



Research Note

Interest Rate Derivatives Trading Activity Reported in EU, UK and US Markets: Full Year 2023 and the Fourth 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 full year 2023:

- European IRD traded notional reported by APAs and TVs in the EU and UK rose by 16.4% to \$197.0 trillion in 2023 from \$169.3 trillion in 2022.
- Euro-denominated IRD traded notional increased by 35.1% to \$119.4 trillion from \$88.4 trillion and accounted for 60.6% of total European IRD traded notional. Contracts denominated in US dollars fell by 3.9% to \$32.9 trillion in 2023 from \$34.3 trillion in 2022, representing 16.7% of European IRD traded notional. Sterling-denominated traded notional dropped by 5.5% to \$26.6 trillion from \$28.2 trillion and comprised 13.5% of the European total. Other currencies made up 9.1% of total European IRD traded notional².
- Overnight index swaps (OIS) traded notional rose by 37.9% to \$117.9 trillion in 2023 from \$85.5 trillion in 2022, accounting for 59.9% of the European total. Fixed-for-floating interest rate swaps (IRS) traded notional dropped by 13.0% to \$44.1 trillion from \$50.6 trillion and comprised 22.4% of total European IRD traded notional. Forward rate agreement (FRA) traded notional grew by 0.5% to \$26.5 trillion from \$26.4 trillion and represented 13.4% of the European total.
- 33.8% of European IRD traded notional occurred on TVs and 43.2% was executed by systematic internalizers (SIs)³. The remaining 23.0% of IRD traded notional was reported as XOFF⁴.

In the fourth quarter of 2023:

- European IRD traded notional reported by APAs and TVs in the EU and UK rose by 25.6% to \$43.7 trillion in the fourth quarter of 2023 from \$34.8 trillion in the fourth quarter of 2022.
- Euro-denominated IRD traded notional increased by 38.9% to \$27.6 trillion in the fourth quarter of 2023 compared to \$19.8 trillion in the fourth quarter of 2022, representing 63.1% of total European IRD traded notional. Contracts denominated in US dollars grew by 28.5% to \$6.4 trillion from \$5.0 trillion, equating to 14.7% of European IRD traded notional. Sterling-denominated traded notional fell by 29.1% to \$4.7 trillion from \$6.7 trillion and comprised 10.9% of the European total. Other currencies made up 11.3% of total European IRD traded notional.
- OIS traded notional rose by 30.5% to \$25.9 trillion from \$19.8 trillion and accounted for 59.2% of the European total. Fixed-for-floating IRS traded notional increased by 17.8% to \$11.4 trillion from \$9.7 trillion and comprised 26.2% of European traded notional. FRA traded notional grew by 9.9% to \$4.3 trillion from \$3.9 trillion and represented 9.8% of the European total.
- 36.0% of European IRD traded notional occurred on TVs and 39.9% was executed by SIs. The remaining 24.2% 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 full year 2023:

- IRD traded notional reported by APAs and TVs in the UK rose by 4.5% to \$129.2 trillion in 2023 compared to \$123.6 trillion in 2022, representing 65.6% of total European IRD traded notional.
- Euro-denominated IRD traded notional grew by 15.6% to \$60.1 trillion from \$52.0 trillion, US-dollar-denominated IRD fell by 2.5% to \$28.4 trillion from \$29.1 trillion and sterling-denominated IRD traded notional dropped by 5.0% to \$26.0 trillion from \$27.3 trillion. Euro-, sterling- and US-dollar-denominated transactions accounted for 46.5%, 20.1% and 22.0% of total UK IRD traded notional, respectively. Other currencies represented 11.4% of the UK total.
- OIS traded notional increased by 22.5% to \$85.7 trillion from \$70.0 trillion. Fixed-for-floating IRS traded notional dropped by 25.8% to \$23.0 trillion from \$30.9 trillion, while FRA transactions fell by 22.4% to \$12.9 trillion from \$16.7 trillion. OIS accounted for 66.4% of total UK IRD traded notional, fixed-for-floating IRS comprised 17.8% and FRAs represented 10.0%.
- 36.2% of UK IRD traded notional took place on TVs, 46.1% was executed by SIs and 17.7% was reported as XOFF.

In the fourth quarter of 2023:

- IRD traded notional reported by APAs and TVs in the UK rose by 7.1% to \$26.1 trillion in the fourth quarter of 2023 compared to \$24.4 trillion in the fourth quarter of 2022, representing 59.7% of total European IRD traded notional.
- Euro-denominated IRD traded notional increased by 12.9% to \$12.3 trillion in the fourth quarter of 2023 compared to \$10.9 trillion in the fourth quarter of 2022. US-dollar-denominated IRD grew by 21.6% to \$5.2 trillion from \$4.3 trillion, while sterling-denominated IRD traded notional dropped by 30.3% to \$4.5 trillion from \$6.5 trillion. Euro-, sterling- and US-dollar-denominated transactions accounted for 47.2%, 17.4% and 19.9% of total UK IRD traded notional, respectively. Other currencies comprised 15.5% of the UK total.
- OIS traded notional rose by 9.5% to \$16.8 trillion from \$15.4 trillion, fixed-for-floating IRS traded notional increased by 3.3% to \$5.5 trillion from \$5.4 trillion and FRA traded notional fell by 21.8% to \$1.9 trillion from \$2.4 trillion. OIS accounted for 64.4% of total UK IRD traded notional, fixed-for-floating IRS comprised 21.2% and FRAs represented 7.3%.
- 42.3% of UK IRD traded notional took place on TVs, 38.1% was executed by SIs and 19.5% was reported as XOFF.

EU IRD Trading Activity

In the full year 2023:

- IRD traded notional reported by APAs and TVs in the EU rose by 48.4% to \$67.8 trillion in 2023 versus \$45.7 trillion in 2022, accounting for 34.4% of total European IRD traded notional.
- Euro-denominated IRD traded notional increased by 62.9% to \$59.4 trillion from \$36.4 trillion and accounted for 87.6% of total EU IRD traded notional. US-dollar-denominated IRD dropped by 11.8% to \$4.5 trillion from \$5.1 trillion and represented 6.7% of EU IRD traded notional. Sterling-denominated IRD comprised 1.0% of EU traded notional, while other currencies accounted for 4.8%.

- OIS traded notional grew by 108.0% to \$32.2 trillion in 2023 from \$15.5 trillion in 2022, fixed-for-floating IRS traded notional increased by 7.1% to \$21.1 trillion from \$19.7 trillion and FRA traded notional rose by 39.9% to \$13.5 trillion from \$9.7 trillion. OIS, fixed-for-floating IRS and FRAs made up 47.4%, 31.2% and 20.0% of total EU IRD traded notional, respectively.
- 29.2% of EU IRD traded notional took place on TVs, 37.7% was executed by SIs and 33.1% was reported as XOFF.

In the fourth quarter of 2023:

- IRD traded notional reported by APAs and TVs in the EU grew by 68.7% to \$17.6 trillion in the fourth quarter of 2023 versus \$10.4 trillion in the fourth quarter of 2022, accounting for 40.3% of total European IRD traded notional.
- Euro-denominated IRD traded notional rose by 70.8% to \$15.2 trillion in the fourth quarter of 2023 from \$8.9 trillion in the fourth quarter of 2022 and accounted for 86.7% of total EU IRD traded notional. US-dollar-denominated IRD increased by 69.1% to \$1.2 trillion from \$726.5 billion and represented 7.0% of EU IRD traded notional. Sterling-denominated IRD comprised 1.2% of the EU total, while other currencies made up 5.1%.
- OIS traded notional grew by 103.2% to \$9.0 trillion versus \$4.5 trillion, fixed-for-floating IRS traded notional rose by 35.8% to \$5.9 trillion from \$4.4 trillion and FRA traded notional increased by 63.5% to \$2.4 trillion from \$1.4 trillion. OIS, fixed-for-floating IRS and FRAs comprised 51.4%, 33.6% and 13.5% of total EU IRD traded notional, respectively.
- 26.5% of EU IRD traded notional took place on TVs, 42.4% was executed by SIs and 31.0% was reported as XOFF.

European and US IRD Trading Activity

In the full year 2023:

- IRD traded notional reported in the US increased by 11.2% to \$324.5 trillion in 2023 compared to \$291.9 trillion in 2022⁵. Combined EU, UK and US traded notional rose by 13.1% to \$521.5 trillion from \$461.2 trillion. US-reported traded notional accounted for 62.2% of the combined total, while the EU and UK made up 13.0% and 24.8%, respectively.
- Of the combined \$521.5 trillion in EU, UK and US IRD traded notional, 32.3% was denominated in US dollars, 43.4% was in euros and 10.8% was in sterling. Other currencies accounted for 13.5% of the total, with Australian dollar, Canadian dollar and Japanese yen representing the largest share.
- US-dollar-denominated IRD traded notional fell by 1.9% to \$168.4 trillion in 2023 compared to \$171.7 trillion in 2022. 80.5% of US-dollar-denominated IRD traded notional was reported in the US, 16.9% was reported in the UK and 2.7% was reported in the EU.
- Euro-denominated IRD traded notional rose by 24.4% to \$226.2 trillion from \$181.8 trillion. Reporting of euro-denominated transactions was split between the three jurisdictions, with 26.6% reported in the UK, 26.2% reported in the EU and 47.2% reported in the US.
- Sterling-denominated IRD traded notional increased by 8.5% to \$56.5 trillion compared to \$52.0 trillion. 46.0% of sterling-denominated IRD traded notional was reported in the UK, 52.8% was reported in the US and 1.2% was reported in the EU.
- OIS accounted for 61.8% of total EU, UK and US IRD traded notional, while single currency fixed-for-floating IRS and FRAs made up 17.9% and 10.6%, respectively.

⁵ Based on data from the Depository Trust & Clearing Corporation (DTCC) swap data repository (SDR). This data covers only transactions required to be disclosed under US Commodity Futures Trading Commission (CFTC) regulations. Most recent data on US trading activity is available on the ISDA SwapsInfo website <http://swapsinfo.org>

In the fourth quarter of 2023:

- IRD traded notional reported in the US rose by 7.5% to \$72.4 trillion in the fourth quarter of 2023 compared to \$67.4 trillion in the fourth quarter of 2022. Combined EU, UK and US traded notional grew by 13.7% to \$116.1 trillion from \$102.2 trillion. US-reported traded notional accounted for 62.4% of the combined total, while the EU and UK made up 15.2% and 22.5%, respectively.
- Of the combined \$116.1 trillion in EU, UK and US IRD traded notional, 32.9% was denominated in US dollars, 42.8% was in euros and 8.4% was in sterling. Other currencies accounted for 15.9% of the total, with Australian dollar, Canadian dollar and Japanese yen representing the largest share.
- US-dollar-denominated IRD traded notional increased by 11.8% to \$38.2 trillion compared to \$34.2 trillion. 83.2% of US-dollar-denominated IRD traded notional was reported in the US, 13.6% was reported in the UK and 3.2% was reported in the EU.
- Euro-denominated IRD traded notional rose by 16.6% to \$49.7 trillion from \$42.6 trillion, of which 30.7% was reported in the EU, 24.8% was reported in the UK and 44.5% was reported in the US.
- Sterling-denominated IRD traded notional fell by 24.3% to \$9.7 trillion from \$12.9 trillion. 46.5% of sterling-denominated IRD traded notional was reported in the UK, 51.2% was reported in the US and 2.2% was reported in the EU.
- OIS accounted for 63.3% of total EU, UK and US IRD traded notional, while single currency fixed-for-floating IRS and FRAs made up 19.6% and 6.9%, respectively.

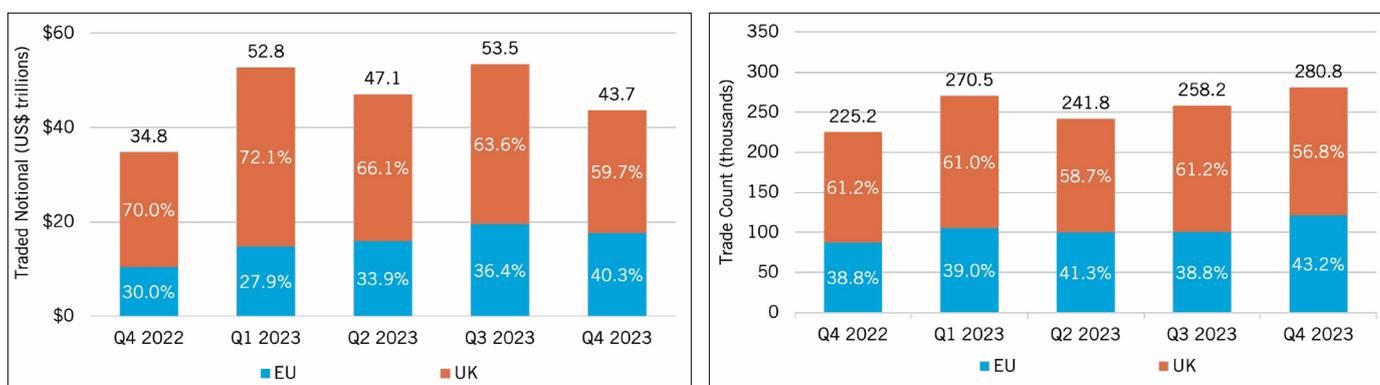
EUROPEAN IRD TRADING ACTIVITY

In the fourth quarter of 2023:

European IRD traded notional reported by APAs and TVs in the EU and UK grew by 25.6% to \$43.7 trillion in the fourth quarter of 2023 versus \$34.8 trillion in the fourth quarter of 2022. Trade count rose by 24.7% to 280.8 thousand versus 225.2 thousand over the same period.

IRD traded notional reported in the UK accounted for 59.7% of the European total, while EU-reported traded notional comprised 40.3%. UK-reported trade count made up 56.8% of total European trade count and the EU accounted for 43.2% (see Chart 1)⁶.

Chart 1: European IRD Traded Notional and Trade Count



Source: European APAs and TVs

Euro-denominated IRD traded notional increased by 38.9% to \$27.6 trillion from \$19.8 trillion and accounted for 63.1% of total European traded notional. Euro-denominated contracts made up 50.6% of European trade count (see Chart 2).

US dollar IRD traded notional grew by 28.5% to \$6.4 trillion from \$5.0 trillion, while sterling-denominated IRD traded notional fell by 29.1% to \$4.7 trillion from \$6.7 trillion.

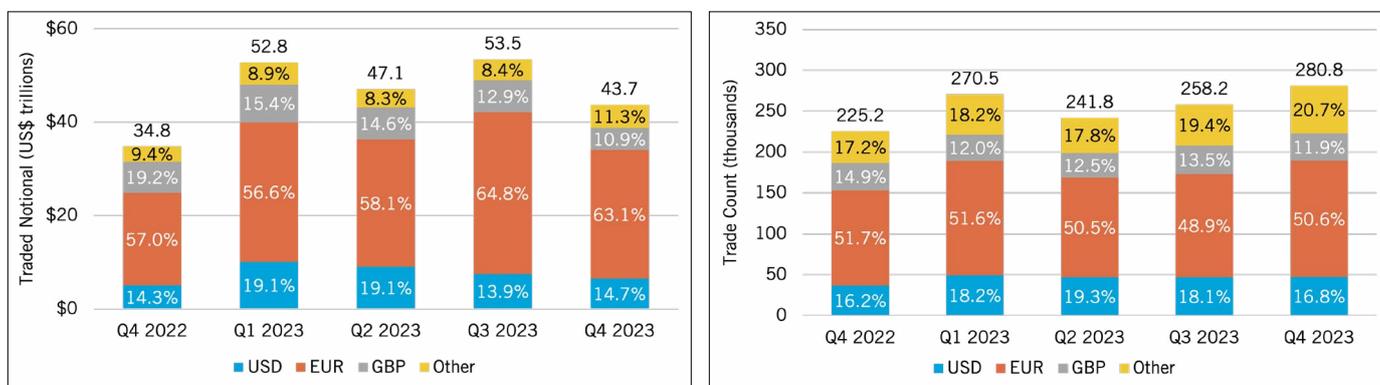
US dollar contracts represented 14.7% of total European IRD traded notional and 16.8% of trade count, while sterling-denominated transactions comprised 10.9% of European traded notional and 11.9% of trade count.

Other currencies accounted for 11.3% of total European IRD traded notional and 20.7% of trade count, with Australian dollar and Swedish krona representing the largest share⁷.

⁶ 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

⁷ 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

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



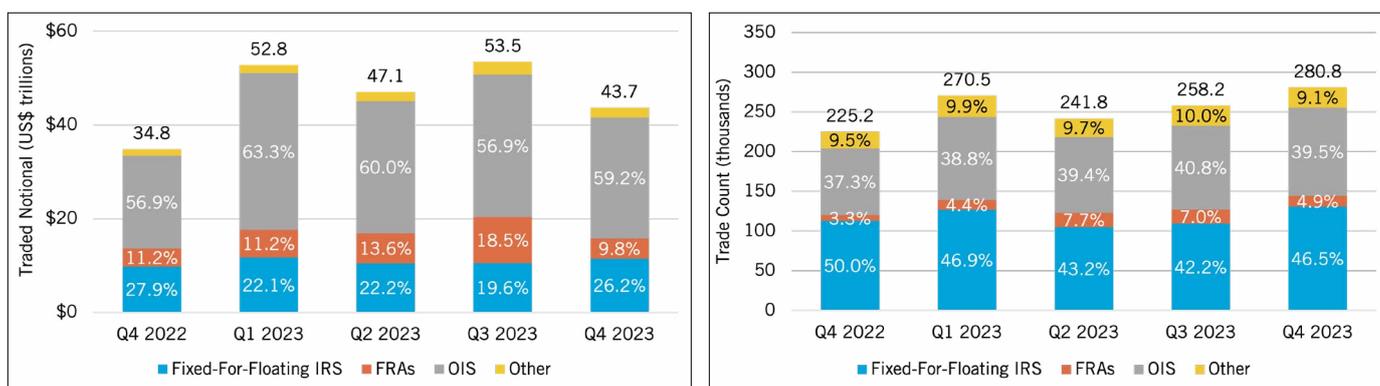
Source: European APAs and TVs

OIS traded notional increased by 30.5% to \$25.9 trillion in the fourth quarter of 2023 from \$19.8 trillion in the fourth quarter of 2022 and represented 59.2% of total European IRD traded notional. OIS contracts made up 39.5% of European trade count (see Chart 3).

Fixed-for-floating IRS traded notional rose by 17.8% to \$11.4 trillion from \$9.7 trillion and FRA traded notional grew by 9.9% to \$4.3 trillion from \$3.9 trillion.

Fixed-for-floating IRS accounted for 26.2% of total European IRD traded notional and 46.5% of trade count, while FRAs represented 9.8% and 4.9% of European traded notional and trade count, respectively.

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

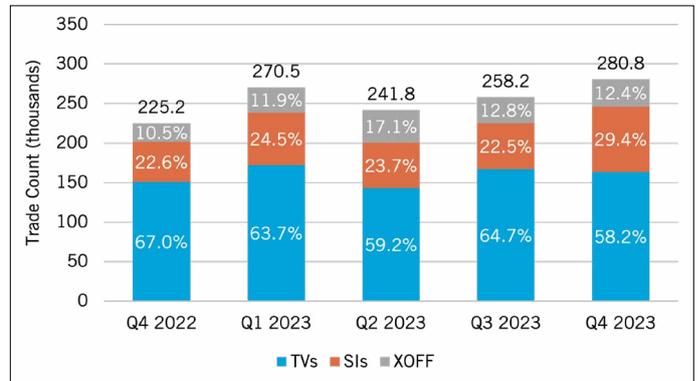
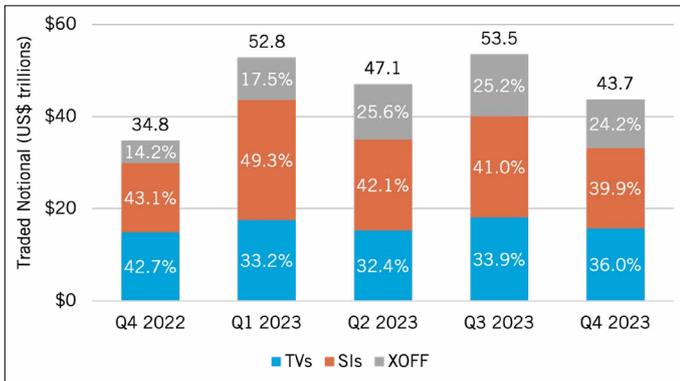


Source: European APAs and TVs

In the fourth quarter of 2023, 36.0% of European IRD traded notional and 58.2% of trade count took place on TVs, 39.9% of traded notional and 29.4% of trade count was executed by SIs, and 24.2% of traded notional and 12.4% of trade count was reported as XOFF⁸ (see Chart 4).

⁸ 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

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



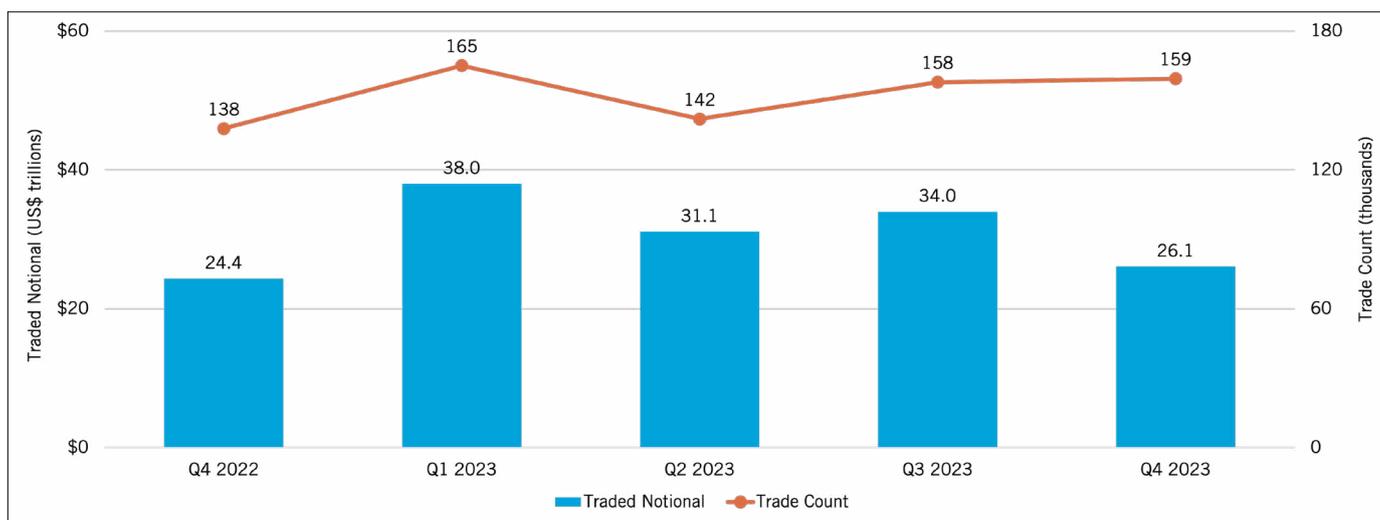
Source: European APAs and TVs

UK IRD TRADING ACTIVITY

In the fourth quarter of 2023:

IRD traded notional reported by APAs and TVs in the UK grew by 7.1% to \$26.1 trillion in the fourth quarter of 2023 from \$24.4 trillion in the fourth quarter of 2022. Trade count increased by 15.6% to 159.5 thousand from 137.9 thousand over the same period (see Chart 5).

Chart 5: UK IRD Traded Notional and Trade Count



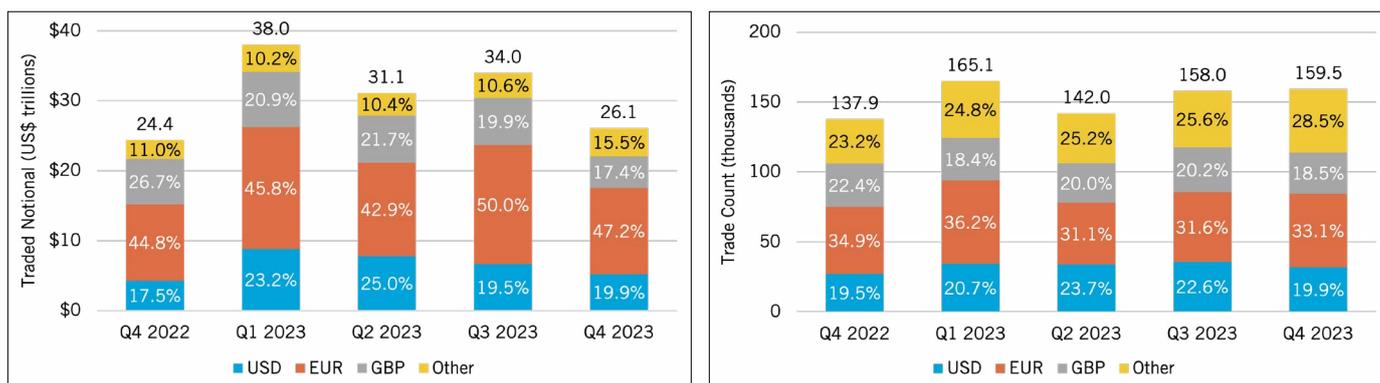
Source: European APAs and TVs

Euro-denominated IRD traded notional rose by 12.9% to \$12.3 trillion from \$10.9 trillion, US-dollar-denominated IRD traded notional increased by 21.6% to \$5.2 trillion from \$4.3 trillion, and sterling-denominated IRD traded notional declined by 30.3% to \$4.5 trillion from \$6.5 trillion.

Euro-denominated transactions represented 47.2% of total UK IRD traded notional and 33.1% of trade count, sterling-denominated IRD accounted for 17.4% of UK IRD traded notional and 18.5% of trade count, and US-dollar-denominated IRD made up 19.9% of both UK IRD traded notional and trade count (see Chart 6).

Other currencies accounted for 15.5% of total UK IRD traded notional and 28.5% of total trade count. Australian dollar, Japanese yen and Swedish krona represented the largest share of other currencies.

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

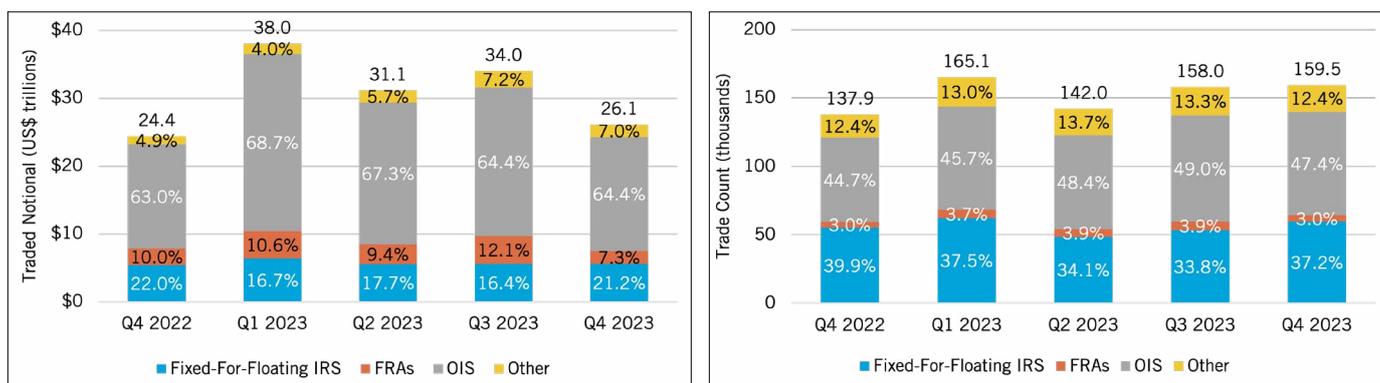


Source: European APAs and TVs

OIS traded notional grew by 9.5% to \$16.8 trillion in the fourth quarter of 2023 from \$15.4 trillion in the fourth quarter of 2022. Fixed-for-floating IRS traded notional rose by 3.3% to \$5.5 trillion from \$5.4 trillion, while FRA traded notional fell by 21.8% to \$1.9 trillion from \$2.4 trillion over the same period.

OIS transactions accounted for 64.4% of total UK IRD traded notional and 47.4% of trade count. Single currency fixed-for-floating IRS comprised 21.2% of traded notional and 37.2% of trade count. FRAs made up 7.3% and 3.0% of UK traded notional and trade count, respectively (see Chart 7).

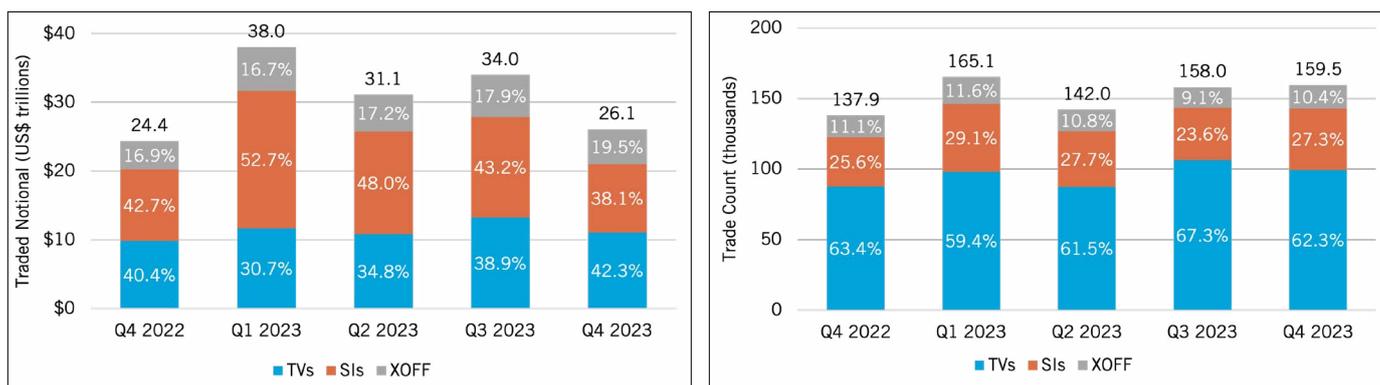
Chart 7: UK IRD Traded Notional and Trade Count by Product



Source: European APAs and TVs

In the fourth quarter of 2023, 42.3% of UK IRD traded notional and 62.3% of trade count occurred on TVs, 38.1% of traded notional and 27.3% of trade count was executed by SIs and 19.5% of traded notional and 10.4% of trade count was reported as XOFF (see Chart 8).

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



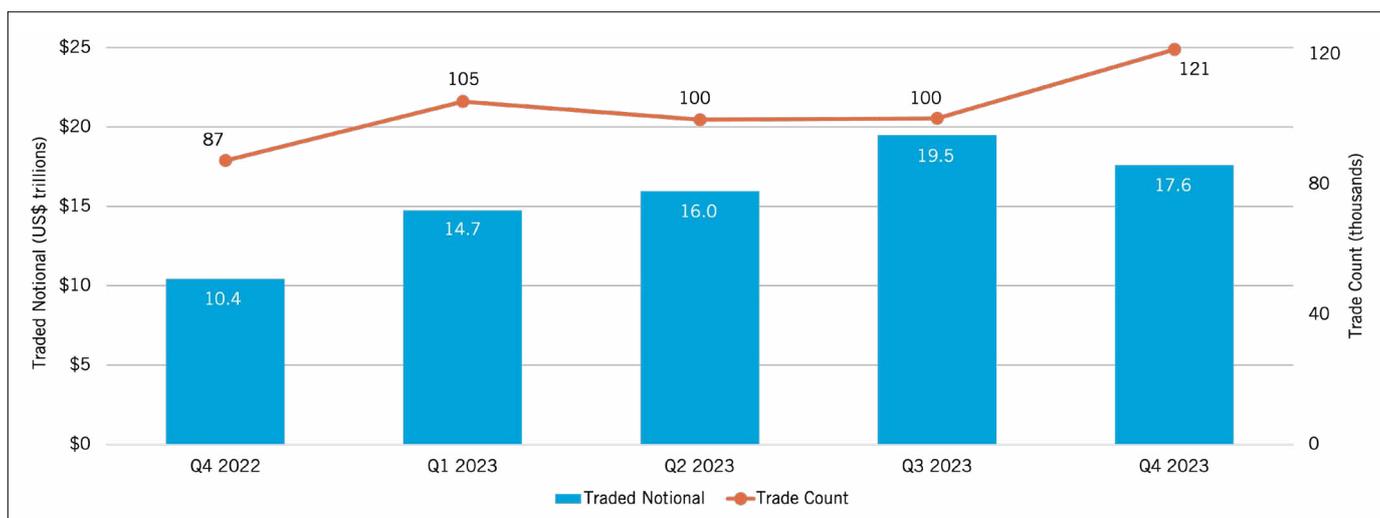
Source: European APAs and TVs

EU IRD TRADING ACTIVITY

In the fourth quarter of 2023:

IRD traded notional reported by APAs and TVs in the EU increased by 68.7% to \$17.6 trillion in the fourth quarter of 2023 compared to \$10.4 trillion in the fourth quarter of 2022. Trade count rose by 39.1% to 121.4 thousand from 87.3 thousand over the same period (see Chart 9).

Chart 9: EU IRD Traded Notional and Trade Count



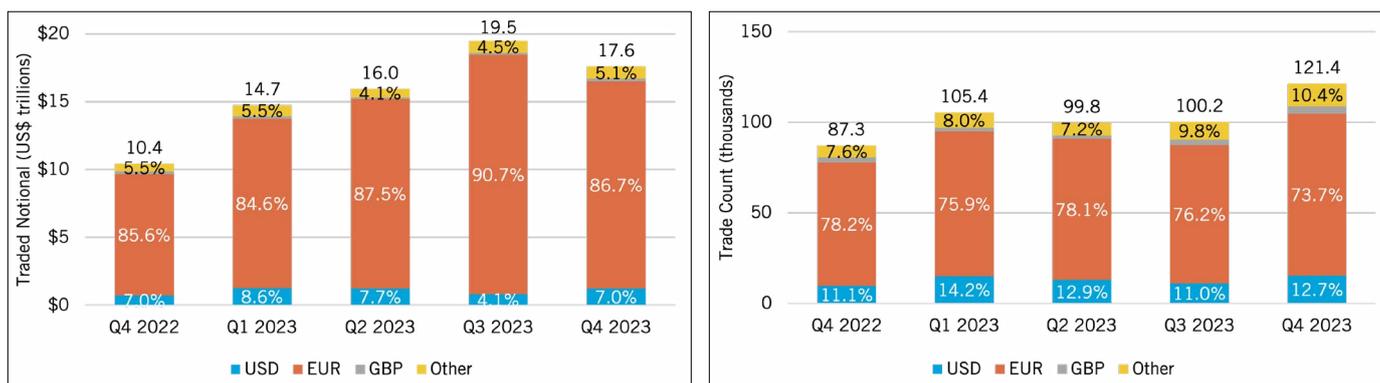
Source: European APAs and TVs

Euro-denominated IRD traded notional grew by 70.8% to \$15.2 trillion from \$8.9 trillion and comprised 86.7% of total EU IRD traded notional. The number of contracts denominated in euro increased by 31.1% to 89.4 thousand from 68.2 thousand, accounting for 73.7% of total EU IRD trade count (see Chart 10).

US-dollar-denominated IRD grew by 69.1% to \$1.2 trillion from \$726.5 billion and comprised 7.0% of total EU IRD traded notional and 12.7% of trade count. Sterling-denominated transactions represented 1.2% and 3.2% of EU IRD traded notional and trade count, respectively.

Other currencies accounted for 5.1% of EU IRD traded notional and 10.4% of trade count, with Swedish krona and Australian dollar representing the largest share.

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



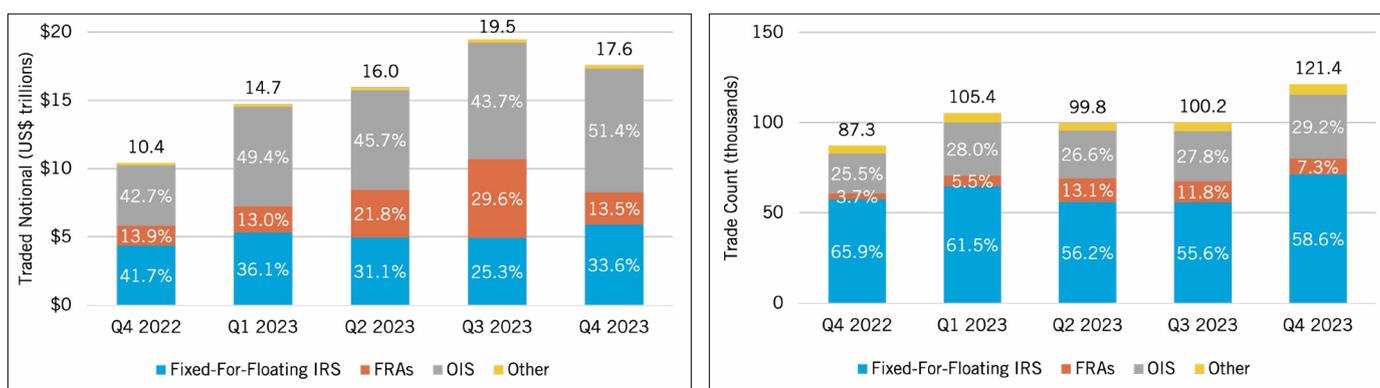
Source: European APAs and TVs

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.

OIS traded notional rose by 103.2% to \$9.0 trillion in the fourth quarter of 2023 versus \$4.5 trillion in the fourth quarter of 2022, comprising 51.4% and 29.2% of EU IRD traded notional and trade count, respectively (see Chart 11).

Fixed-for-floating IRS traded notional grew by 35.8% to \$5.9 trillion from \$4.4 trillion and FRA traded notional increased by 63.5% to \$2.4 trillion from \$1.4 trillion. Fixed-for-floating IRS and FRAs accounted for 33.6% and 13.5% of total EU IRD traded notional and 58.6% and 7.3% of trade count, respectively.

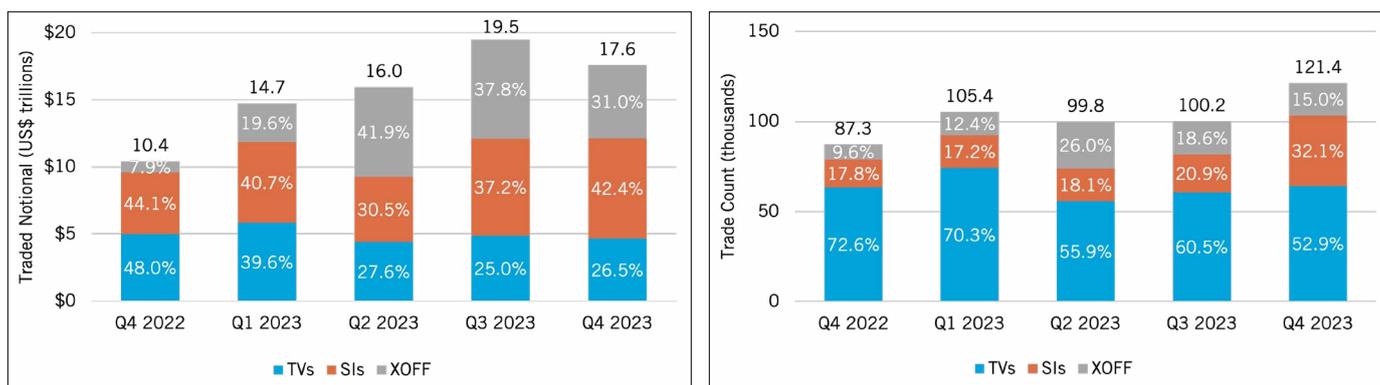
Chart 11: EU IRD Traded Notional and Trade Count by Product



Source: European APAs and TVs

In the fourth quarter of 2024, 26.5% of EU IRD traded notional and 52.9% of EU IRD trade count took place on TVs, 42.4% of traded notional and 32.1% of trade count was executed by SIs and 31.0% of traded notional and 15.0% of trade count was reported as XOFF (see Chart 12).

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



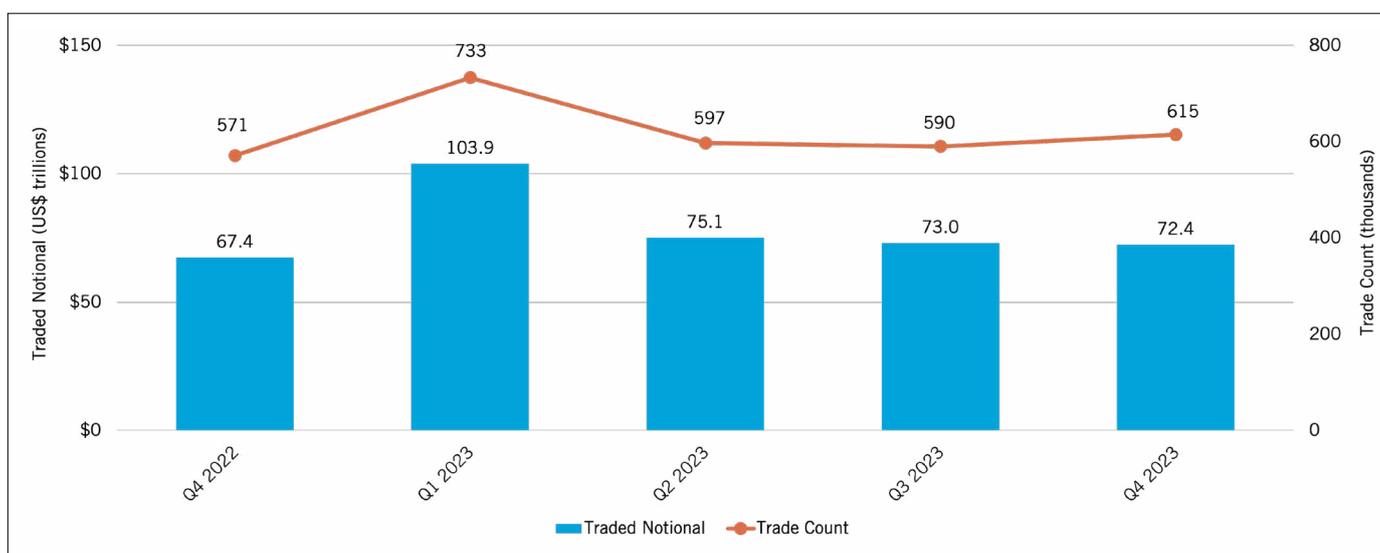
Source: European APAs and TVs

EUROPEAN AND US IRD TRADING ACTIVITY

In the fourth quarter of 2023:

IRD traded notional reported in the US increased by 7.5% to \$72.4 trillion in the fourth quarter of 2023 from \$67.4 trillion in the fourth quarter of 2022, while trade count rose by 7.6% to 614.6 thousand from 571.3 thousand (see Chart 13)⁹.

Chart 13: US IRD Traded Notional and Trade Count

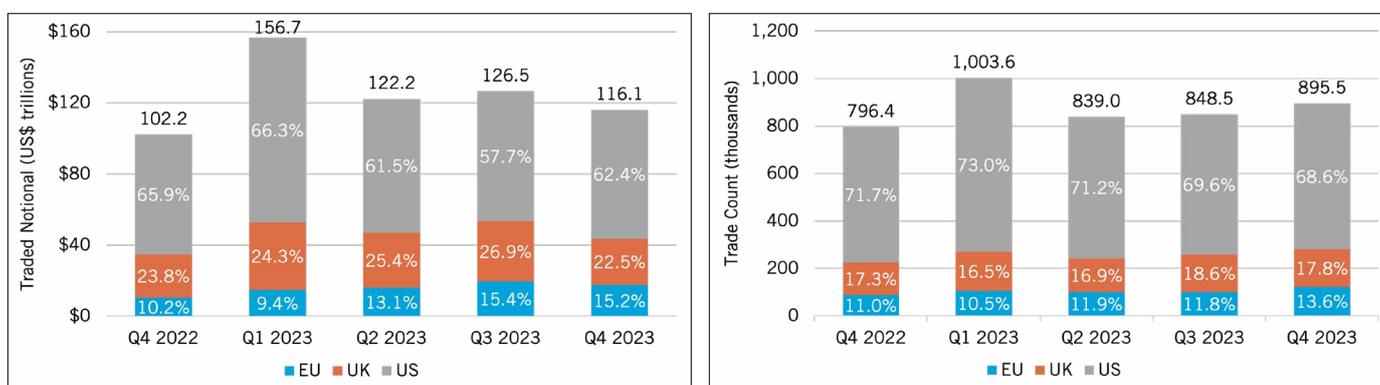


Source: DTCC SDR

Combined EU, UK and US traded notional rose by 13.7% to \$116.1 trillion from \$102.2 trillion and trade count grew by 12.4% to 895.5 thousand from 796.4 thousand.

US-reported IRD traded notional accounted for 62.4% of combined EU, UK and US traded notional, while the EU and UK comprised 15.2% and 22.5%, respectively. US-reported transactions represented 68.6% of total IRD trade count, the EU made up 13.6% and the UK accounted for 17.8% (see Chart 14).

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



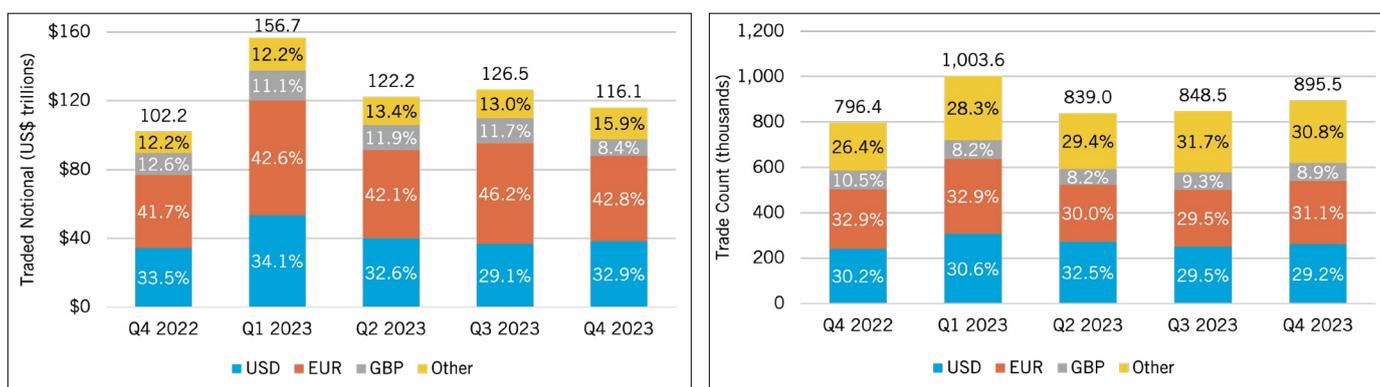
Source: DTCC SDR, European APAs and TVs

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

Of the combined \$116.1 trillion in EU, UK and US IRD traded notional, 42.8% was denominated in euros, 32.9% was in US dollars and 8.4% was in sterling. Of the 895.5 thousand in combined trade count, 31.1% was denominated in euros, 29.2% was in US dollars and 8.9% was in sterling (see Chart 15).

Other currencies accounted for 15.9% of combined IRD traded notional and 30.8% of trade count, with Australian dollar, Canadian dollar and Japanese yen representing the largest share.

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

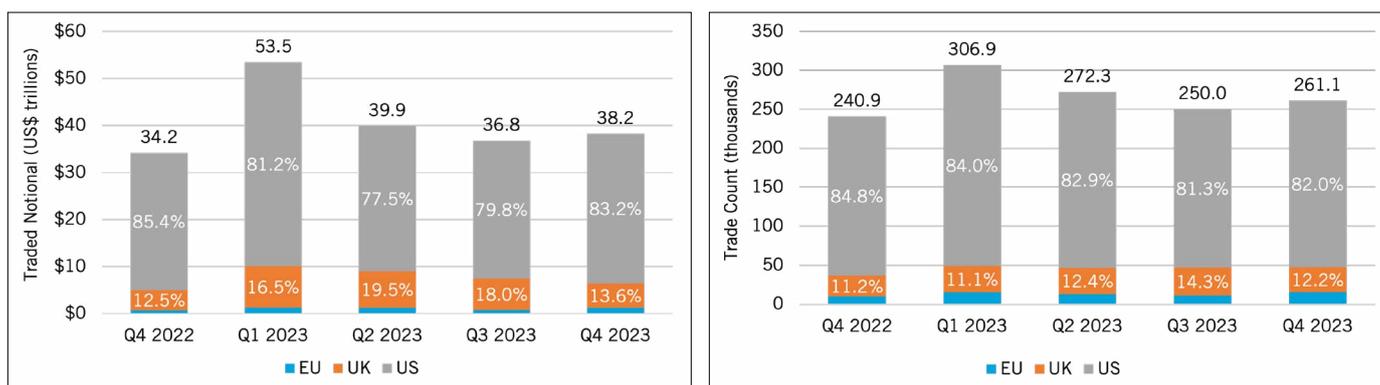


Source: DTCC SDR, European APAs and TVs

US-dollar-denominated IRD traded notional grew by 11.8% to \$38.2 trillion in the fourth quarter of 2023 from \$34.2 trillion in the fourth quarter of 2022. Trade count rose by 8.4% to 261.1 thousand from 240.9 thousand over the same period.

83.2% of US-dollar-denominated IRD traded notional and 82.0% of trade count was reported in the US, while 13.6% of US dollar traded notional and 12.2% 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

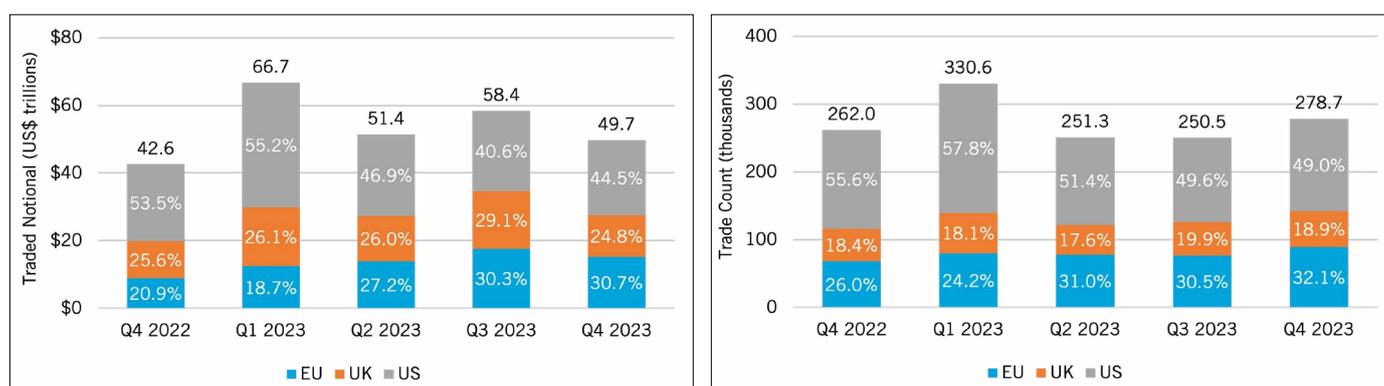


Source: DTCC SDR, European APAs and TVs

Euro-denominated IRD traded notional grew by 16.6% to \$49.7 trillion from \$42.6 trillion and trade count rose by 6.4% to 278.7 thousand from 262.0 thousand.

Reporting of euro-denominated IRD transactions was split between the three jurisdictions: 30.7% of traded notional and 32.1% of trade count was reported in the EU; 24.8% of traded notional and 18.9% of trade count was reported in the UK; and 44.5% of traded notional and 49.0% of trade count was reported in the US (see Chart 17).

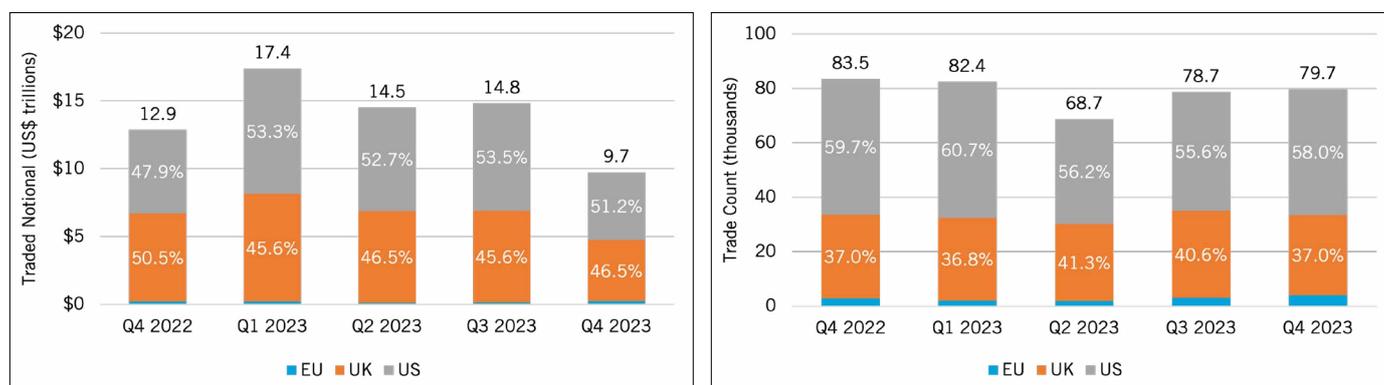
Chart 17: Combined Euro-denominated IRD Traded Notional and Trade Count by Jurisdiction



Source: DTCC SDR, European APAs and TVs

Sterling-denominated IRD traded notional fell by 24.3% to \$9.7 trillion from \$12.9 trillion and trade count dropped by 4.5% to 79.7 thousand from 83.5 thousand. 46.5% of sterling-denominated IRD traded notional and 37.0% of trade count was reported in the UK and 51.2% of traded notional and 58.0% of trade count was reported in the US (see Chart 18).

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



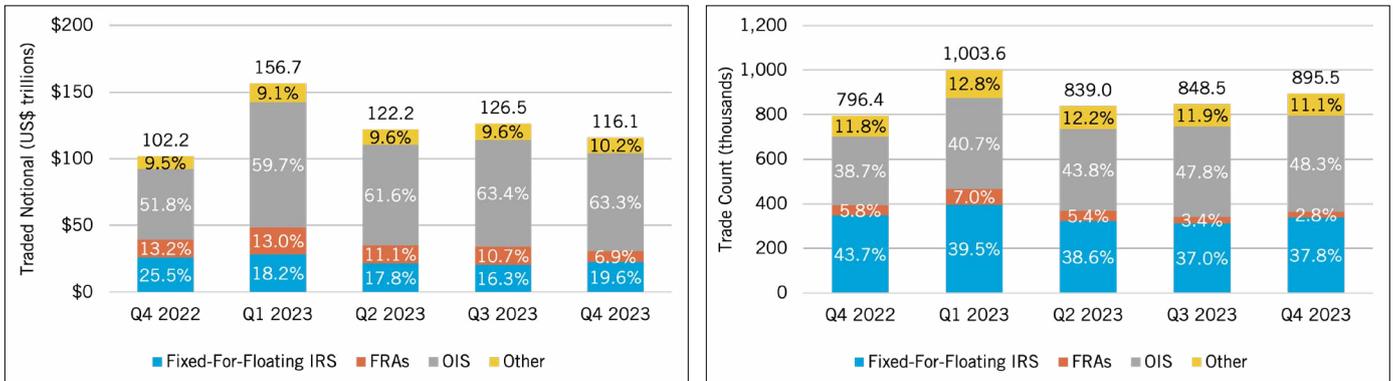
Source: DTCC SDR, European APAs and TVs

OIS traded notional rose by 39.1% to \$73.5 trillion in the fourth quarter of 2023 from \$52.9 trillion in the fourth quarter of 2022 and represented 63.3% of combined IRD traded notional. OIS trade count increased by 40.2% to 432.3 thousand from 308.3 thousand and accounted for 48.3% of the combined total (see Chart 19).

Single currency fixed-for-floating IRS traded notional fell by 12.7% to \$22.7 trillion from \$26.0 trillion and trade count dropped by 2.7% to 338.7 thousand from 348.3 thousand. Fixed-for-floating IRS represented 19.6% of combined EU, UK and US IRD traded notional and 37.8% of combined trade count.

FRA traded notional declined by 40.6% to \$8.0 trillion from \$13.5 trillion and trade count dropped by 45.7% to 25.0 thousand from 46.2 thousand. FRAs made up 6.9% of combined EU, UK and US IRD traded notional and 2.8% 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 TV¹⁰s.

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 does not include all APAs and TV¹⁵s that are registered with ESMA and the FCA, the trades reported by the 30 APAs and TV¹⁶s 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 TV¹⁷s located in the UK, while EU IRD trading activity is measured by IRD traded notional and trade count reported by APAs and TV¹⁸s located in the EU. Of the 30 APAs and TV¹⁹s 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 TV²⁰s¹⁵. 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 TV²¹s, 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 TV²²s 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 TV²³s display data only for a brief period of time and no historical data is available

¹⁶ Most APAs and TV²⁴s do not 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 does not capture 100% of the market. First, it does not 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 a result, total DTCC IRD traded notional is likely to be understated.



ISDA has published other recent research papers:

- ***SwapsInfo Full Year 2023 and the Fourth Quarter of 2023 Review***

www.isda.org/a/pOlgE/SwapsInfo-Full-Year-2023-and-the-Fourth-Quarter-of-2023-Review.pdf

- ***ISDA-Clarus RFR Adoption Indicator: Q4 2023 vs. Q4 2022***

www.isda.org/a/m3lgE/ISDA-Clarus-RFR-Adoption-Indicator-Quarterly-Summary.pdf

- ***Key Trends in the Size and Composition of OTC Derivatives Markets in the First Half of 2023***

www.isda.org/a/5ihgE/Key-Trends-in-the-Size-and-Composition-of-OTC-Derivatives-Markets-in-the-First-Half-of-2023.pdf

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ABOUT ISDA

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