

# TRANSITION TO RFRs REVIEW: Third Quarter of 2022 and Year-to- September 30, 2022

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The Transition to Risk-free Rates (RFRs) Review analyzes the trading volumes of over-the-counter (OTC) and exchange-traded interest rate derivatives (IRD) that reference selected alternative RFRs, including the Secured Overnight Financing Rate (SOFR), the Sterling Overnight Index Average (SONIA), the Swiss Average Rate Overnight (SARON), the Tokyo Overnight Average Rate (TONA), the Euro Short-Term Rate (€STR) and the Australian Overnight Index Average (AONIA).

Global data is collected from all major central counterparties (CCPs) that clear OTC and exchange-traded derivatives (ETD) in six currencies, including the Australian Securities Exchange, CME Group, Eurex, Intercontinental Exchange (ICE), Japan Securities Clearing Corporation, LCH and the Tokyo Financial Exchange. Only cleared transactions are captured in this data.

US data is collected from the Depository Trust & Clearing Corporation (DTCC) swap data repository (SDR). It covers only trades that are required to be disclosed under Commodity Futures Trading Commission regulations and includes cleared and non-cleared OTC IRD transactions.

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## KEY HIGHLIGHTS FOR THE THIRD QUARTER OF 2022 AND YEAR-TO SEPTEMBER 30, 2022

### Global Trading Activity<sup>1</sup>

The ISDA-Clarus RFR Adoption Indicator tracks how much global trading activity (as measured by DVO1) is conducted in cleared OTC and exchange-traded IRD that reference the identified RFRs in six major currencies<sup>2</sup>.

#### In the third quarter of 2022:

The ISDA-Clarus RFR Adoption Indicator increased to a monthly average of 49.7% compared to 45.5% in the second quarter of 2022<sup>3</sup>. RFR-linked IRD traded notional accounted for 42.9% of total IRD traded notional in the third quarter of 2022 versus 38.3% in the prior quarter.

#### Year-to-September 30, 2022:

In the nine months to September 30, 2022, the ISDA-Clarus RFR Adoption Indicator rose to a monthly average of 43.5% compared to 12.4% in the nine months to September 30, 2021. RFR-linked IRD traded notional represented 35.8% of total IRD traded notional versus 11.8% in the year to September 30, 2021.

### Trading Activity in the US<sup>4</sup>

#### In the third quarter of 2022:

US-reported OTC IRD traded notional referencing alternative RFRs fell by 0.8% to \$29.6 trillion in the third quarter of 2022 compared to \$29.8 trillion in the second quarter of 2022. RFR transactions accounted for 42.7% of total OTC IRD traded notional, up from 41.8% in the second quarter of 2022.

<sup>1</sup> The global data is collected from all major central counterparties (CCPs) that clear over-the-counter (OTC) and exchange-traded derivatives (ETD) in six currencies, including the Australian Securities Exchange, CME Group, Eurex, Intercontinental Exchange (ICE), Japan Securities Clearing Corporation, LCH and the Tokyo Financial Exchange. Only cleared transactions are captured in this data

<sup>2</sup> ISDA-Clarus RFR Adoption Indicator White Paper: [www.isda.org/a/SlmTE/ISDA-Clarus-RFR-Adoption-Indicator-Whitepaper.pdf](http://www.isda.org/a/SlmTE/ISDA-Clarus-RFR-Adoption-Indicator-Whitepaper.pdf)

<sup>3</sup> The RFR Adoption Indicator was 51.0% in September 2022. ISDA-Clarus RFR Adoption Indicator, September 2022 [www.isda.org/a/LF3gE/ISDA-Clarus-RFR-Adoption-Indicator-September-2022.pdf](http://www.isda.org/a/LF3gE/ISDA-Clarus-RFR-Adoption-Indicator-September-2022.pdf)

<sup>4</sup> The US data is collected from the Depository Trust & Clearing Corporation (DTCC) swap data repository (SDR). It covers only transactions that are required to be disclosed under Commodity Futures Trading Commission regulations and includes cleared and non-cleared OTC IRD trades

- OTC IRD traded notional referencing SOFR increased to \$14.4 trillion in the third quarter of 2022 versus \$13.0 trillion in the prior quarter. SOFR transactions accounted for 44.8% of US dollar-denominated OTC IRD traded notional compared to 41.4% in the second quarter of 2022.
- IRD traded notional referencing SONIA rose by 2.0% to \$5.8 trillion in the third quarter of 2022 compared to \$5.7 trillion in the second quarter of 2022. SONIA-linked transactions represented 99.8% of sterling-denominated OTC IRD traded notional compared to 99.3% in the second quarter of 2022.
- €STR-linked OTC IRD traded notional dropped by 17.0% to \$8.3 trillion in the third quarter of 2022 compared to \$10.0 trillion in the second quarter of 2022. €STR-linked transactions comprised 38.4% of euro-denominated OTC IRD traded notional compared to 40.3% in the second quarter of 2022.
- OTC IRD traded notional referencing LIBOR denominated in US dollars, sterling, Swiss franc, yen and euro, as well as EURIBOR and TIBOR, fell by 10.8% to \$24.5 trillion in the third quarter of 2022 compared to \$27.4 trillion in the prior quarter. These interbank offered rates (IBORs) represented 35.3% of total OTC IRD traded notional compared to 38.5% in the second quarter of 2022.

#### **Year-to-September 30, 2022:**

US-reported OTC IRD traded notional linked to alternative RFRs climbed to \$86.5 trillion in the nine months to September 30, 2022 versus \$16.7 trillion in the nine months to September 30, 2021. RFR transactions accounted for 38.0% of total OTC IRD traded notional, up from 9.8% in the nine months to September 30, 2021.

- OTC IRD traded notional referencing SOFR increased to \$40.1 trillion in the nine months to September 30, 2022 from \$3.8 trillion in the year to September 30, 2021. SOFR transactions accounted for 37.3% of US dollar-denominated OTC IRD traded notional compared to 4.2% in the nine months to September 30, 2021.
- SONIA-linked IRD traded notional rose to \$17.6 trillion in the nine months to September 30, 2022 versus \$12.1 trillion in the nine months to September 30, 2021. SONIA transactions represented 99.6% of sterling-denominated OTC IRD traded notional versus 56.7% in the nine months to September 30, 2021.

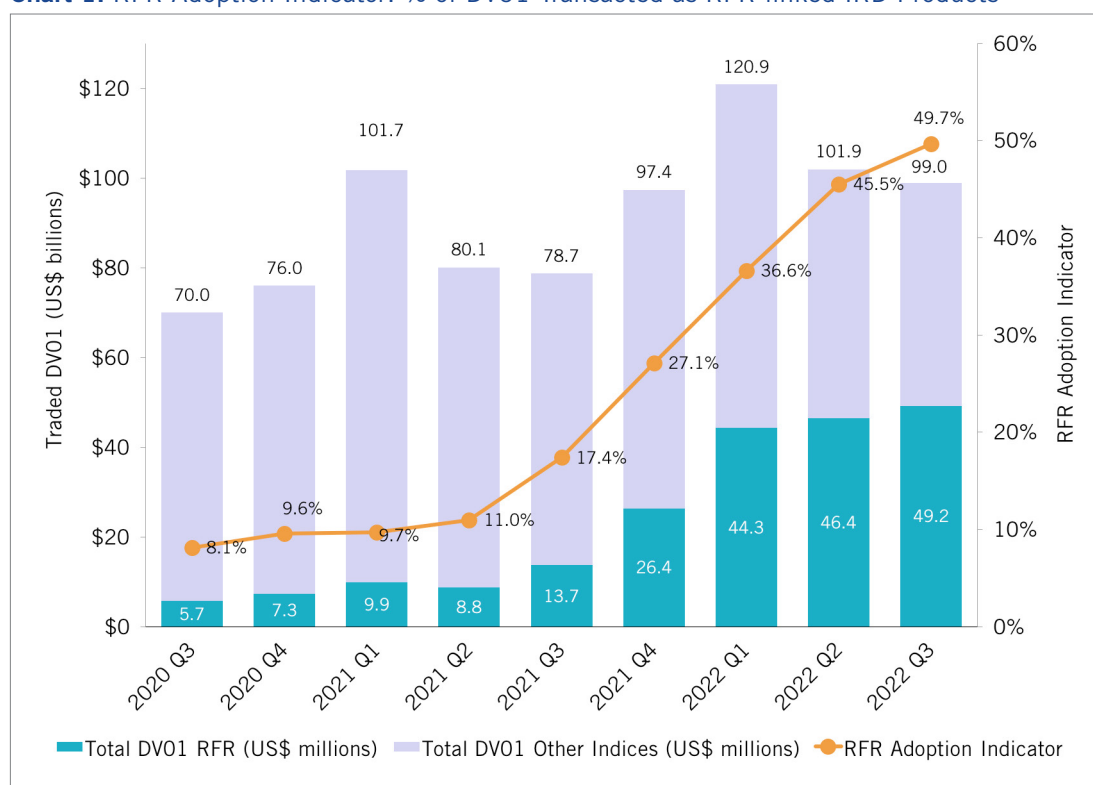
- OTC IRD traded notional linked to €STR grew to \$25.5 trillion in the nine months to September 30, 2022 compared to \$321.6 billion in the same period in 2021. €STR-linked transactions comprised 35.3% of euro-denominated IRD traded notional compared to 0.9% in the nine months to September 30, 2021.
  - OTC IRD traded notional referencing LIBOR denominated in US dollars, sterling, Swiss franc, yen and euro, as well as EURIBOR and TIBOR, fell by 23.2% to \$89.1 trillion in the nine months to September 30, 2022 compared to \$116.0 trillion in year to September 30, 2021. These IBORs represented 39.2% of total OTC IRD traded notional compared to 67.9% in the nine months to September 30, 2021.
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## GLOBAL RFR-LINKED OTC AND EXCHANGE-TRADED IRD

The ISDA-Clarus RFR Adoption Indicator rose to a monthly average of 49.7% in the third quarter of 2022 compared to 45.5% in the second quarter of 2022. RFR-linked IRD DV01 increased to \$49.2 billion compared to \$46.4 billion in the second quarter of 2022. Total IRD DV01 fell to \$99.0 billion from \$101.9 billion over the same period (see Chart 1).

In the nine months to September 30, 2022, the ISDA-Clarus RFR Adoption Indicator increased to a monthly average of 43.5% versus 12.4% in the year to September 30, 2021. RFR-linked IRD DV01 grew to \$139.8 billion compared to \$32.3 billion in the nine months to September 30, 2021. Total IRD DV01 increased to \$321.7 billion from \$260.5 billion over the same period<sup>5</sup>.

**Chart 1:** RFR Adoption Indicator: % of DV01 Transacted as RFR-linked IRD Products



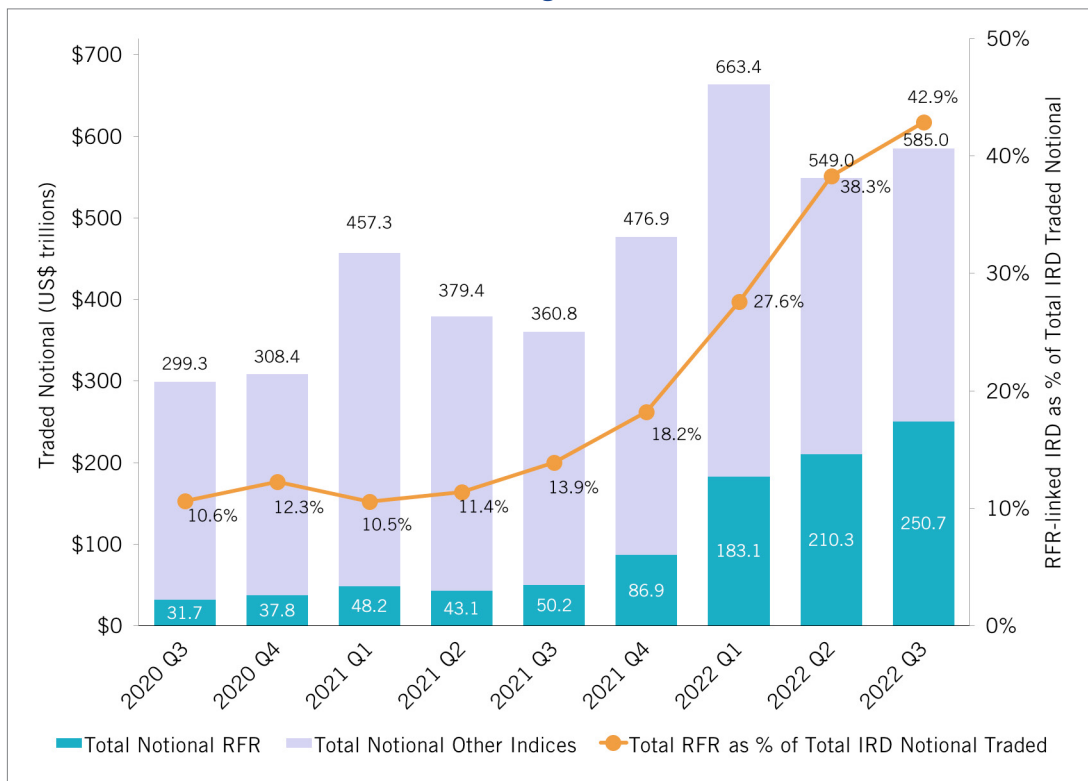
Source: ISDA-Clarus RFR Adoption Indicator

RFR-linked IRD traded notional increased to 42.9% of total IRD traded notional in the third quarter of 2022 versus 38.3% in the second quarter of 2022. RFR-linked IRD traded notional, which includes OTC and ETD, totaled \$250.7 trillion in the third quarter of 2022 compared to \$210.3 trillion in the previous quarter. Total IRD traded notional rose to \$585.0 trillion from \$549.0 trillion over the same period (see Chart 2).

<sup>5</sup> To access interactive charts and download monthly data, go to <https://rfr.clarusft.com>

IRD traded notional referencing RFRs accounted for 35.8% of total IRD traded notional in the nine months to September 30, 2022 compared to 11.8% in the same period in 2021. RFR-linked IRD traded notional increased to \$644.1 trillion from \$141.6 trillion in the nine months to September 30, 2021. Total IRD traded notional rose to \$1,797.4 trillion from \$1,197.6 trillion over the same interval.

**Chart 2:** Global IRD Traded Notional (including OTC and ETD)



Source: ISDA-Clarus RFR Adoption Indicator

## RFR-LINKED OTC IRD IN THE US

US-reported OTC IRD traded notional referencing alternative RFRs fell by 0.8% to \$29.6 trillion in the third quarter of 2022 compared to \$29.8 trillion in the second quarter of 2022. RFR transactions comprised 35.3% of total OTC IRD traded notional, down from 38.5% in the second quarter of 2022.

The number of trades referencing RFRs rose to 243.1 thousand in the third quarter of 2022 from 228.4 thousand in the previous quarter. RFR-linked trades accounted for 29.5% of total OTC IRD trade count compared to 33.9% in the second quarter of 2022.

### In the third quarter of 2022:

- SOFR-linked OTC IRD traded notional climbed by 10.7% to \$14.4 trillion, including \$1.6 trillion of basis swaps. Trade count grew to 162.8 thousand from 153.1 thousand in the second quarter of 2022, including 12.5 thousand basis swaps.
- IRD traded notional referencing SONIA increased by 2.0% to 5.8 trillion, including \$149.9 billion of basis swaps. Trade count grew by 17.9% to 38.9 thousand, including 1.6 thousand basis swaps.
- IRD traded notional linked to SARON rose to \$268.6 billion, including \$17.9 billion of basis swaps. Trade count increased to 4.9 thousand, including 144 basis swaps.
- IRD traded notional referencing TONA declined to \$848.7 billion, including \$193.2 billion of basis swaps. Trade count fell to 12.8 thousand, including 2.6 thousand basis swaps.
- €STR-linked IRD traded notional dropped to \$8.3 trillion, including \$370.2 billion of basis swaps. Trade count fell to 23.8 thousand, including 3.0 thousand basis swaps.

### In the nine months to September 30, 2022:

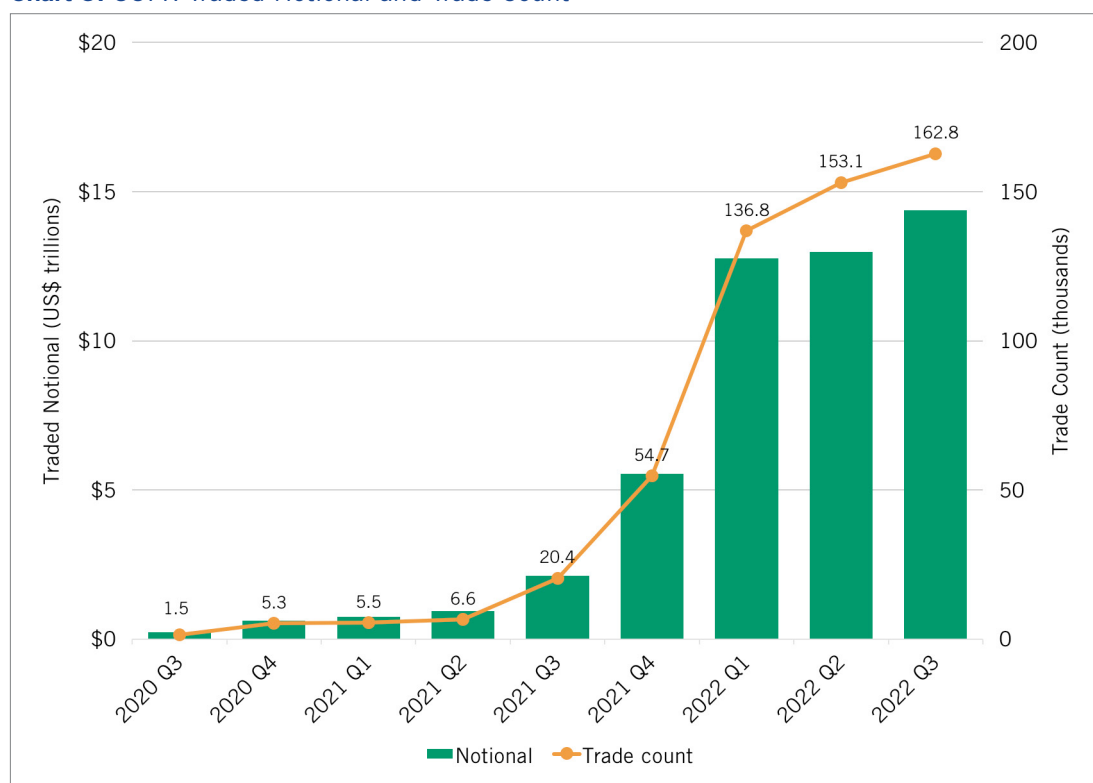
- OTC IRD traded notional referencing SOFR grew by 947.5% to \$40.1 trillion from \$3.8 trillion in the nine months to September 30, 2021, including \$5.3 trillion of basis swaps. Trade count increased to 452.7 thousand from 32.5 thousand, including 40.0 thousand basis swaps.
- IRD traded notional linked to SONIA rose by 45.8% to \$17.6 trillion from \$12.1 trillion in the nine months to September 30, 2021, including \$433.7 billion of basis swaps. Trade count increased by 74.2% to 106.7 thousand from 61.3 thousand, including 4.1 thousand basis swaps.
- SARON-linked IRD traded notional rose to \$714.3 billion, including \$51.3 billion of basis swaps. Trade count grew to 13.5 thousand, including 492 basis swaps.

- IRD traded notional referencing TONA increased to \$2.5 trillion, including \$568.0 billion of basis swaps. Trade count rose to 37.2 thousand, including 7.1 thousand basis swaps.
- €STR-linked IRD traded notional climbed to \$25.5 trillion from \$321.6 billion, including \$1.2 trillion of basis swaps. Trade count grew to 68.7 thousand, including 9.7 thousand basis swaps.

## SOFR

SOFR-linked OTC IRD traded notional rose by 10.7% to \$14.4 trillion in the third quarter of 2022 versus \$13.0 trillion in the previous quarter. The number of SOFR-linked IRD transactions increased by 6.3% to 162.8 thousand from 153.1 thousand over the same period (see Chart 3).

**Chart 3:** SOFR Traded Notional and Trade Count

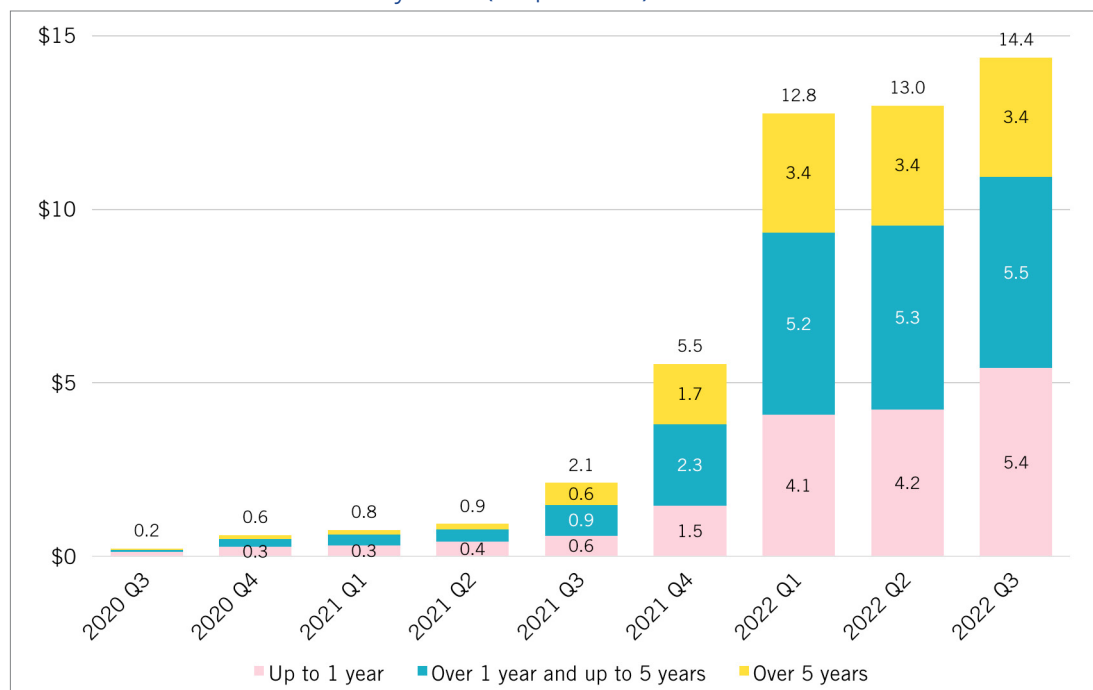


Source: DTCC SDR

Of the \$14.4 trillion of SOFR-linked IRD traded notional in the third quarter of 2022, \$5.4 trillion (37.7%) had a tenor up to one year, \$5.5 trillion (38.3%) was between one and five years and \$3.4 trillion (24.0%) had a tenor over five years<sup>6</sup> (see Chart 4).

<sup>6</sup> Tenor is calculated as the difference between the effective date and the maturity date

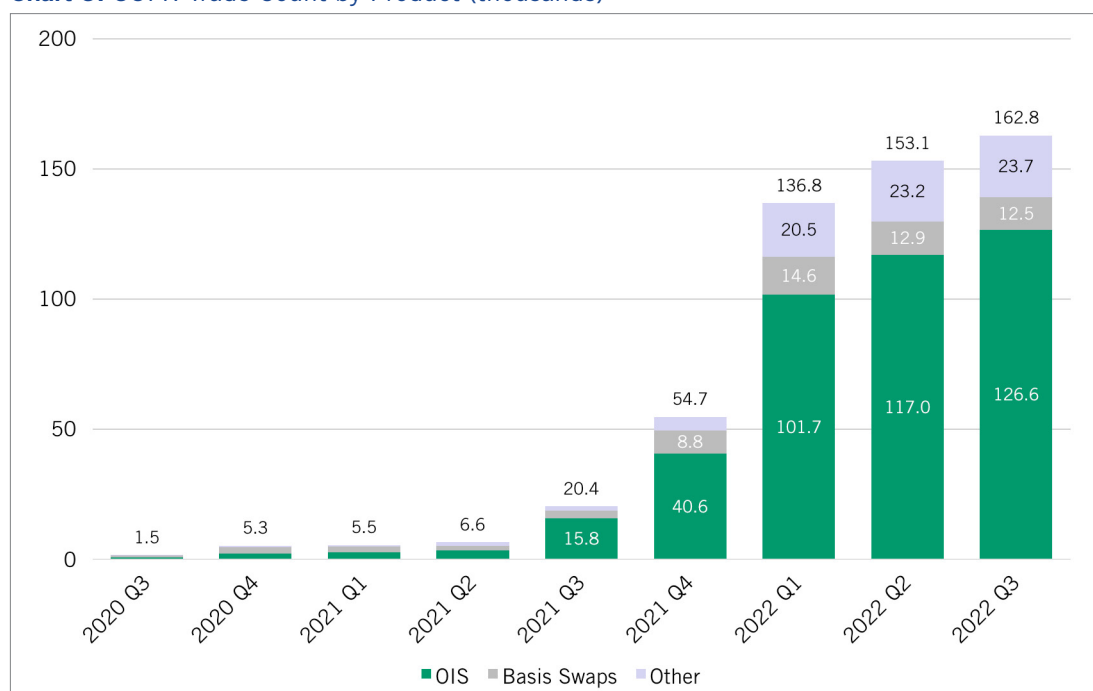
**Chart 4: SOFR Traded Notional by Tenor (US\$ trillions)**



Source: DTCC SDR

Overnight index swaps (OIS) accounted for the majority of SOFR-linked IRD contracts in the third quarter of 2022. Of the 162.8 thousand transactions, 126.6 thousand were OIS, 12.5 thousand were basis swaps and 23.7 thousand were other transactions, including fixed-for-floating interest rate swaps and cap-floor products (see Chart 5).

**Chart 5: SOFR Trade Count by Product (thousands)**

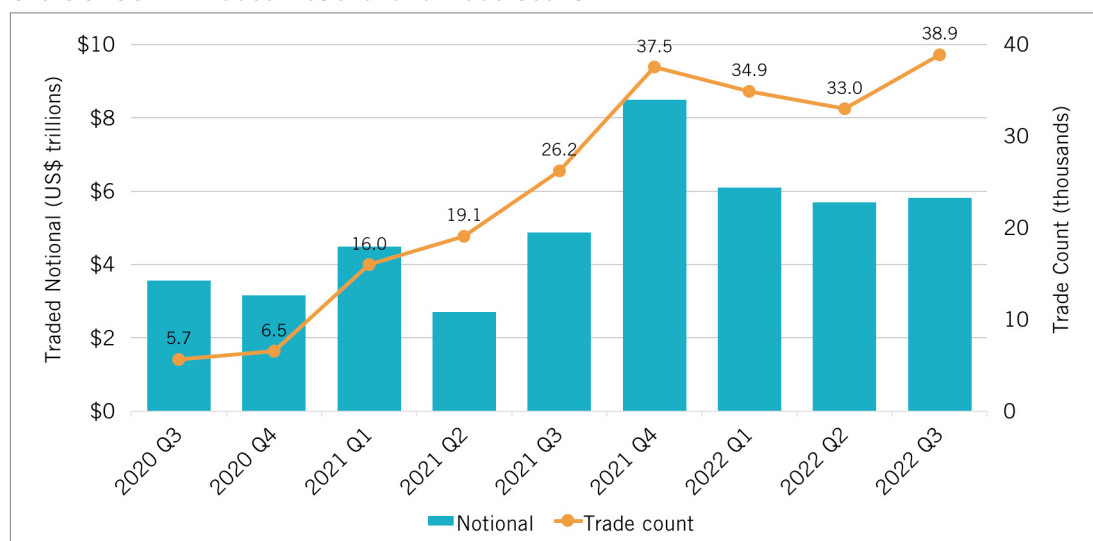


Source: DTCC SDR

## SONIA

OTC IRD traded notional referencing SONIA grew by 2.0% to \$5.8 trillion in the third quarter of 2022 from \$5.7 trillion in the prior quarter. Trade count increased by 17.9% to 38.9 thousand from 33.0 thousand over the same period (see Chart 6).

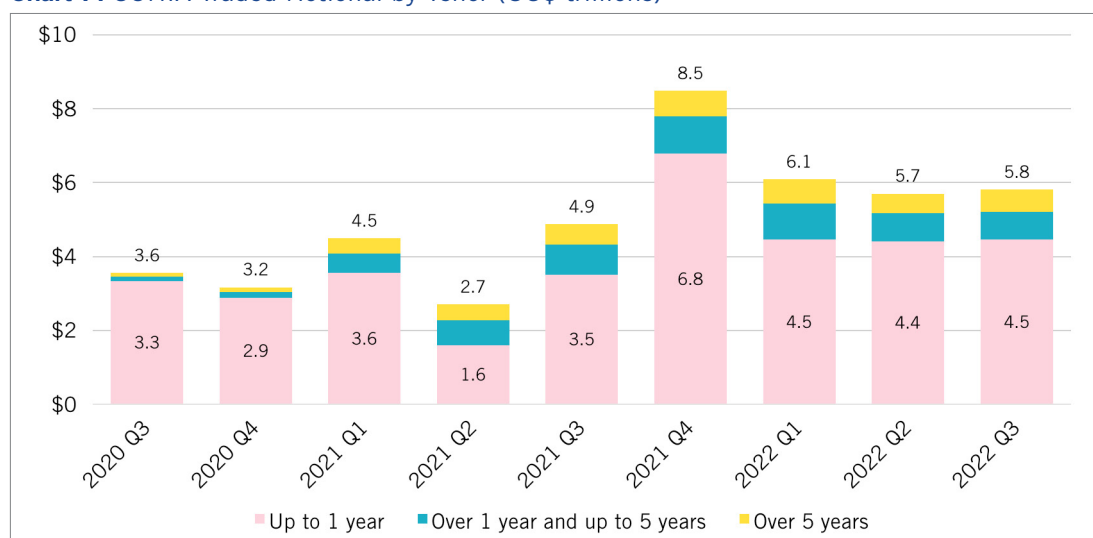
**Chart 6:** SONIA Traded Notional and Trade Count



Source: DTCC SDR

Most transactions referencing SONIA had a tenor up to one year. Of the \$5.8 trillion of SONIA-linked IRD traded notional in the third quarter of 2022, \$4.5 trillion (76.7%) had a tenor up to one year, \$750.4 billion (12.9%) was between one and five years and \$604.6 billion (10.4%) had a tenor over five years (see Chart 7).

**Chart 7:** SONIA Traded Notional by Tenor (US\$ trillions)



Source: DTCC SDR

The majority of SONIA-linked OTC IRD trade count was OIS transactions. Of the 38.9 thousand SONIA-linked IRD contracts traded in the third quarter of 2022, 35.7 thousand were OIS transactions, 1.6 thousand were basis swaps and 1.5 thousand were other products (see Chart 8).

**Chart 8:** SONIA Trade Count by Product (thousands)

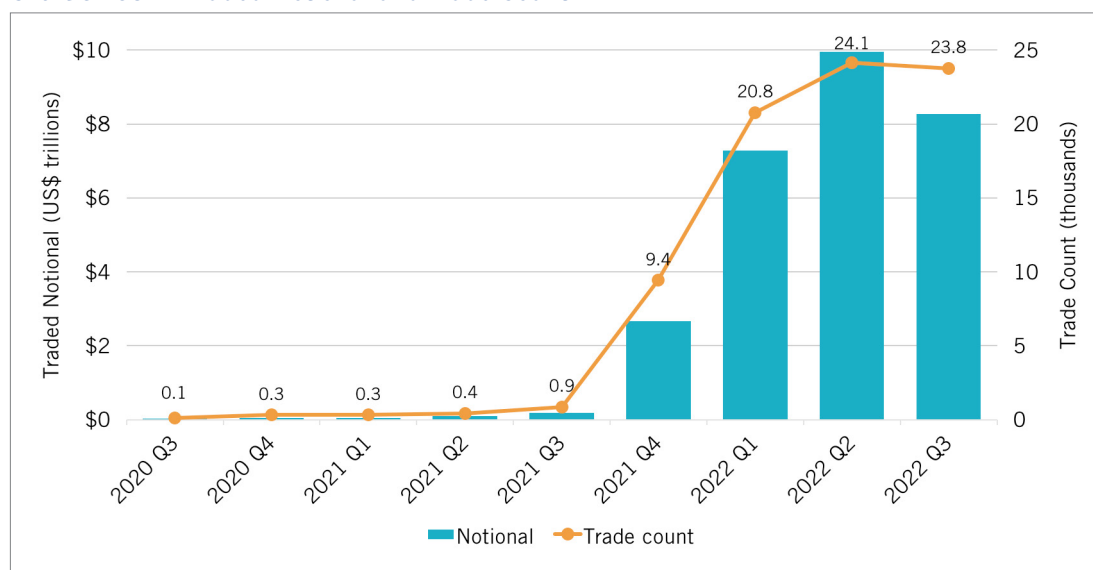


Source: DTCC SDR

## €STR

€STR-linked OTC IRD traded notional dropped by 17.0% to \$8.3 trillion in the third quarter of 2022 from \$10.0 trillion in the second quarter of 2022. Trade count fell by 1.6% to 23.8 thousand from 24.1 thousand over the same period<sup>7</sup> (see Chart 9).

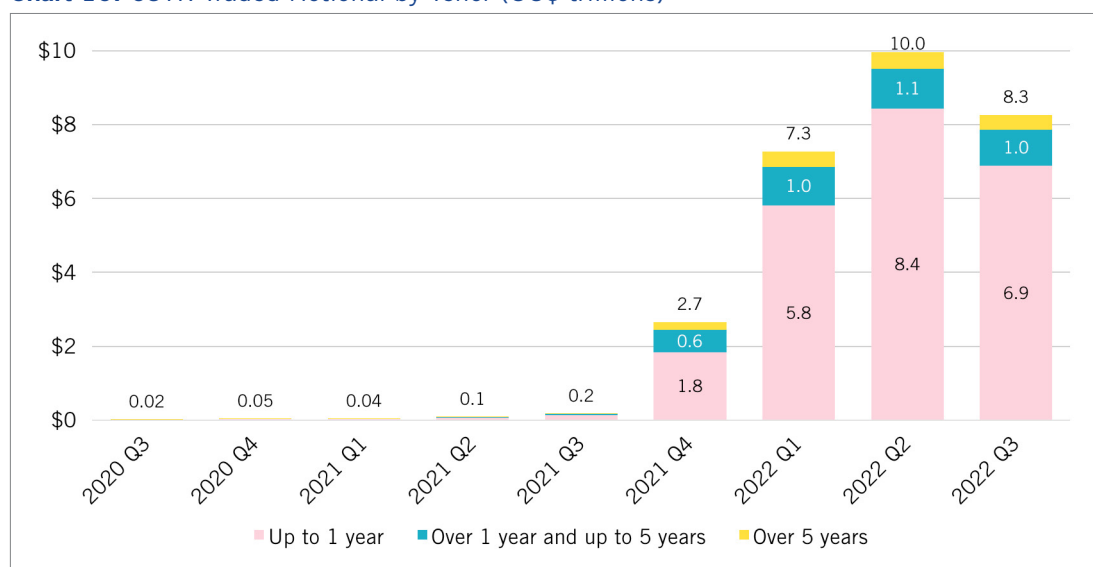
**Chart 9: €STR Traded Notional and Trade Count**



Source: DTCC SDR

Most transactions referencing €STR had a tenor up to one year. Of the \$8.3 trillion of €STR-linked IRD traded notional in the third quarter of 2022, \$6.9 trillion (83.4%) had a tenor up to one year, \$1.0 trillion (11.7%) was between one and five years and \$410.5 billion (5.0%) had a tenor over five years (see Chart 10).

**Chart 10: €STR Traded Notional by Tenor (US\$ trillions)**



Source: DTCC SDR

<sup>7</sup> €STR swaps started trading in the fourth quarter of 2019

OIS comprised the majority of €STR-linked OTC IRD trade count. Of the 23.8 thousand €STR trades in the third quarter of 2022, 20.7 thousand were OIS, 3.0 thousand were basis swaps and 25 were other products (see Chart 11).

**Chart 11: €STR Trade Count by Product (thousands)**



Source: DTCC SDR

Table 1: US IRD Traded Notional and Trade Count

	Q3 2022		YTD Q3 2022	
	Traded Notional (US\$ billions)	Trade Count	Traded Notional (US\$ billions)	Trade Count
USD LIBOR	11,124.6	48,457	44,117.2	191,073
SOFR	12,748.7	150,243	34,802.0	412,637
Basis Swaps: SOFR	1,625.3	12,549	5,325.4	40,032
GBP LIBOR	1.1	12	16.4	87
SONIA	5,663.0	37,267	17,167.9	102,591
Basis Swaps: SONIA	149.9	1,612	433.7	4,135
CHF LIBOR	0.1	1	0.2	3
SARON	250.7	4,759	663.0	12,996
Basis Swaps: SARON	17.9	144	51.3	492
JPY LIBOR	2.4	49	7.1	146
TIBOR/Euroyen TIBOR	1.7	40	7.8	128
TONA	655.5	10,161	1,964.5	30,085
Basis Swaps: TONA	193.2	2,622	568.0	7,130
EUR LIBOR	0.0	0	0.1	1
EURIBOR	13,335.6	119,845	44,952.1	381,756
€STR	7,895.1	20,714	24,285.5	58,972
Basis Swaps: €STR	370.2	3,041	1,219.5	9,679
Other*	15,192.8	159,605	51,861.9	483,716
<b>Total**</b>	<b>69,227.9</b>	<b>571,121</b>	<b>227,443.5</b>	<b>1,735,659</b>

\*Other includes IRD with other reference rates, IBOR/non-RFR basis swaps and IBOR/IBOR basis swaps that reference different IBORs IBOR/IBOR basis swaps that reference the same IBOR are included in a corresponding IBOR category  
RFR/RFR basis swaps that reference different RFRs are included in both RFR basis swaps categories and, therefore, are double-counted  
\*\*This data includes only the transactions required to be disclosed under U.S. regulations and does not include any exchange-traded derivatives (futures)

Source: DTCC SDR

Table 2: US IRD Traded Notional and Trade Count Q3 2022 vs. Q2 2022

	Q3 2022		Q2 2022		Q3 2022 vs. Q2 2022	
	Traded Notional (US\$ billions)	Trade Count	Traded Notional (US\$ billions)	Trade Count	Traded Notional	Trade Count
USD LIBOR	11,124.6	48,457	12,640.0	57,888	-12.0%	-16.3%
SOFR	14,374.1	162,792	12,985.2	153,073	10.7%	6.3%
GBP LIBOR	1.1	12	6.9	18	-83.7%	-33.3%
SONIA	5,812.9	38,879	5,696.9	32,975	2.0%	17.9%
CHF LIBOR	0.1	1	0.1	2	24.4%	-50.0%
SARON	268.6	4,903	259.5	4,579	3.5%	7.1%
JPY LIBOR	2.4	49	2.2	45	6.2%	8.9%
TIBOR/Euroyen TIBOR	1.7	40	2.6	38	-34.8%	5.3%
TONA	848.7	12,783	901.2	13,590	-5.8%	-5.9%
EUR LIBOR	0.0	0	0.1	1	-100.0%	-100.0%
EURIBOR	13,335.6	119,845	14,779.4	138,983	-9.8%	-13.8%
€STR	8,265.2	23,755	9,961.8	24,129	-17.0%	-1.6%
Other*	15,192.8	159,605	14,087.2	154,884	7.8%	3.0%
<b>Total**</b>	<b>69,227.9</b>	<b>571,121</b>	<b>71,323.1</b>	<b>580,205</b>	<b>-2.9%</b>	<b>-1.6%</b>

\*Other includes IRD with other reference rates, IBOR/non-RFR basis swaps and IBOR/IBOR basis swaps that reference different IBORs IBOR/IBOR basis swaps that reference the same IBOR are included in a corresponding IBOR category  
RFR/RFR basis swaps that reference different RFRs are included in both RFR basis swaps categories and, therefore, are double-counted  
\*\*This data includes only the transactions required to be disclosed under U.S. regulations and does not include any exchange-traded derivatives (futures)

Source: DTCC SDR

**Table 3: US IRD Traded Notional and Trade Count YTD Q3 2022 vs. YTD Q3 2021**

	YTD Q3 2022		YTD Q3 2021		YTD Q3 2022 vs. YTD Q3 2021	
	Traded Notional (US\$ billions)	Trade Count	Traded Notional (US\$ billions)	Trade Count	Traded Notional	Trade Count
USD LIBOR	44,117.2	191,073	74,940.0	520,022	-41.1%	-63.3%
SOFR	40,127.3	452,669	3,830.9	32,504	947.5%	1292.7%
GBP LIBOR	16.4	87	8,938.1	64,382	-99.8%	-99.9%
SONIA	17,601.6	106,726	12,069.2	61,265	45.8%	74.2%
CHF LIBOR	0.2	3	472.5	8,694	-100.0%	-100.0%
SARON	714.3	13,488	100.6	1,460	610.1%	823.8%
JPY LIBOR	7.1	146	2,114.5	27,558	-99.7%	-99.5%
TIBOR/Euroyen TIBOR	7.8	128	16.4	158	-52.3%	-19.0%
TONA	2,532.5	37,215	349.4	3,204	624.7%	1061.5%
EUR LIBOR	0.1	1	1.07	14	-94.9%	-92.9%
EURIBOR	44,952.1	381,756	29,493.4	252,383	52.4%	51.3%
€STR	25,505.0	68,651	321.6	1,587	7831.6%	4225.8%
Other*	51,861.9	483,716	38,214.5	443,968	35.7%	9.0%
<b>Total**</b>	<b>227,443.5</b>	<b>1,735,659</b>	<b>170,862.2</b>	<b>1,417,199</b>	<b>33.1%</b>	<b>22.5%</b>

\*Other includes IRD with other reference rates, IBOR/non-RFR basis swaps and IBOR/IBOR basis swaps that reference different IBORs IBOR/IBOR basis swaps that reference the same IBOR are included in a corresponding IBOR category  
RFR/RFR basis swaps that reference different RFRs are included in both RFR basis swaps categories and, therefore, are double-counted  
\*\*This data includes only the transactions required to be disclosed under U.S. regulations and does not include any exchange-traded derivatives (futures)

Source: DTCC SDR

**Table 4: US RFR-linked IRD Traded Notional and Trade Count by Tenor**

	Q3 2022		YTD Q3 2022	
	Traded Notional (US\$ billions)	Trade Count	Traded Notional (US\$ billions)	Trade Count
SOFR	14,374.1	162,792	40,127.3	452,669
Up to 1 year	5,425.5	15,937	13,730.9	39,416
Over 1 year and up to 5 years	5,499.6	64,564	16,052.7	177,892
Over 5 years	3,449.0	82,291	10,343.7	235,361
SONIA	5,812.9	38,879	17,601.6	106,726
Up to 1 year	4,457.9	5,246	13,315.9	13,692
Over 1 year and up to 5 years	750.4	12,630	2,492.6	35,710
Over 5 years	604.6	21,003	1,793.0	57,324
SARON	268.6	4,903	714.3	13,488
Up to 1 year	131.1	431	279.4	992
Over 1 year and up to 5 years	111.4	2,738	349.6	7,728
Over 5 years	26.1	1,734	85.4	4,768
TONA	848.7	12,783	2,532.5	37,215
Up to 1 year	309.8	1,027	839.9	2,772
Over 1 year and up to 5 years	325.2	4,688	999.2	12,900
Over 5 years	213.7	7,068	693.5	21,543
€STR	8,265.2	23,755	25,505.0	68,651
Up to 1 year	6,890.5	7,099	21,143.4	18,069
Over 1 year and up to 5 years	964.2	8,680	3,080.7	25,539
Over 5 years	410.5	7,976	1,280.9	25,043

RFR/RFR basis swaps that reference different RFRs are included in both RFR basis swaps categories and, therefore, are double-counted  
This data includes only the transactions required to be disclosed under U.S. regulations and does not include any exchange-traded derivatives (futures)

Source: DTCC SDR

**Table 5: US RFR-linked IRD Traded Notional and Trade Count by Product**

	Q3 2022		YTD Q3 2022	
	Traded Notional (US\$ billions)	Trade Count	Traded Notional (US\$ billions)	Trade Count
<b>SOFR</b>	14,374.1	162,792	40,127.3	452,669
<b>OIS</b>	10,244.5	126,561	27,717.5	345,201
Basis Swaps	1,625.3	12,549	5,325.4	40,032
Fixed-for-Floating IRS	183.5	5,755	450.4	14,270
Cross Currency IRS	47.9	2,093	130.0	5,457
Inflation Swaps	0.4	8	2.3	25
Exotics	361.5	2,093	884.2	5,899
Options	1,535.9	10,779	4,690.7	34,036
Cap Floor	375.0	2,954	926.9	7,749
<b>SONIA</b>	5,812.9	38,879	17,601.6	106,726
<b>OIS</b>	5,466.4	35,740	16,386.4	97,488
Basis Swaps	149.9	1,612	433.7	4,135
Fixed-for-Floating IRS	1.5	11	2.7	35
Cross Currency IRS	0.0	3	1.2	23
Inflation Swaps	0.0	0	0.1	3
Exotics	2.5	158	10.7	221
Options	112.8	1,227	555.9	4,427
Cap Floor	79.8	128	210.9	394
<b>SARON</b>	268.6	4,903	714.3	13,488
<b>OIS</b>	250.7	4,759	663.0	12,996
Basis Swaps	17.9	144	51.3	492
Fixed-for-Floating IRS	0.0	0	0.0	0
Cross Currency IRS	0.0	0	0.0	0
Inflation Swaps	0.0	0	0.0	0
Exotics	0.0	0	0.0	0
Options	0.0	0	0.0	0
Cap Floor	0.0	0	0.0	0
<b>TONA</b>	848.7	12,783	2,532.5	37,215
<b>OIS</b>	583.9	9,034	1,722.2	26,182
Basis Swaps	193.2	2,622	568.0	7,130
Fixed-for-Floating IRS	0.2	5	0.7	29
Cross Currency IRS	0.0	0	0.0	0
Inflation Swaps	0.0	0	0.0	0
Exotics	0.6	38	2.6	148
Options	70.7	1,082	238.6	3,720
Cap Floor	0.2	2	0.4	6
<b>€STR</b>	8,265.2	23,755	25,505.0	68,651
<b>OIS</b>	7,893.3	20,689	24,280.3	58,919
Basis Swaps	370.2	3,041	1,219.5	9,679
Fixed-for-Floating IRS	0.3	3	0.7	11
Cross Currency IRS	0.0	0	0.8	6
Inflation Swaps	0.0	0	0.0	0
Exotics	0.5	1	0.5	1
Options	1.0	20	3.2	34
Cap Floor	0.1	1	0.1	1

RFR/RFR basis swaps that reference different RFRs are included in both RFR basis swaps categories and, therefore, are double-counted  
This data includes only the transactions required to be disclosed under U.S. regulations and does not include any exchange-traded derivatives (futures)

Source: DTCC SDR

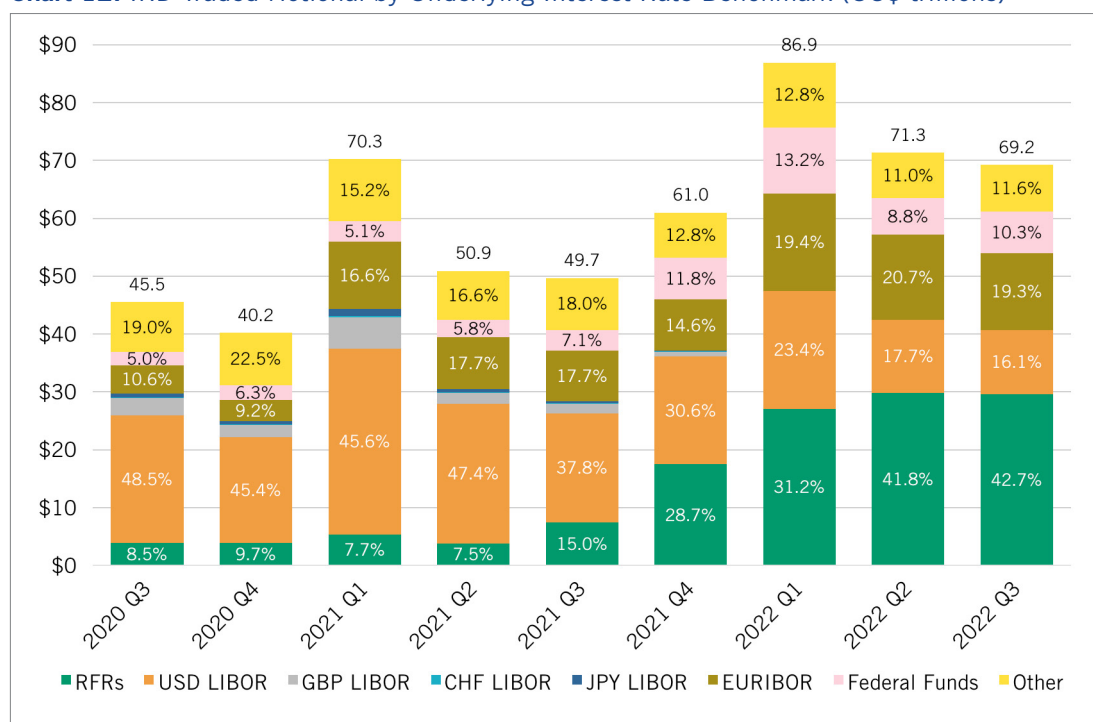
## IBOR-LINKED OTC IRD IN THE US

US-reported OTC IRD traded notional referencing LIBOR denominated in US dollars, sterling, Swiss franc, yen and euro, as well as EURIBOR and TIBOR, declined by 10.8% to \$24.5 trillion in the third quarter of 2022 from \$27.4 trillion in the prior quarter. The number of trades referencing IBORs fell by 14.5% to 168.4 thousand from 197.0 thousand over the same period. IBOR-linked transactions represented 35.3% of total OTC IRD traded notional in the third quarter of 2022 compared to 38.5% in the second quarter of 2022.

Traded notional of IBOR-linked transactions dropped by 23.2% to \$89.1 trillion in the nine months to September 30, 2022 from \$116.0 trillion in the year to September 30, 2021. The number of trades declined by 34.4% to 573.2 thousand from 873.2 thousand over the same period. IBOR-linked transactions represented 33.0% of total IRD traded notional in the nine months to September 30, 2022 compared to 61.6% in the nine months to September 30, 2021<sup>8</sup>.

IRD traded notional based on US dollar LIBOR equaled \$11.1 trillion, accounting for 16.1% of total OTC IRD traded notional in the third quarter of 2022<sup>9</sup> (see Chart 12). IRD traded notional linked to EURIBOR and sterling LIBOR was \$13.3 trillion and \$1.1 billion, respectively. IRD traded notional referencing the effective federal funds rate totaled \$7.1 trillion and accounted for 10.3% of IRD traded notional.

**Chart 12: IRD Traded Notional by Underlying Interest Rate Benchmark (US\$ trillions)**



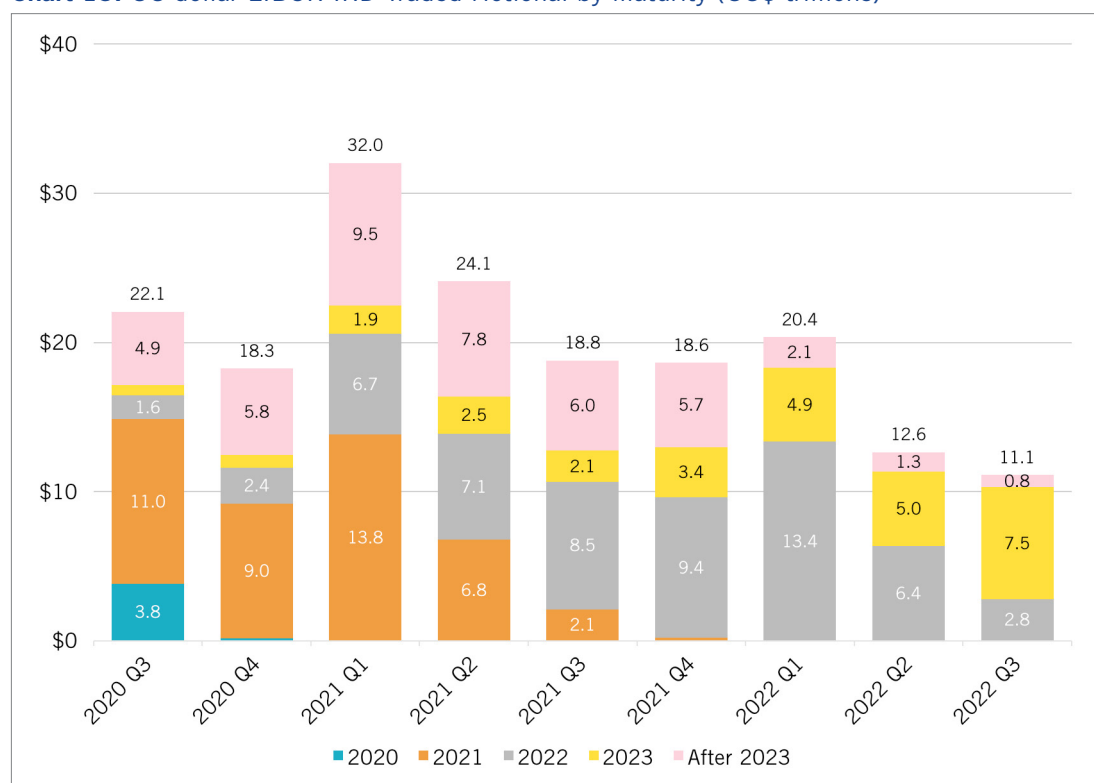
Source: DTCC SDR

<sup>8</sup> This data covers only transactions that are required to be disclosed under US regulations

<sup>9</sup> RFR/RFR basis swaps that reference different RFRs are double counted. These swaps totaled about \$0.7 trillion in the third quarter of 2022

Of the \$11.1 trillion of US dollar LIBOR-linked IRD traded notional in the third quarter of 2022, \$2.8 trillion had a 2022 maturity, \$7.5 trillion had a 2023 maturity and \$0.8 trillion had a maturity after 2023 (see Chart 13).

**Chart 13:** US dollar LIBOR IRD Traded Notional by Maturity (US\$ trillions)



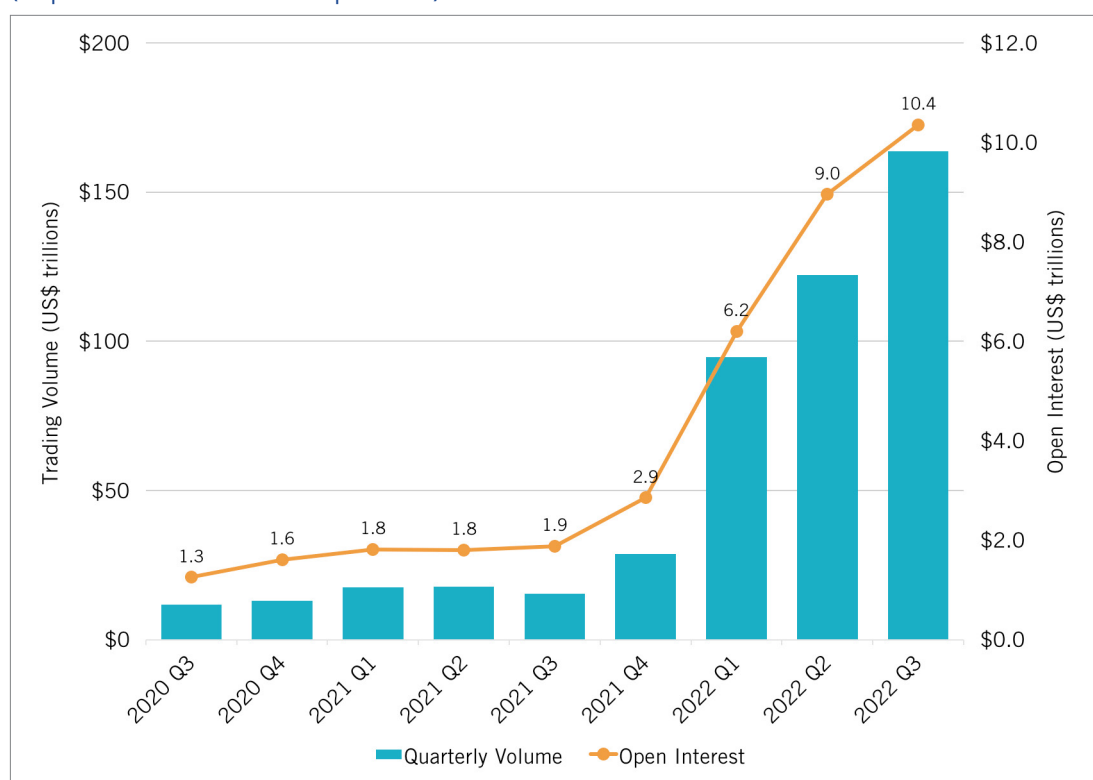
Source: DTCC SDR

## SOFR AND SONIA FUTURES

Trading volume in SOFR futures increased to \$163.7 trillion in the third quarter of 2022 compared to \$122.2 trillion in the second quarter of 2022. Open interest rose to \$10.4 trillion at the end of September 2022 versus \$9.0 trillion at the end of June 2022<sup>10</sup> (see Chart 14).

Trading volume in SOFR futures grew by 648.5% to \$380.7 trillion in the nine months to September 30, 2022 compared to \$50.9 trillion in the year to September 30, 2021.

**Chart 14:** SOFR Futures Quarterly Trading Volume and Open Interest  
(Implied Notional in OTC Equivalent)



Source: CME and ICE

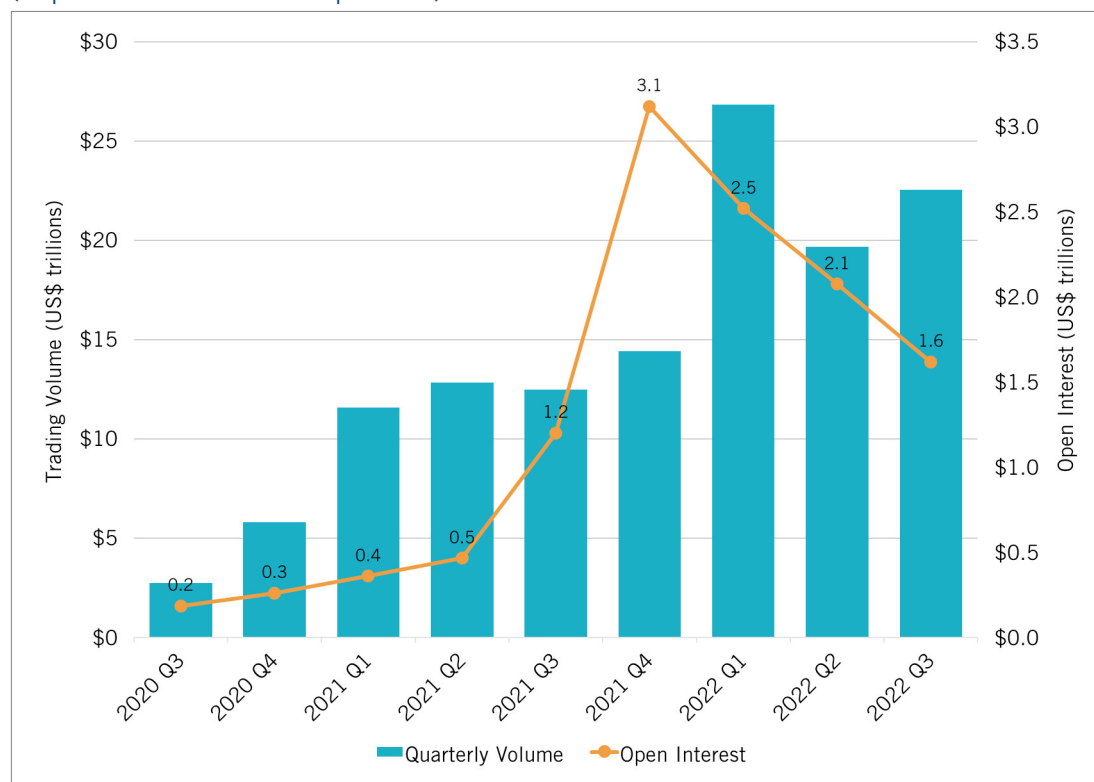
Trading volume in SONIA futures rose to \$22.5 trillion in the third quarter of 2022 compared to \$19.7 trillion in the prior quarter. Open interest declined to \$1.6 trillion at the end of September 2022 versus \$2.1 trillion at the end of June 2022<sup>11</sup> (see Chart 15).

Trading volume in SONIA futures increased by 87.1% to \$69.0 trillion in the nine months to September 30, 2022 from \$36.9 trillion in the nine months to September 30, 2021.

<sup>10</sup> The analysis of trading activity in SOFR exchange-traded futures is based on data from CME and ICE

<sup>11</sup> The analysis of trading activity in SONIA exchange-traded futures is based on data from CME, ICE and LCH

**Chart 15: SONIA Quarterly Trading Volume and Open Interest**  
(Implied Notional in OTC Equivalent)



Source: CME, ICE and LCH



ISDA has published other recent research papers:

- ***SwapsInfo Third Quarter of 2022 and Year-to-September 30, 2022 Review: Summary***  
<https://www.isda.org/a/ab5gE/SwapsInfo-Third-Quarter-of-2022-and-Year-to-September-30-2022-Review-Summary.pdf>
- ***ISDA-Clarus RFR Adoption Indicator: September 2022***  
<https://www.isda.org/a/LF3gE/ISDA-Clarus-RFR-Adoption-Indicator-September-2022.pdf>
- ***Interest Rate Derivatives Trading Activity Reported in EU, UK and US Markets: First Half of 2022 and Second Quarter of 2022***  
<https://www.isda.org/a/182gE/Interest-Rate-Derivatives-Trading-Activity-Reported-in-EU-UK-and-US-Markets-First-Half-of-2022-and-the-Second-Quarter-of-2022.pdf>

The [ISDA-Brattle microsite](#) provides background information about the IBOR Fallbacks, including adoption rates for the IBOR Fallbacks Protocol, graphs comparing certain fallback rates for LIBOR to LIBOR in the corresponding currency and information about the consultations that resulted in the final fallbacks.

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

Olga Roman  
Head of Research  
International Swaps and Derivatives Association, Inc. (ISDA)  
Office: 212-901-6017  
[oroman@isda.org](mailto:oroman@isda.org)

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Since 1985, ISDA has worked to make the global derivatives markets safer and more efficient. Today, ISDA has over 1000 member institutions from 79 countries. These members comprise a broad range of derivatives market participants, including corporations, investment managers, government and supranational entities, insurance companies, energy and commodities firms, and international and regional banks. In addition

to market participants, members also include key components of the derivatives market infrastructure, such as exchanges, intermediaries, clearing houses and repositories, as well as law firms, accounting firms and other service providers. Information about ISDA and its activities is available on the Association's website: [www.isda.org](http://www.isda.org). Follow us on [Twitter](#), [LinkedIn](#), [Facebook](#) and [YouTube](#).