Swedish krona, Norwegian krone, Polish złoty, Czech koruna and 'other'. Cross-currency swaps are also included in other currencies

OIS traded notional grew by 97.5% to \$48.6 trillion in the second quarter of 2023 from \$24.6 trillion in the second quarter of 2022 and represented 55.3% of total European IRD traded notional. OIS contracts made up 27.3% of European trade count (see Chart 3).

Fixed-for-floating IRS traded notional rose by 27.9% to \$19.8 trillion in the second quarter of 2023 from \$15.4 trillion in the second quarter of 2022. FRA traded notional fell by 22.5% to \$9.3 trillion from \$12.0 trillion over the same period.

Fixed-for-floating IRS accounted for 22.5% of total European IRD traded notional and 42.6% of trade count, while FRAs represented 10.6% and 6.2% of European traded notional and trade count, respectively.

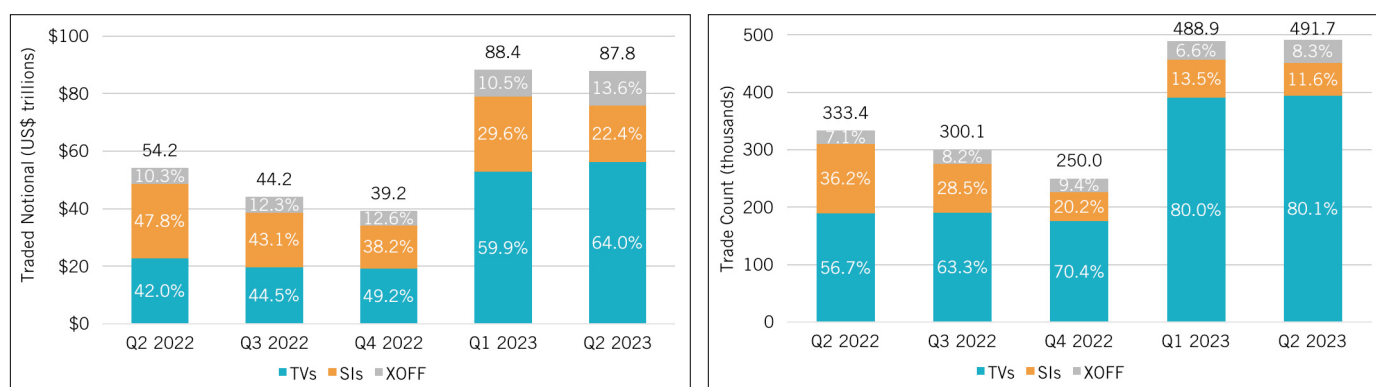
Chart 3: European IRD Traded Notional and Trade Count by Product



Source: European APAs and TVs

In the second quarter of 2023, 64.0% of European IRD traded notional and 80.1% of trade count took place on TVs, 22.4% of traded notional and 11.6% of trade count was executed by SIs, and 13.6% of traded notional and 8.3% of trade count was reported as XOFF⁹ (see Chart 4).

Chart 4: European IRD Traded Notional and Trade Count by Execution Venue



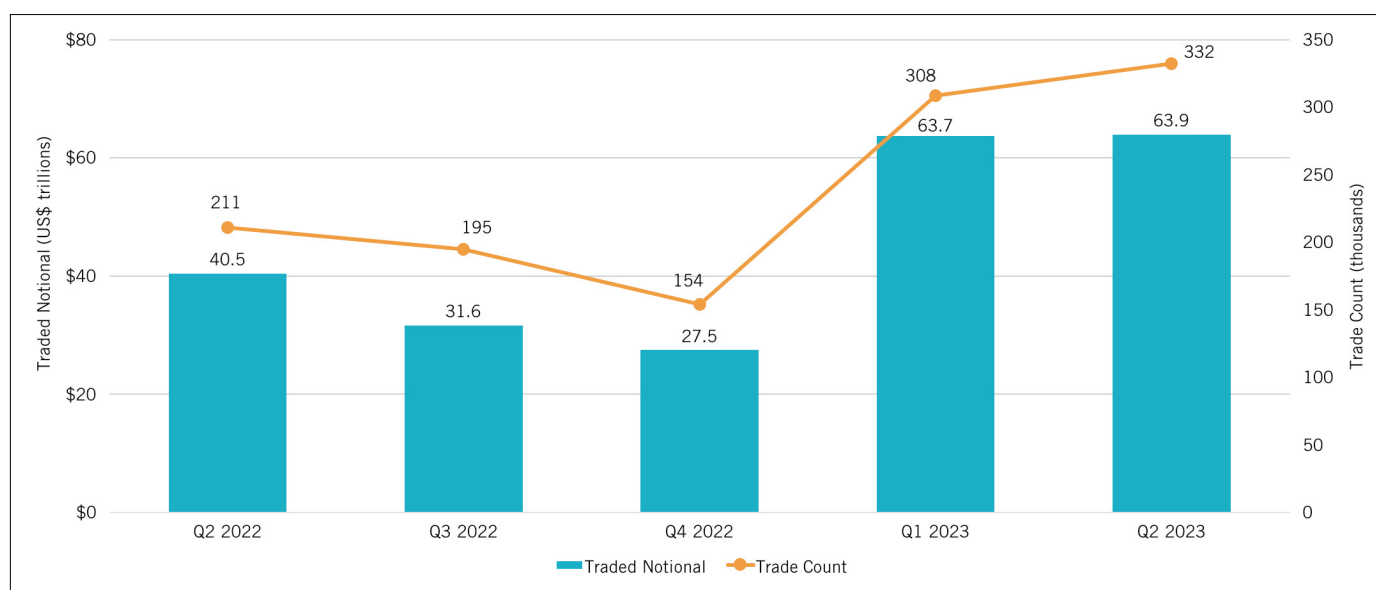
Source: European APAs and TVs

⁹ The XOFF market identifier code is used for financial instruments admitted to trading or traded on a trading venue or for which a request for admission was made, where the transaction on that financial instrument is not executed on a trading venue, SI or organized trading platform outside of the EU and UK, or where an investment firm does not know it is trading with another investment firm acting as an SI

UK IRD TRADING ACTIVITY

IRD traded notional reported by APAs and TVs in the UK grew by 57.8% to \$63.9 trillion in the second quarter of 2023 from \$40.5 trillion in the second quarter of 2022. Trade count increased by 57.5% to 332.5 thousand from 211.0 thousand over the same period (see Chart 5).

Chart 5: UK IRD Traded Notional and Trade Count



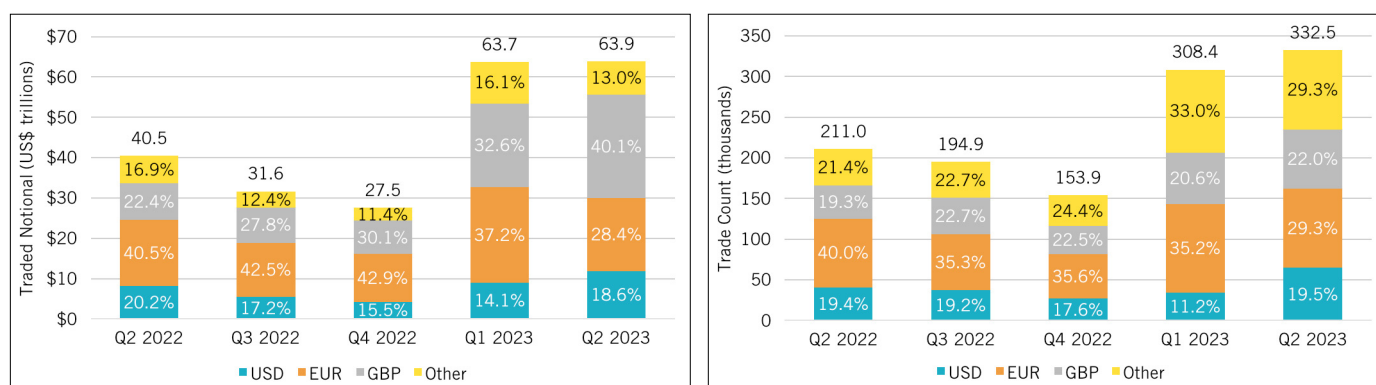
Source: European APAs and TVs

Euro-denominated IRD traded notional rose by 10.6% to \$18.1 trillion in the second quarter of 2023 from \$16.4 trillion in the second quarter of 2022. Sterling-denominated IRD traded notional grew by 182.7% to \$25.6 trillion from \$9.1 trillion and US dollar-denominated IRD traded notional increased by 45.1% to \$11.9 trillion from \$8.2 trillion.

Euro-denominated transactions represented 28.4% of total UK IRD traded notional and 29.3% of trade count, sterling-denominated IRD accounted for 40.1% of UK IRD traded notional and 22.0% of trade count, and US dollar-denominated IRD made up 18.6% and 19.5% of UK IRD traded notional and trade count, respectively (see Chart 6).

Other currencies accounted for 13.0% of total UK IRD traded notional and 29.3% of total trade count. Swedish krona and Australian dollar represented the largest share of other currencies.

Chart 6: UK IRD Traded Notional and Trade Count by Currency

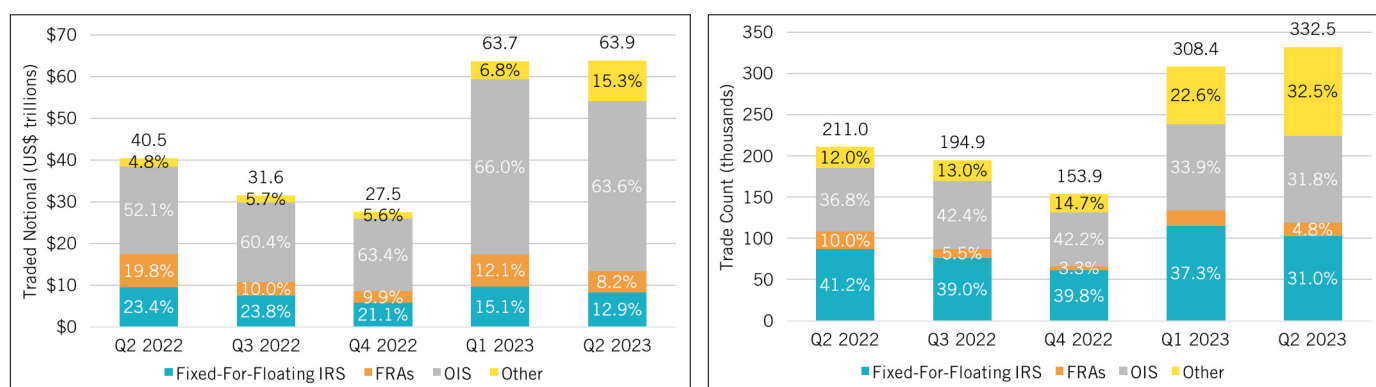


Source: European APAs and TVs

OIS traded notional grew by 92.9% to \$40.6 trillion in the second quarter of 2023 from \$21.1 trillion in the second quarter of 2022. Fixed-for-floating IRS traded notional fell by 13.2% to \$8.2 trillion from \$9.5 trillion and FRA traded notional dropped by 34.6% to \$5.2 trillion from \$8.0 trillion over the same period.

OIS transactions accounted for 63.6% of total UK IRD traded notional and 31.0% of trade count. Single currency fixed-for-floating IRS comprised 12.9% of traded notional and 31.0% of trade count, while FRAs made up 8.2% and 4.8% of UK traded notional and trade count, respectively (see Chart 7).

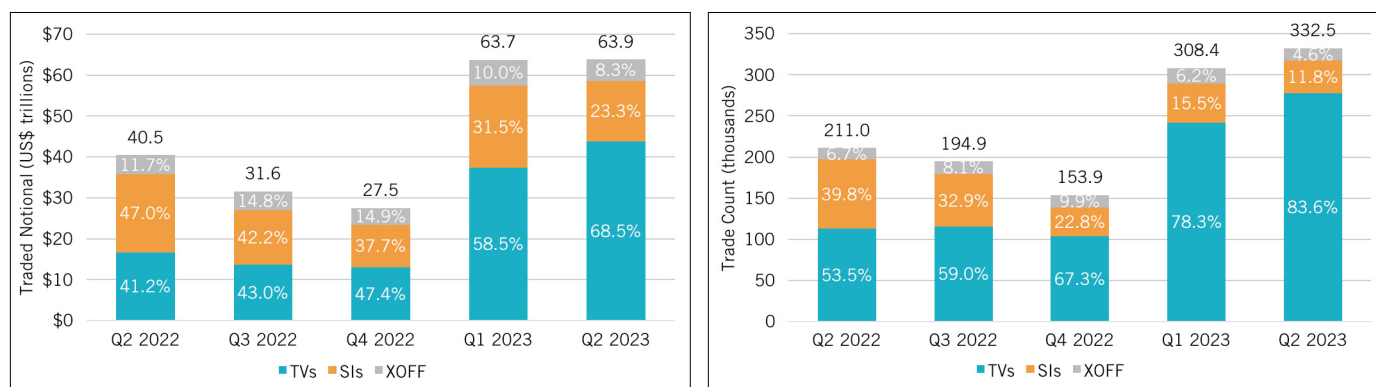
Chart 7: UK IRD Traded Notional and Trade Count by Product



Source: European APAs and TVs

In the second quarter of 2023, 68.5% of UK IRD traded notional and 83.6% of trade count occurred on TVs, 23.3% of traded notional and 11.8% of trade count was executed by SIs, and 8.3% of traded notional and 4.6% of trade count was reported as XOFF (see Chart 8).

Chart 8: UK IRD Traded Notional and Trade Count by Execution Venue

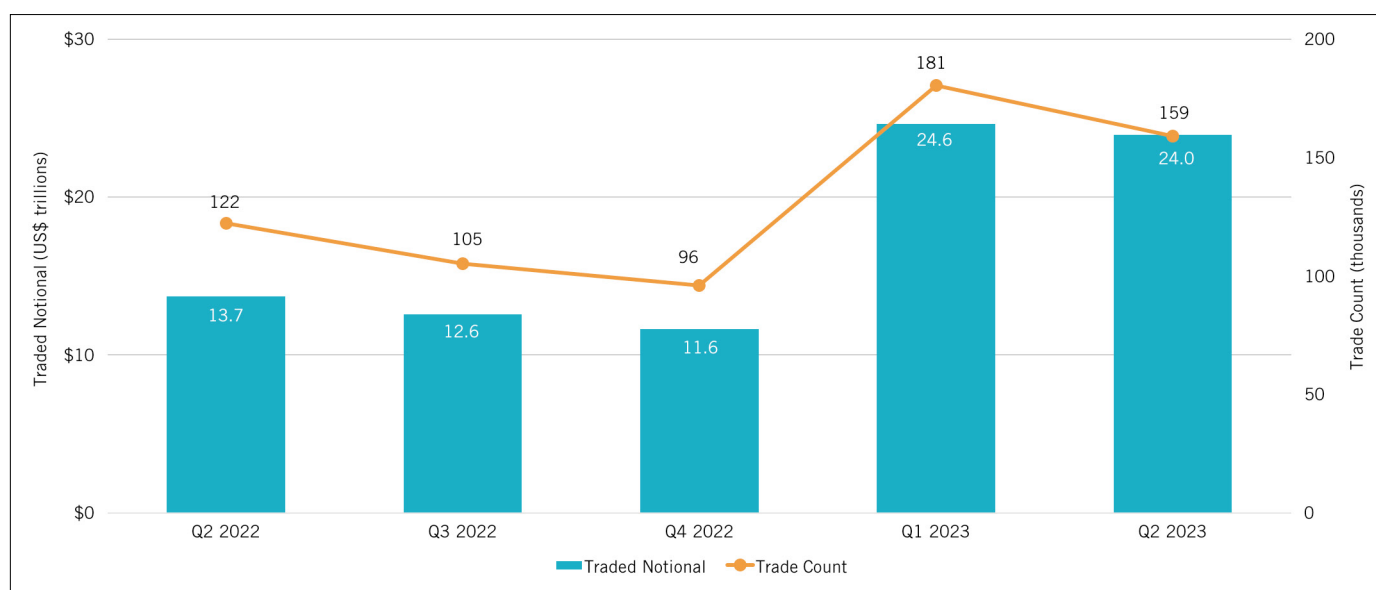


Source: European APAs and TVs

EU IRD TRADING ACTIVITY

IRD traded notional reported by APAs and TVs in the EU increased by 74.4% to \$24.0 trillion in the second quarter of 2023 versus \$13.7 trillion in the second quarter of 2022. Trade count rose by 30.2% to 159.2 thousand from 122.4 thousand over the same period (see Chart 9).

Chart 9: EU IRD Traded Notional and Trade Count



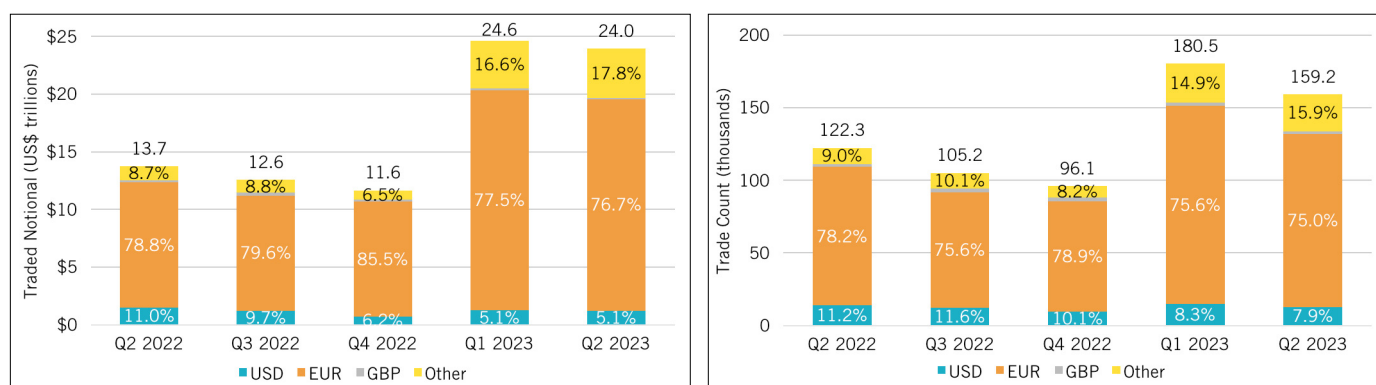
Source: European APAs and TVs

Euro-denominated IRD traded notional grew by 69.6% to \$18.4 trillion in the second quarter of 2023 from \$10.8 trillion in the second quarter of 2022 and comprised 76.7% of total EU traded notional. The number of contracts denominated in euro increased by 25.0% to 119.5 thousand from 95.6 thousand and accounted for 75.0% of EU trade count (see Chart 10).

US dollar-denominated IRD traded notional dropped by 19.0% to \$1.2 trillion in the second quarter of 2023 from \$1.5 trillion in the second quarter of 2022 and accounted for 5.1% of total EU IRD traded notional and 7.9% of trade count. Sterling-denominated transactions represented 0.5% and 1.1% of EU IRD traded notional and trade count, respectively.

Other currencies accounted for 17.8% of EU IRD traded notional and 15.9% of trade count, with Swedish krona and Australian dollar representing the largest share.

Chart 10: EU IRD Traded Notional and Trade Count by Currency



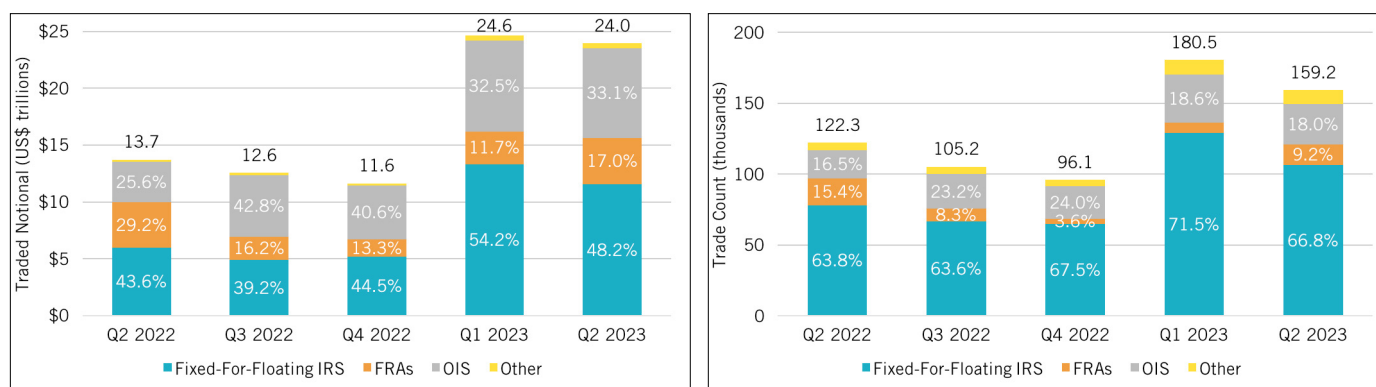
Source: European APAs and TVs

The composition of swaps reported in the EU differed from the UK, with a larger share of fixed-for-floating IRS and a smaller share of OIS.

Fixed-for-floating IRS traded notional rose by 92.9% to \$11.6 trillion in the second quarter of 2023 versus \$6.0 trillion in the second quarter of 2022 and comprised 48.2% of the EU total. Fixed-for-floating IRS made up 66.8% of EU trade count (see Chart 11).

OIS traded notional grew by 125.4% to \$7.9 trillion in the second quarter of 2023 from \$3.5 trillion in the second quarter of 2022. FRA traded notional rose by 1.7% to \$4.1 trillion from \$4.0 trillion over the same period. OIS and FRAs accounted for 33.1% and 17.0% of total EU IRD traded notional and 18.0% and 9.2% of trade count, respectively.

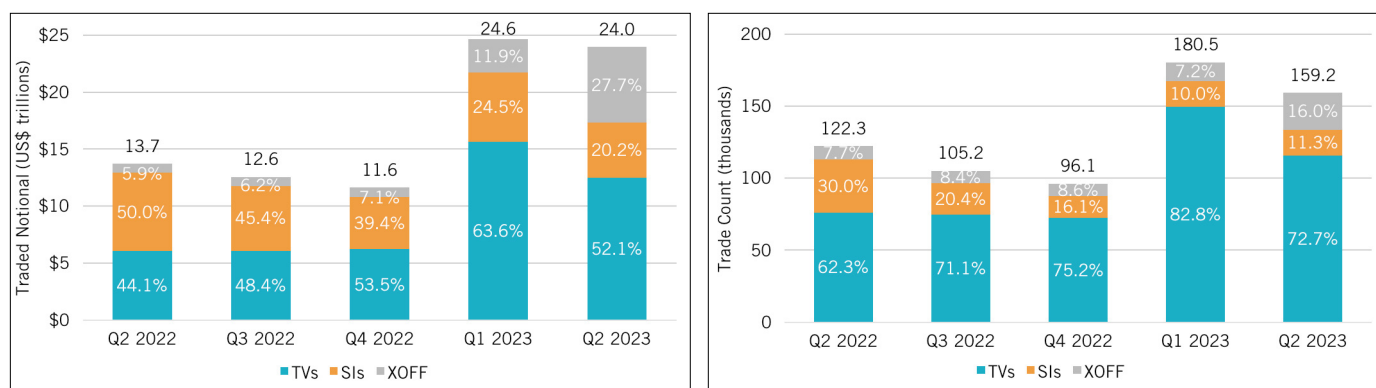
Chart 11: EU IRD Traded Notional and Trade Count by Product



Source: European APAs and TVs

In the second quarter of 2023, 52.1% of EU IRD traded notional and 72.7% of EU IRD trade count took place on TVs, 20.2% of traded notional and 11.3% of trade count was executed by SIs, and 27.7% of traded notional and 16.0% of trade count was reported as XOFF (see Chart 12).

Chart 12: EU IRD Traded Notional and Trade Count by Execution Venue

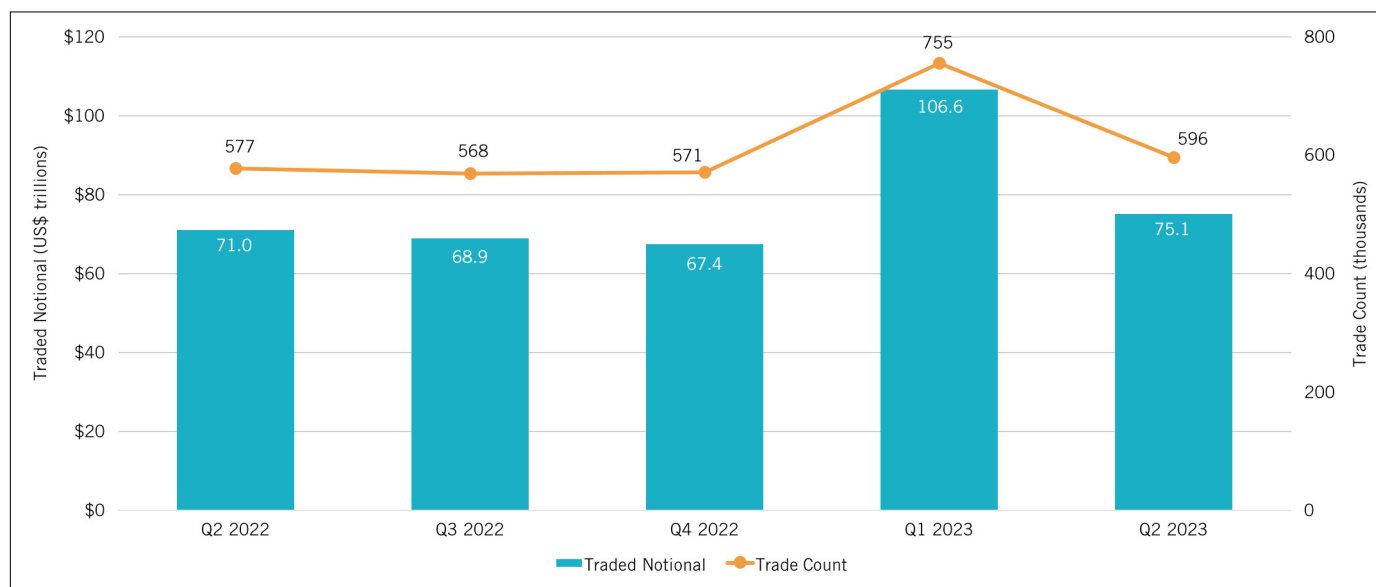


Source: European APAs and TVs

EUROPEAN AND US IRD TRADING ACTIVITY

IRD traded notional reported in the US increased by 5.7% to \$75.1 trillion in the second quarter of 2023 from \$71.0 trillion in the second quarter of 2022, while trade count rose by 3.3% to 596.3 thousand from 577.5 thousand (see Chart 13)⁹.

Chart 13: US IRD Traded Notional and Trade Count

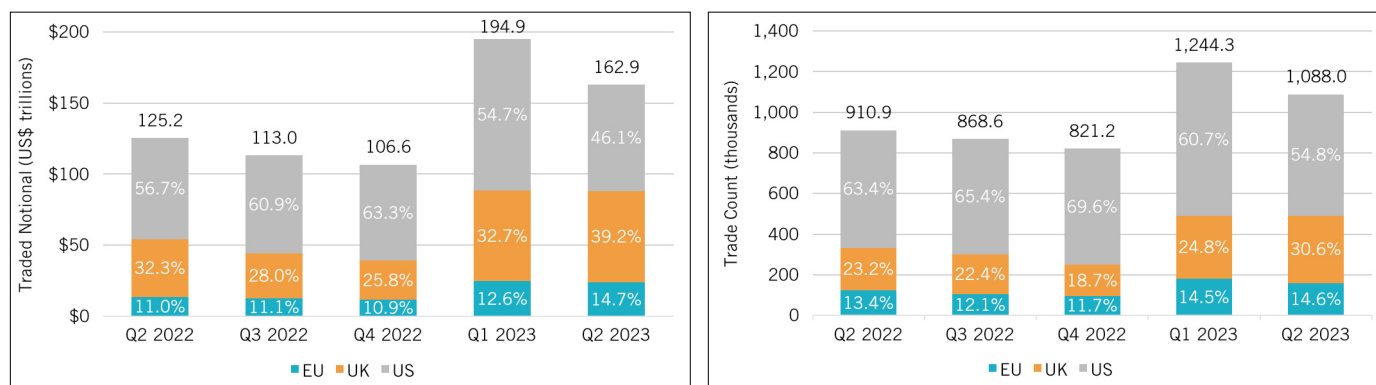


Source: DTCC SDR

Combined EU, UK and US traded notional rose by 30.1% to \$162.9 trillion from \$125.2 trillion and trade count grew by 19.4% to 1.1 million from 910.9 thousand.

US-reported IRD traded notional accounted for 46.1% of combined EU, UK and US traded notional, while the EU and UK comprised 14.7% and 39.2%, respectively. US-reported transactions represented 54.8% of total trade count, the EU made up 14.6% and the UK accounted for 30.6% (see Chart 14).

Chart 14: EU, UK and US Traded Notional and Trade Count



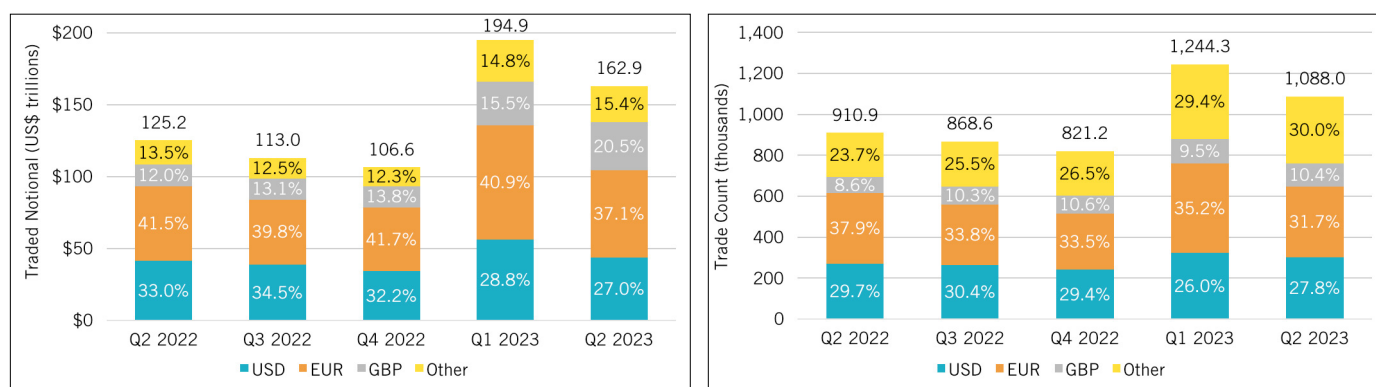
Source: DTCC SDR, European APAs and TVs

⁹ Based on data from the DTCC SDR. This data covers only transactions required to be disclosed under US Commodity Futures Trading Commission regulations. Most recent data on US trading activity is available on the ISDA SwapsInfo website <http://swapsinfo.org>

Of the combined \$162.9 trillion in EU, UK and US IRD traded notional, 37.1% was denominated in euros, 27.0% was in US dollars and 20.5% was in sterling. Of the 1.1 million in combined trade count, 31.7% was denominated in euros, 27.8% was in US dollars and 10.4% was in sterling (see Chart 15).

Other currencies accounted for 15.4% of combined IRD traded notional and 30.0% of trade count, with Australian dollar, Swedish krona and Canadian dollar representing the largest share.

Chart 15: EU, UK and US IRD Traded Notional and Trade Count by Currency

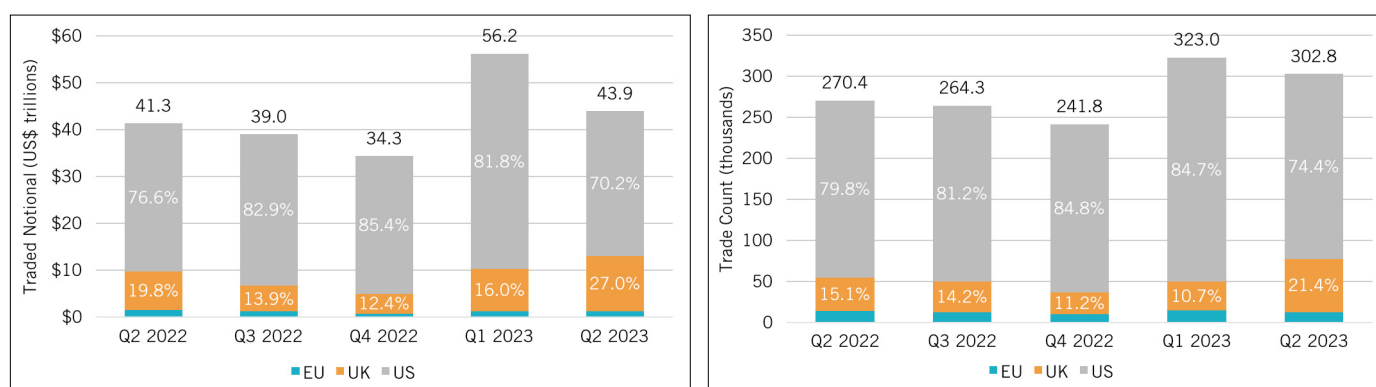


Source: DTCC SDR, European APAs and TVs

US dollar-denominated IRD traded notional rose by 6.2% to \$43.9 trillion in the second quarter of 2023 from \$41.3 trillion in the second quarter of 2022. Trade count increased by 12.0% to 302.8 thousand from 270.4 thousand over the same period.

70.2% of US dollar-denominated IRD traded notional and 74.4% of trade count was reported in the US, while 27.0% of US dollar traded notional and 21.4% of trade count was reported in the UK (see Chart 16).

Chart 16: Combined US Dollar-denominated IRD Traded Notional and Trade Count by Jurisdiction

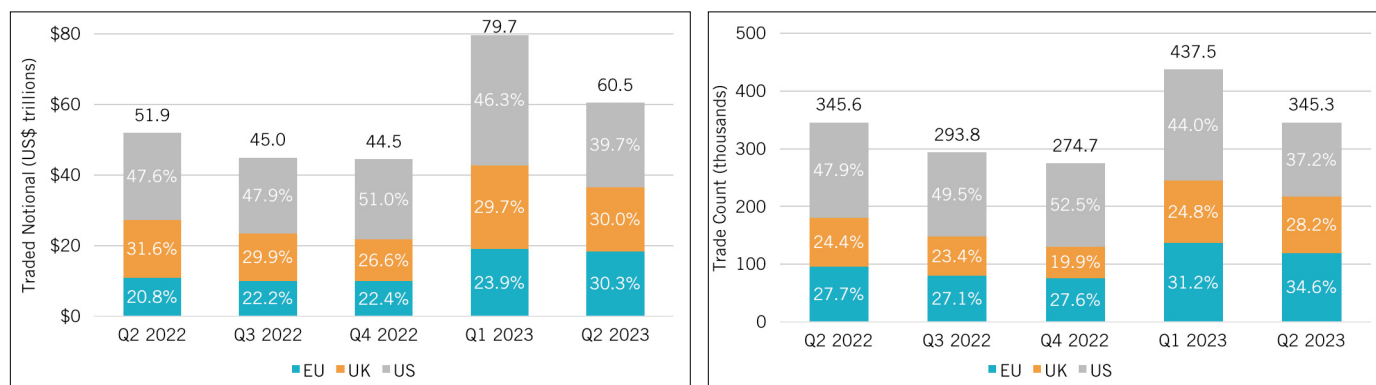


Source: DTCC SDR, European APAs and TVs

Euro-denominated IRD traded notional grew by 16.5% to \$60.5 trillion in the second quarter of 2023 from \$51.9 trillion in the second quarter of 2022, while trade count fell by 0.1% to 345.3 thousand from 345.6 thousand.

Reporting of euro-denominated IRD transactions was split between the three jurisdictions: 30.3% of traded notional and 34.6% of trade count was reported in the EU, 30.0% of traded notional and 28.2% of trade count was reported in the UK, and 39.7% of traded notional and 37.2% of trade count was reported in the US (see Chart 17).

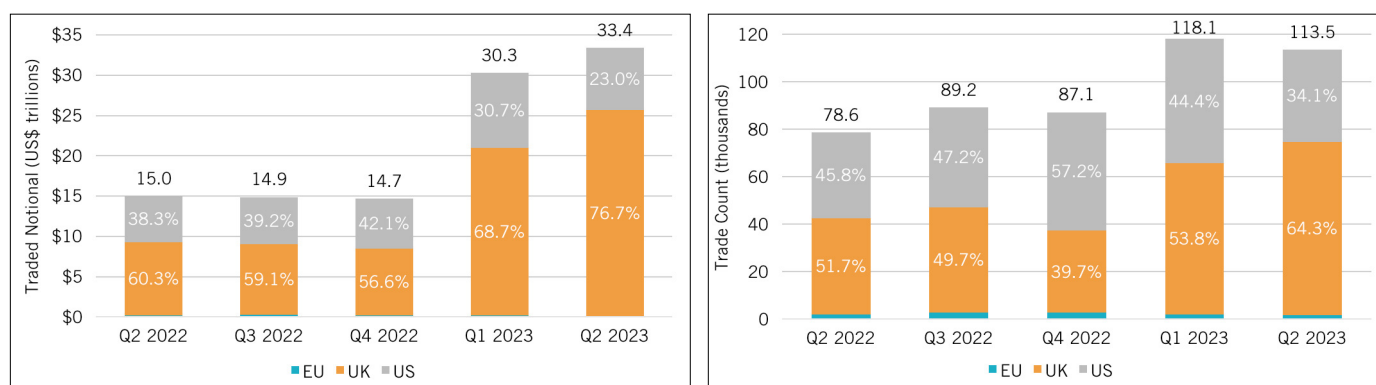
Chart 17: Combined Euro-denominated IRD Traded Notional and Trade Count by Jurisdiction



Source: DTCC SDR, European APAs and TVIs

Sterling-denominated IRD traded notional rose by 122.5% to \$33.4 trillion in the second quarter of 2023 from \$15.0 trillion the second quarter of 2022, while trade count grew by 44.4% to 113.5 thousand from 78.6 thousand. 76.7% of sterling-denominated IRD traded notional and 64.3% of trade count was reported in the UK, and 23.0% of traded notional and 34.1% of trade count was reported in the US (see Chart 18).

Chart 18: Combined Sterling-denominated IRD Traded Notional and Trade Count by Jurisdiction



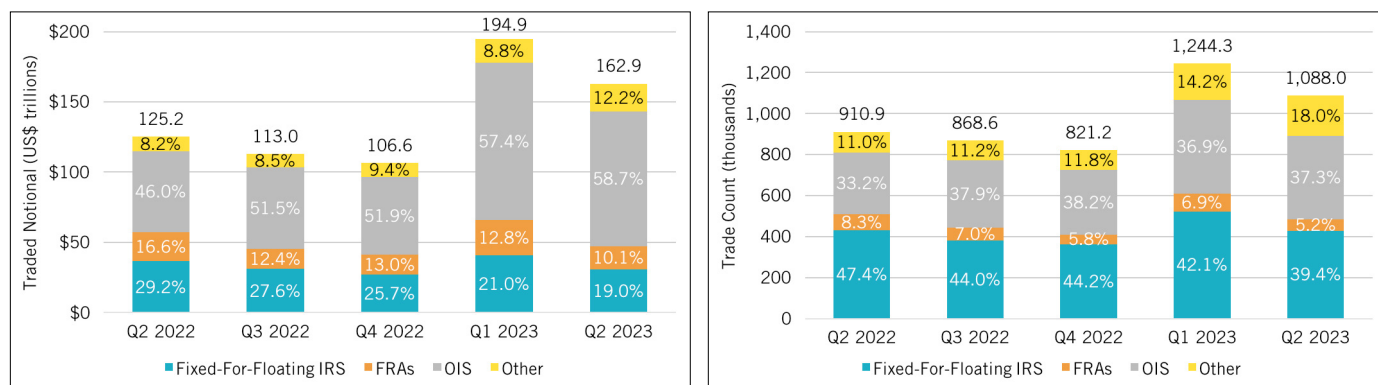
Source: DTCC SDR, European APAs and TVIs

OIS traded notional rose by 66.0% to \$95.6 trillion in the second quarter of 2023 from \$57.6 trillion in the second quarter of 2022 and represented 58.7% of combined IRD traded notional. OIS trade count increased by 34.3% to 406.2 thousand from 302.4 thousand and accounted for 37.3% of the combined total (see Chart 19).

Single currency fixed-for-floating IRS traded notional fell by 15.3% to \$31.0 trillion in the second quarter of 2023 from \$36.6 trillion in the second quarter of 2022. Trade count dropped by 0.8% to 428.7 thousand from 432.1 thousand over the same period. Fixed-for-floating IRS represented 19.0% of combined EU, UK and US traded notional and 39.4% of trade count.

FRA traded notional decreased by 21.1% to \$16.4 trillion in the second quarter of 2023 from \$20.8 trillion in the second quarter of 2022. FRA trade count fell by 24.7% to 57.1 thousand from 75.8 thousand over the same period. FRAs made up 10.1% of combined EU, UK and US IRD traded notional and 5.2% of trade count.

Chart 19: EU, UK and US IRD Traded Notional and Trade Count by Product



Source: DTCC SDR, European APAs and TVs

APPENDIX 1: LIST OF MAJOR VENUES REPORTING OTC IRD TRANSACTIONS INCLUDED IN THE ISDA EUROPEAN IRD MARKETS DATASET

Venue Name	Venue Type	MIC	Region
Aurel BGC Paris	OTF	AURO	EU
BGC Brokers LP	OTF	BGCO	UK
Bloomberg BV APA	APA	BAPE	EU
Bloomberg BV MTF	MTF	BTFE	EU
Bloomberg UK APA	APA	BAPA	UK
Bloomberg UK MTF	MTF	BMTF	UK
GFI Brokers Limited	OTF	GFBO	UK
GFI Paris	OTF	GFPO	EU
GFI Securities Limited	OTF	GFSO	UK
ICAP EU OTF	OTF	ICOT	EU
ICAP Global Derivatives MTF	MTF	IGDL	UK
ICAP Securities OTF	OTF	IOTF	UK
iSWAP EU MTF	MTF	ISWP	EU
TP ICAP EU MTF	MTF	TPIC	EU
TP ICAP UK MTF	MTF	ICPM	UK
TRADEcho NL	APA	ECEU	EU
TRADEcho UK	APA	ECHO	UK
Tradeweb BV APA	APA	TWEA	EU
Tradeweb BV MTF	MTF	TWEM	EU
Tradeweb UK APA	APA	TREA	UK
Tradeweb UK MTF	MTF	TREU	UK
Tradition	OTF	TCDS	UK
Trad-X EU	MTF	TRXE	EU
Trad-X UK	MTF	TRDX	UK
Trax APA	APA	TRAX	UK
Trax NL APA	APA	TRNL	EU
TSAF OTC	OTF	TSAF	EU
Tullett Prebon EU OTF	OTF	TPEU	EU
Tullett Prebon Europe MTF	MTF	TPEL	UK
Tullett Prebon Europe OTF	OTF	TPEO	UK

APPENDIX 2: METHODOLOGY

European Data

ISDA's analysis of European-reported IRD trading data is based on transactions publicly reported by eight European APAs and 22 TVS¹⁰.

Under European post-trade reporting requirements, "[i]nvestment firms which, either on own account or on behalf of clients, conclude transactions in bonds, structured finance products, emission allowances and derivatives traded on a trading venue shall make public the volume and price of those transactions and the time at which they were concluded"¹¹.

Trade information must be publicly disseminated either through an APA or by a TV through which a transaction was executed¹². As of August 2022, there were 15 active APAs registered on the European Securities and Markets Authority's (ESMA) website¹³. In the UK, there were five APAs registered by the Financial Conduct Authority (FCA)¹⁴.

While ISDA's data set doesn't include all APAs and TVS that are registered with ESMA and the FCA, the trades reported by the 30 APAs and TVS included in this analysis are believed to cover most over-the-counter (OTC) IRD activity in Europe.

UK IRD trading activity is measured by IRD traded notional and trade count reported by APAs and TVS located in the UK, while EU IRD trading activity is measured by IRD traded notional and trade count reported by APAs and TVS located in the EU. Of the 30 APAs and TVS covered by this analysis, 17 are located in the UK and 13 are located in the EU.

To collect the data, ISDA set up daily feeds from the eight APAs and 22 TVS¹⁵. ISDA also set up a data feed from the Association of National Numbering Agencies' Derivatives Service Bureau to download new International Securities Identification Numbers (ISINs) for IRD transactions¹⁶. By matching IRD ISINs with all daily reported transactions that include various asset classes (equity, fixed income derivatives, etc), ISDA eliminated all non-IRD transactions and kept only the IRD data.

Using ISIN data, ISDA identified IRD instrument type (swap, option, forward, etc), IRD product taxonomy (fixed-for-floating IRS, FRAs, OIS, etc), underlying reference rate and tenor. Using trade details published by APAs and TVS, ISDA identified publication ID, trade data, publication data, venue of execution, notional amount, notional currency, cleared status and supplementary flags.

The ISDA data set includes only new trades. All cancelled transactions are removed and amended trades are updated using the original ID field. Transactions reported with a four-week aggregation flag and volume omission flag are also removed from the data set.

Reported notional is converted to US dollars based on daily foreign exchange (FX) rates. All reported transactions are aggregated on a daily basis. Monthly traded notional referenced in this report represents the sum of converted traded notional of all transactions executed during the month. Monthly trade count represents the number of all transactions executed during the month.

Due to post-trade transparency deferrals, the majority of European transactions are published with a four- to five-week delay.

¹⁰ The list of APAs and TVS is included in Appendix 1

¹¹ Markets in Financial Instruments Regulation Article 21 www.esma.europa.eu/databases-library/interactive-single-rulebook/clone-mifir/article-21

¹² See Appendix 2 in the Interest Rate Derivatives Trading Activity Reported in EU, UK and US Markets: May 2021 for more detailed information on post-trade reporting requirements in Europe and US www.isda.org/a/MdMgE/Interest-Rate-Derivatives-Trading-Activity-Reported-in-EU-UK-and-US-Markets.pdf

¹³ European Securities and Markets Authority (ESMA) List of Registers https://registers.esma.europa.eu/publication/searchRegister?core=esma_registers_upreg

¹⁴ Financial Conduct Authority, The Financial Services Register https://register.fca.org.uk/s/resources#Other_registers

¹⁵ Most APAs and TVS display data only for a short period of time and no historical data is available

¹⁶ Most APAs and TVS don't disclose asset class data and publish all transactions ISINs

US Data

Analysis of US IRD is based on data from the DTCC SDR that only covers transactions required to be disclosed under US CFTC regulations¹⁷.

In the US, the CFTC swap reporting rules were finalized in December 2011 and required all traded swaps to be reported by the end of 2013. These rules require key swap transaction and pricing data to be reported to US-registered SDRs as soon as technologically practicable after execution.

There are three major SDRs in the US: DTCC SDR (reports all asset classes); CME (reports all asset classes except for equity); and ICE Trade Vault (reports credit, FX and commodities)¹⁸. Almost all OTC IRD are reported by the DTCC SDR.

The DTCC SDR reports execution time stamp, effective date, expiration date, asset class, product taxonomy, notional amount, notional currency, underlying reference rate, execution venue, cleared status and other trade details¹⁹.

ISDA analysis includes only new transactions. All cancelled transactions are removed and amended trades are updated using the dissemination ID field. Reported notional is converted to US dollars based on daily FX rates. All reported transactions are aggregated on a daily basis.

Delays in reporting (generally 15 or 30 minutes, with a maximum of 24 business hours) are allowed for block trades (transactions with a notional above the minimum block size for the relevant asset class) and large notional trades.

Data Limitations

While ISDA believes this data covers the majority of OTC IRD transactions in Europe, it doesn't capture 100% of the market. First, it doesn't cover all APAs and TVs that are registered with ESMA and the FCA. Second, it captures only transactions that are subject to post-trade transparency reporting requirements. OTC derivatives that are not traded on TVs are considered 'traded on a trading venue' (TOTV) – and are therefore subject to the reporting and transparency requirements – if they share the same reference data details as derivatives traded on TVs²⁰. Therefore, OTC derivatives not traded on TVs that are not TOTV are not captured.

When European counterparties face US entities on a swap execution facility (SEF), ESMA does not require EU firms to systematically republish information in the EU about transactions executed on TVs outside the EU that are subject to transparency provisions similar to those applicable to EU TVs. Under US rules, SEFs are required to send relevant trade details to an SDR for real-time public dissemination²¹. Therefore, these trades will be captured in US trading activity only, resulting in a potential understatement of European traded notional.

Trades executed on multilateral trading facilities (MTFs) and organized trading facilities (OTFs) between EU and US counterparties may be disseminated to the public twice. Since EU and US reporting rules have not been determined equivalent, trades executed on MTFs and OTFs are viewed as off-facility transactions for US real-time reporting purposes and are subject to the CFTC reporting rules. At the same time, MTFs and OTFs have an obligation to send trade details for public dissemination. Therefore, these trades may be double counted in European and US combined trading activity analysis.

¹⁷ CFTC 17 CFR Part 43 Real-Time Public Reporting of Swap Transaction Data www.cftc.gov/sites/default/files/idc/groups/public/@lrfederalregister/documents/file/2011-33173a.pdf

¹⁸ Bloomberg SDR was closed in August 2018 and all transactions were moved to DTCC SDR

¹⁹ DTCC SDR services <https://pddata.dtcc.com/gtr/cftc/dashboard.do>

²⁰ ESMA Clarifies Traded On a Trading Venue Under MIFID II www.esma.europa.eu/press-news/esma-news/esma-clarifies-traded-trading-venue-under-mifid-ii

²¹ A Practical Guide to Navigating Derivatives Trading on US/EU Recognized Trading Venues www.isda.org/a/CRmEE/ISDA-Publishes-Guide-to-Trading-on-US-EU-Trading-Venues-FINAL.pdf

The majority of block trades and large notional off-facility swaps (LNOFs) are reported to the DTCC SDR with a capped notional. Block trades and LNOFs are transactions above a designated notional threshold (block size). These transactions are reported with a delay at the capped amounts (cap size). As ISDA cleans up DTCC SDR data, all transactions that are reported with a '+' indicating a block trade are counted at the minimum notional. For example, a transaction reported with \$1,000,000+ notional would be counted as \$1,000,000 traded notional. As the result, total DTCC IRD traded notional is likely to be understated.



ISDA has published other recent research papers:

- ***SwapsInfo First Half of 2023 and the Second Quarter of 2023 Review***

www.isda.org/a/HAogE/SwapsInfo-First-Half-of-2023-and-Second-Quarter-of-2023-Review-Full-Report.pdf

- ***Transition to RFRs Review: First Half of 2023 and the Second Quarter of 2023***

www.isda.org/a/p9ogE/Transition-to-RFRs-Review-First-Half-of-2023-and-the-Second-Quarter-of-2023.pdf

- ***ISDA Survey on OTC Derivatives in Emerging and Developing Markets***

www.isda.org/a/qfогE/ISDA-Survey-on-OTC-Derivatives-in-Emerging-and-Developing-Markets.pdf

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