

# TRANSITION TO RFRs REVIEW: Third Quarter of 2020 and Year-to- September 30, 2020

---

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 the 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).

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

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

## KEY HIGHLIGHTS FOR THE THIRD QUARTER OF 2020 AND YEAR-TO- SEPTEMBER 2020

### Global Trading Activity

The ISDA-Clarus RFR Adoption Indicator, which tracks how much global trading activity (as measured by DV01) is conducted in cleared OTC and exchange-traded IRD that reference the identified RFRs in six major currencies, was at 7.7% in the third quarter of 2020, compared to 4.5% the prior quarter<sup>1,2</sup>. RFR-linked IRD DV01 increased to \$5.4 billion in the third quarter of 2020 compared to \$3.6 billion in the prior quarter, while total IRD DV01 decreased to \$69.8 billion from \$81.0 billion over the same period.

In the nine months to September 30, 2020, RFR-linked IRD DV01 totaled \$18.9 billion, compared to \$13.6 billion over the same period in 2019. Total IRD DV01 was \$280.0 billion in the nine months to September 30, 2020, compared to \$322.4 billion in the nine months to September 30, 2019.

Global RFR-linked IRD traded notional, including OTC and ETD, totaled \$31.1 trillion in the third quarter of 2020, compared to \$21.7 trillion in the second quarter of 2020. RFR-linked IRD traded notional accounted for 10.4% of total IRD traded notional in the third quarter of 2020, compared to 5.9% in the prior quarter.

In the nine months to September 30, 2020, RFR-linked IRD traded notional totaled \$108.5 trillion, compared to \$83.0 trillion over the same period in 2019. RFR-linked IRD traded notional accounted for 7.9% of total IRD traded notional in the nine months to September 30, 2020, compared to 4.7% in the first nine months of September 2019.

<sup>1</sup> The RFR Adoption Indicator was 9.5% in September 2020. ISDA-Clarus RFR Adoption Indicator, September 2020: <https://www.isda.org/a/furTE/ISDA-Clarus-RFR-Adoption-Indicator-2020-09.pdf>

<sup>2</sup> ISDA-Clarus RFR Adoption Indicator White Paper: <https://www.isda.org/a/SlmTE/ISDA-Clarus-RFR-Adoption-Indicator-Whitepaper.pdf>

## US Trading Activity

In the US, traded notional of OTC IRD referencing alternative RFRs increased by 50.2% to \$3.9 trillion in the third quarter of 2020, compared to \$2.6 trillion in the second quarter of 2020<sup>3</sup>. RFR transactions accounted for 8.5% of IRD traded notional in the third quarter of 2020, compared to 4.5% in the prior quarter. The increase was driven by higher trading activity in SONIA-linked derivatives.

Traded notional of IRD referencing alternative RFRs totaled \$14.8 trillion in the nine months to September 30, 2020, which accounted for 7.8% of total IRD traded notional. In comparison, traded notional of IRD referencing alternative RFRs totaled \$6.0 trillion in the nine months to September 30, 2019 and accounted for 2.9% of total IRD traded notional.

- IRD traded notional referencing SOFR increased by 8.8% to \$228.0 billion in the third quarter of 2020, from \$209.6 billion in the prior quarter. The proportion of IRD traded notional referencing SOFR remained small, accounting for only 0.5% of total IRD traded notional in the third quarter of 2020. In the nine months to September 30, 2020, SOFR traded notional totaled \$716.9 billion compared to \$213.9 billion in the nine months to September 30, 2019.
- IRD traded notional referencing SONIA increased by 56.1% and totaled \$3.6 trillion in the third quarter of 2020, compared with \$2.3 trillion in the second quarter of 2020. SONIA swaps accounted for 7.8% of total IRD traded notional and represented 92.3% of IRD traded notional referencing RFRs in the third quarter of 2020<sup>4</sup>. In the nine months to September 30, 2020, IRD traded notional referencing SONIA totaled \$13.8 trillion, compared to \$5.7 trillion in the nine months to September 30, 2019.
- Traded notional of IRD referencing LIBOR denominated in US dollars, sterling, Swiss franc, yen and euro, as well as EURIBOR and TIBOR, decreased by 22.1% compared with the second quarter of 2020 and totaled \$29.8 trillion. It represented 65.5% of total IRD traded notional in the third quarter of 2020, compared with 67.3% in the second quarter of 2020.

<sup>3</sup> This data covers only transactions that are required to be disclosed under US regulations

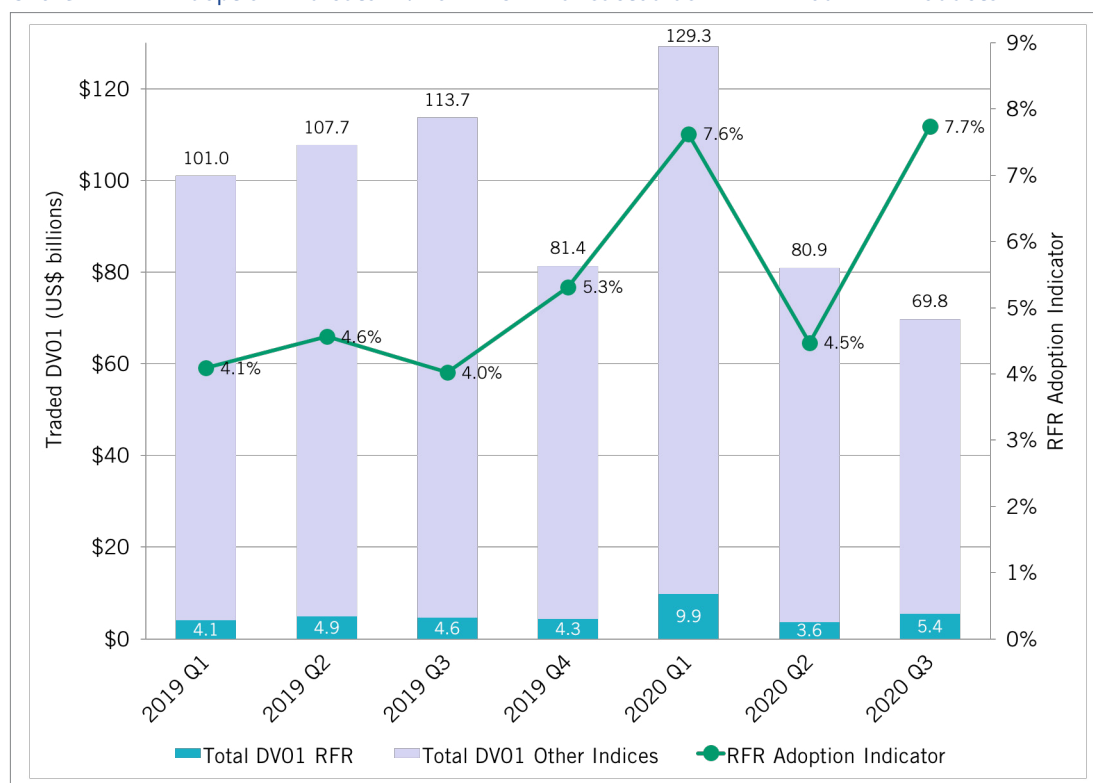
<sup>4</sup> This is expected as SONIA has been and is currently used as the reference rate for sterling overnight index swaps (OIS), while the Effective Federal Funds Rate is still widely used as the reference rate for US dollar OIS

## GLOBAL RFR-LINKED OTC AND EXCHANGE-TRADED IRD

The ISDA-Clarus RFR Adoption Indicator was at 7.7% in the third quarter of 2020, compared to 4.5% in the prior quarter<sup>5</sup>. RFR-linked IRD DV01 increased to \$5.4 billion in the third quarter of 2020, compared to \$3.6 billion in the prior quarter, while total IRD DV01 decreased to \$69.8 billion from \$80.9 billion over the same period<sup>6</sup> (see Chart 1).

In the nine months to September 30, 2020, RFR-linked IRD DV01 totaled \$18.9 billion, compared to \$13.6 billion over the same period in 2019. Total IRD DV01 was \$280.0 billion in the nine months to September 30, 2020, compared to \$322.4 billion in the nine months to September 30, 2019.

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



Source: ISDA-Clarus RFR Adoption Indicator

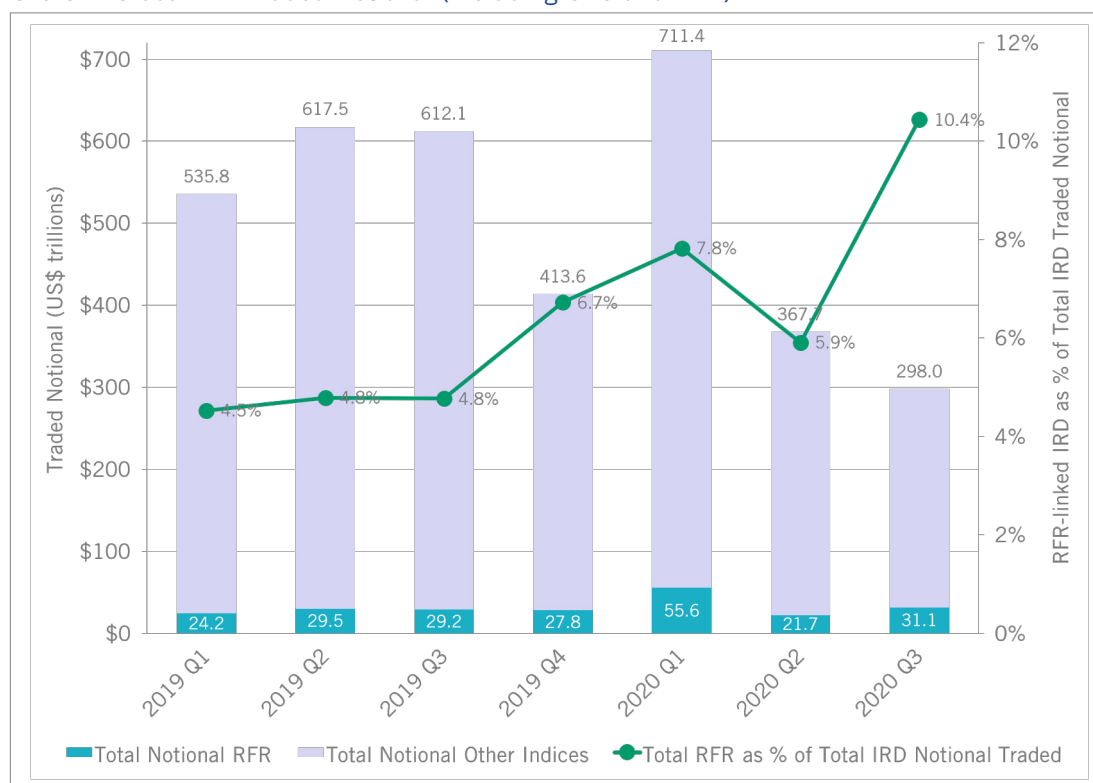
Global RFR-linked IRD traded notional, including OTC and exchange-traded IRD, increased to \$31.1 trillion in the third quarter of 2020, compared to \$21.7 trillion in the second quarter of 2020, while total IRD traded notional declined to \$298.0 trillion from \$367.7 trillion over the same period. RFR-linked IRD traded notional accounted for 10.4% of total IRD traded notional in the third quarter of 2020, compared to 5.9% in the prior quarter (see Chart 2).

<sup>5</sup> ISDA-Clarus RFR Adoption Indicator tracks how much global trading activity (as measured by DV01) is conducted in cleared OTC and exchange-traded derivatives that reference the identified RFRs in six major currencies, including USD, EUR, GBP, JPY, AUD and CHF

<sup>6</sup> To access interactive charts and download monthly data, go to <https://rfr.clarusft.com>

In the nine months to September 30, 2020, RFR-linked IRD traded notional totaled \$108.5 trillion, compared to \$83.0 trillion over the same period in 2019. RFR-linked IRD traded notional accounted for 7.9% of total IRD traded notional in the nine months to September 30, 2020, compared to 4.7% in the nine months to September 30, 2019.

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



Source: ISDA-Clarus RFR Adoption Indicator

## US RFR-LINKED OTC IRD

In the US, OTC IRD traded notional referencing alternative RFRs increased by 50.2% to \$3.9 trillion in the third quarter of 2020, compared to \$2.6 trillion in the second quarter of 2020<sup>7</sup>. The increase was driven by higher trading activity in SONIA-linked derivatives.

RFR transactions accounted for 8.5% of IRD traded notional in the third quarter of 2020, compared to 4.5% in the prior quarter. The number of trades referencing RFRs increased to 7,408 in the third quarter of 2020, from 6,327 in the second quarter of 2020.

### In the third quarter of 2020:

- SOFR-linked IRD traded notional increased by 8.8% compared with the second quarter of 2020 and totaled \$228.0 billion, including \$103.6 billion of basis swaps. Trade count increased by 65.6% over the same period and totaled 1,504, including 660 basis swaps<sup>8</sup>.
- SONIA-linked IRD traded notional increased by 56.1% compared with the second quarter of 2020 and totaled \$3.6 trillion, including \$85.9 billion of basis swaps. Trade count increased by 8.7% over the same period and totaled 5,646, including 336 basis swaps.
- SARON-linked IRD traded notional decreased by 18.3%, while trade count increased by 3.8% compared with the second quarter of 2020. Traded notional and trade count totaled \$10.2 billion and 27, respectively.
- TONA-linked IRD traded notional declined by 38.7% compared with the second quarter of 2020 and totaled \$35.4 billion, including \$10 million of basis swaps. Trade count decreased by 38.5% over the same period and totaled 99, including one basis swap.
- €STR-linked IRD traded notional and trade count jumped by 168.2% and 266.7%, respectively, compared with the second quarter of 2020. Traded notional was \$24.2 billion, while trade count totaled 132.

<sup>7</sup> This data covers only transactions that are required to be disclosed under US regulations

<sup>8</sup> The RFR basis swap data covers all basis swaps with the relevant alternative RFR as one of the underlying assets. This includes alternative RFR/IBOR basis swaps. The IBOR data does not cover any basis swaps. The 'Other' category covers non-alternative RFR/IBOR basis swaps and IRD with reference rates that are not otherwise covered. Basis swaps with the relevant alternative RFR as one of the underlying assets are tracked separately because market participants have specifically identified a robust basis swaps market as key to understanding the economic differences between the alternative RFRs and other rates, including IBORs. A robust and liquid basis swaps market for the alternative RFRs will also support hedging during the transition from IBORs to alternative RFRs

### Year-to-September 30, 2020:

IRD traded notional referencing alternative RFRs totaled \$14.8 trillion in the nine months to September 30, 2020, which accounted for 7.8% of total IRD traded notional. The number of IRD trades referencing alternative RFRs was 23,795, representing 1.9% of total IRD trade count.

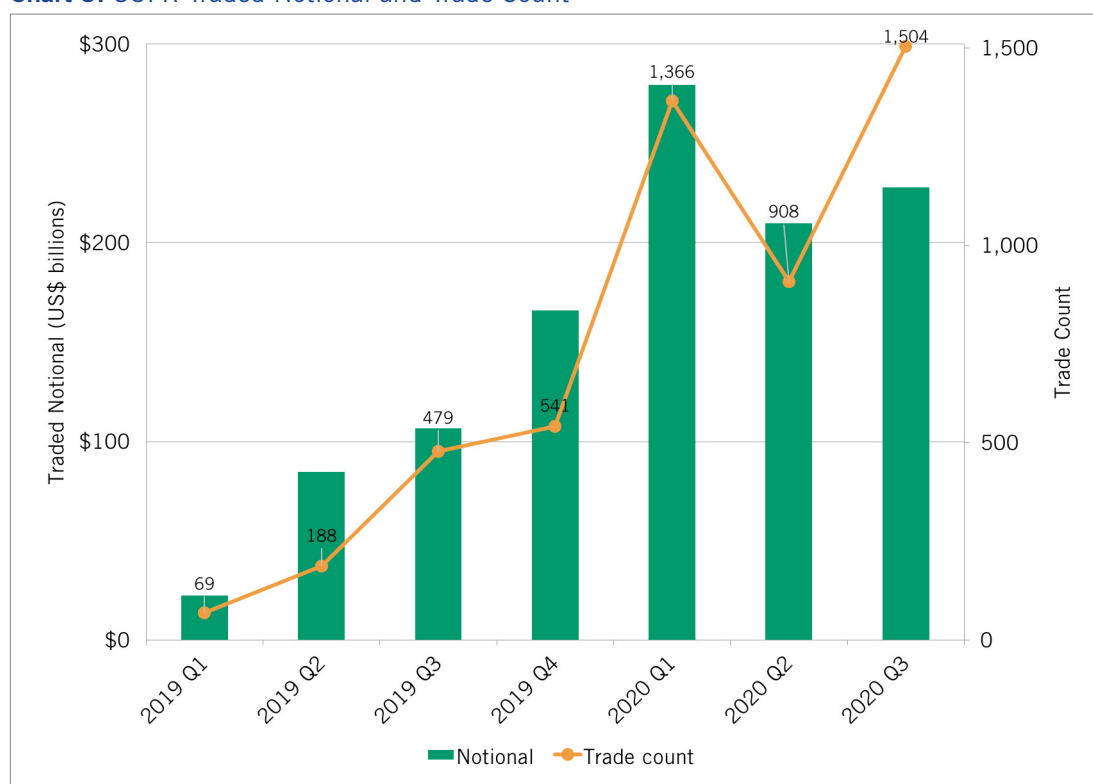
In comparison, traded notional of IRD referencing alternative RFRs totaled \$6.0 trillion in the nine months to September 30, 2019 and accounted for 2.9% of total IRD traded notional.

- SOFR-linked IRD traded notional increased by 235.2% compared with the nine months to September 30, 2019 and totaled \$716.9 billion, including \$339.5 billion of basis swaps. Trade count increased by 413.3% over the same period and totaled 3,778, including 1,288 basis swaps.
- SONIA-linked IRD traded notional jumped by 142.8% to \$13.8 trillion, including \$216.7 billion of basis swaps. Trade count increased by 107.9% and totaled 19,233, including 1,214 basis swaps.
- SARON-linked IRD traded notional increased by 101.0% to \$30.1 billion and trade count grew by 42.9% to 70.
- TONA-linked IRD traded notional increased by 54.4% to \$204.1 billion, including \$0.1 billion of basis swaps. Trade count increased by 51.0% and totaled 512, including three basis swaps.
- €STR-linked IRD traded notional and trade count was \$37.5 billion and 202, respectively.

## SOFR

Trading activity in SOFR swaps grew in the third quarter of 2020 compared with the second quarter of 2020<sup>9</sup>. Traded notional of IRD referencing SOFR increased by 8.8% to \$228.0 billion from \$209.6 billion in the second quarter of 2020. The number of SOFR-linked IRD transactions jumped by 65.6% to 1,504, from 908 over the same period (see Chart 3).

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



Source: DTCC SDR

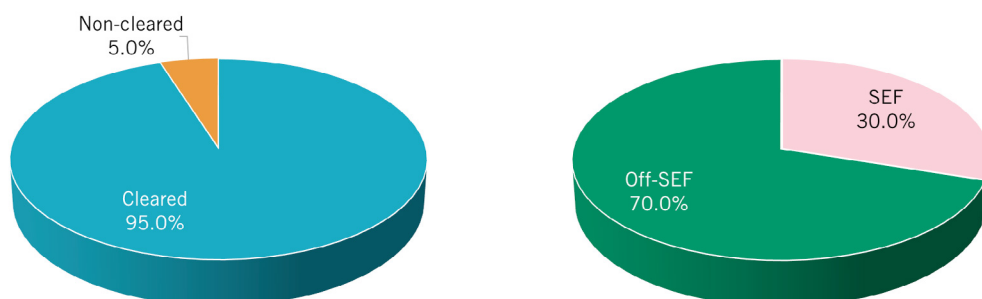
In the third quarter of 2020, \$216.6 billion of SOFR swaps was cleared, including \$98.9 billion of basis swaps. Cleared swaps accounted for 95.0% of total SOFR-linked IRD traded notional (see Chart 4).

\$68.4 billion of SOFR-linked IRD traded notional was traded on swap execution facilities (SEFs), representing 30.0% of total SOFR-based IRD traded notional. Out of 1,504 SOFR-linked IRD transactions, 498 were traded on SEFs.

<sup>9</sup>SOFR swaps started trading in the third quarter of 2018



**Chart 4: SOFR Traded Notional Q3 2020**



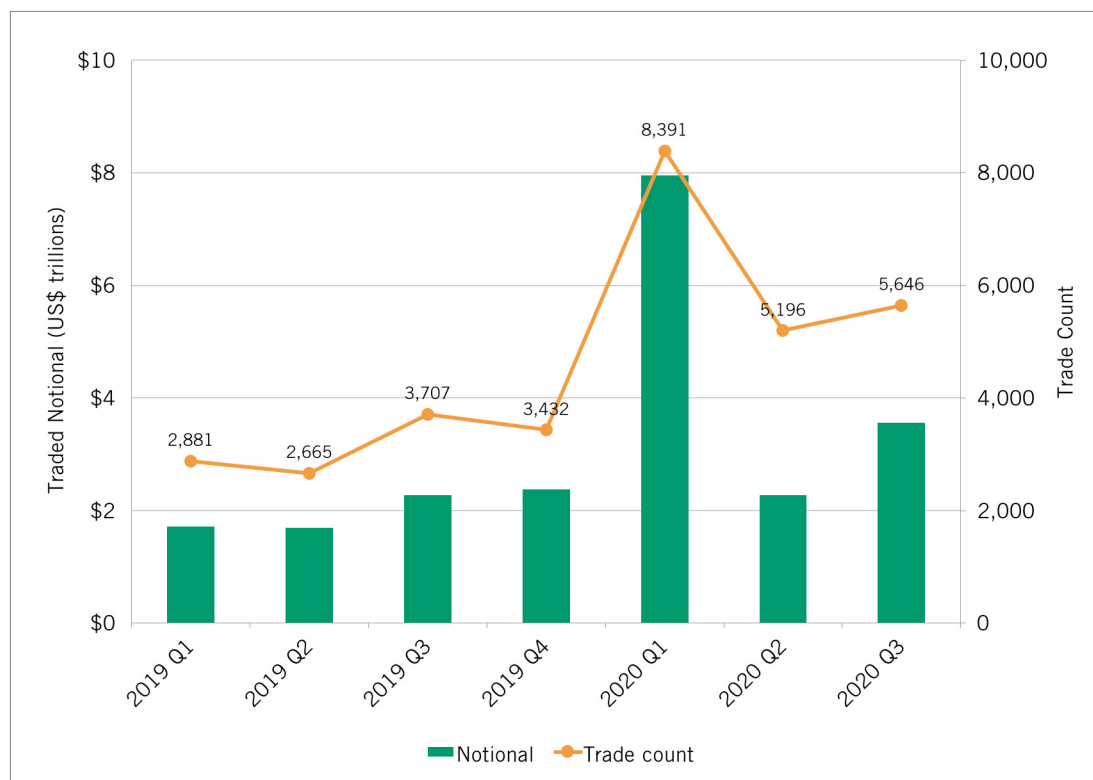
Source: DTCC SDR

In the nine months to September 30, 2020, SOFR traded notional totaled \$716.9 billion, including \$339.5 billion of basis swaps. Total trade count was 3,778, including 1,288 basis swaps. Cleared notional totaled \$653.8 billion and accounted for 91.2% of total SOFR-linked traded notional. SEF-traded notional equaled \$157.1 billion and represented 21.9% of total SOFR-linked traded notional.

## SONIA

Traded notional of IRD referencing SONIA grew by 56.1% to \$3.6 trillion in the third quarter of 2020, from \$2.3 trillion in the second quarter of 2020. Trade count increased by 8.7% from 5,196 to 5,646 over the same period (see Chart 5).

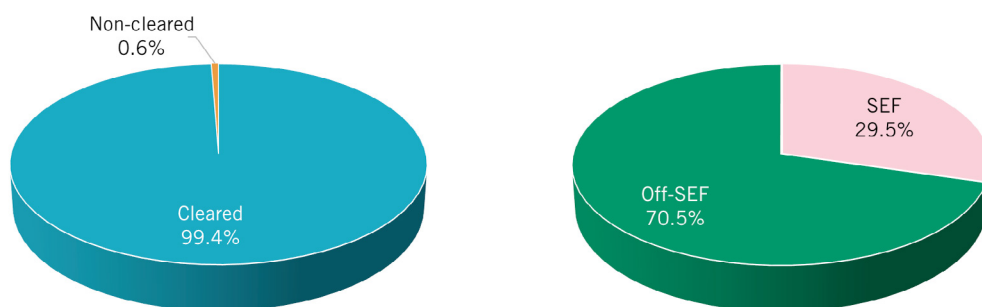
**Chart 5: SONIA Traded Notional and Trade Count**



Source: DTCC SDR

In the third quarter of 2020, \$3.5 trillion of SONIA swaps was cleared, including \$76.8 billion of basis swaps. Cleared transactions accounted for 99.4% of total SONIA-linked IRD traded notional. SEF traded notional equaled \$1.1 trillion and represented 29.5% of total SONIA-linked IRD traded notional (see Chart 6).

**Chart 6: SONIA Traded Notional Q3 2020**



Source: DTCC SDR

In the nine months to September 30, 2020, SONIA-linked IRD traded notional was \$13.8 trillion, including \$216.7 billion of basis swaps. Total trade count was 19,233, including 1,214 basis swaps. Cleared notional totaled \$13.7 trillion and accounted for 99.4% of total SONIA-linked IRD traded notional. SEF-traded notional equaled \$3.1 trillion and represented 22.6% of total SONIA-linked IRD traded notional.

**Table 1: US IRD Traded Notional and Trade Count**

	Q3 2020		YTD Q3 2020	
	Traded Notional (US\$ billions)	Trade Count	Traded Notional (US\$ billions)	Trade Count
USD LIBOR	21,266.8	147,605	84,264.9	541,577
SOFR	124.3	844	377.3	2,490
Basis Swaps: SOFR	103.6	660	339.5	1,288
GBP LIBOR	2,858.5	29,123	10,731.0	94,635
SONIA	3,468.9	5,310	13,573.6	18,019
Basis Swaps: SONIA	85.9	336	216.7	1,214
CHF LIBOR	104.3	2,916	420.2	8,956
SARON	10.2	27	30.1	70
Basis Swaps: SARON	0.0	0	0.0	0
JPY LIBOR	717.6	7,512	2,726.9	27,222
TIBOR/Euroyen TIBOR	1.6	17	6.1	47
TONA	35.4	98	204.1	509
Basis Swaps: TONA	0.01	1	0.1	3
EUR LIBOR	0.5	8	1.5	38
EURIBOR	4,825.6	45,928	17,333.5	156,269
€STR	24.2	132	37.5	202
Basis Swaps: €STR	0.0	0	0.0	0
Other*	11,852.4	118,600	59,161.6	399,664
<b>Total**</b>	<b>45,480.0</b>	<b>359,117</b>	<b>189,424.6</b>	<b>1,252,203</b>
*Other includes IRD with other reference rates and IBOR/non-RFR basis swaps				
**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 2020 vs. Q2 2020

	Q3 2020		Q2 2019		Q3 2020 vs. Q2 2020	
	Traded Notional (US\$ billions)	Trade Count	Traded Notional (US\$ billions)	Trade Count	Traded Notional	Trade Count
USD LIBOR	21,266.8	147,605	27,113.3	181,380	-21.6%	-18.6%
SOFR	228.0	1,504	209.6	908	8.8%	65.6%
GBP LIBOR	2,858.5	29,123	3,704.5	33,762	-22.8%	-13.7%
SONIA	3,554.9	5,646	2,276.8	5,196	56.1%	8.7%
CHF LIBOR	104.3	2,916	158.4	3,131	-34.1%	-6.9%
SARON	10.2	27	12.4	26	-18.3%	3.8%
JPY LIBOR	717.6	7,512	1,003.6	9,059	-28.5%	-17.1%
TIBOR/Euroyen TIBOR	1.6	17	3.6	14	-54.5%	21.4%
TONA	35.4	99	57.8	161	-38.7%	-38.5%
EUR LIBOR	0.5	8	0.5	16	5.1%	-50.0%
EURIBOR	4,825.6	45,928	6,242.8	50,311	-22.7%	-8.7%
€STR	24.2	132	9.0	36	168.2%	266.7%
Other*	11,852.4	118,600	15,967.1	127,114	-25.8%	-6.7%
<b>Total**</b>	<b>45,480.0</b>	<b>359,117</b>	<b>56,759.4</b>	<b>411,114</b>	<b>-19.9%</b>	<b>-12.6%</b>

\*Other includes IRD with other reference rates and IBOR/non-RFR basis swaps  
\*\*This data includes only the transactions required to be disclosed under US regulations and does not include any exchange-traded derivatives (futures)

Source: DTCC SDR

Table 3: US IRD Traded Notional and Trade Count YTD Q3 2020 vs. YTD Q3 2019

	YTD Q3 2020		YTD Q3 2019		YTD Q3 2020 vs. YTD Q3 2019	
	Traded Notional (US\$ billions)	Trade Count	Traded Notional (US\$ billions)	Trade Count	Traded Notional	Trade Count
USD LIBOR	84,264.9	541,577	98,164.4	534,023	-14.2%	1.4%
SOFR	716.9	3,778	213.9	736	235.2%	413.3%
GBP LIBOR	10,731.0	94,635	8,166.3	70,058	31.4%	35.1%
SONIA	13,790.3	19,233	5,679.5	9,253	142.8%	107.9%
CHF LIBOR	420.2	8,956	490.6	6,732	-14.4%	33.0%
SARON	30.1	70	15.0	49	101.0%	42.9%
JPY LIBOR	2,726.9	27,222	3,090.9	30,670	-11.8%	-11.2%
TIBOR/Euroyen TIBOR	6.1	47	9.7	90	-36.4%	-47.8%
TONA	204.1	512	132.2	339	54.4%	51.0%
EUR LIBOR	1.5	38	0.02	3	7779.9%	1166.7%
EURIBOR	17,333.5	156,269	18,632.7	155,094	-7.0%	0.8%
€STR*	37.5	202	0.0	0		
Other**	59,161.6	399,664	72,252.1	346,665	-18.1%	15.3%
<b>Total***</b>	<b>189,424.6</b>	<b>1,252,203</b>	<b>206,847.2</b>	<b>1,153,712</b>	<b>-8.4%</b>	<b>8.5%</b>

\*€STR swaps started trading in the fourth quarter of 2019  
\*\*Other includes IRD with other reference rates and IBOR/non-RFR basis swaps  
\*\*\*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 IRD Cleared and Non-cleared Notional

	Q3 2020		YTD Q3 2020	
	Cleared Notional (US\$ billions)	Non-cleared Notional (US\$ billions)	Cleared Notional (US\$ billions)	Non-cleared Notional (US\$ billions)
USD LIBOR	19,721.1	1,545.8	77,872.5	6,392.4
SOFR	117.7	6.7	334.2	43.1
Basis Swaps: SOFR	98.9	4.7	319.6	19.9
GBP LIBOR	2,609.7	248.8	9,904.2	826.8
SONIA	3,456.2	12.7	13,512.6	60.9
Basis Swaps: SONIA	76.8	9.1	198.1	18.6
CHF LIBOR	101.8	2.6	414.3	5.9
SARON	10.1	0.04	30.1	0.04
Basis Swaps: SARON	0.0	0.0	0.0	0.0
JPY LIBOR	668.0	49.6	2,540.8	186.1
TIBOR/Euroyen TIBOR	0.6	1.0	2.4	3.7
TONA	34.8	0.7	199.5	4.6
Basis Swaps: TONA	0.01	0.0	0.02	0.03
EUR LIBOR	0.2	0.3	0.8	0.7
EURIBOR	4,244.3	581.3	15,204.5	2,129.0
€STR	18.2	6.0	24.8	12.7
Basis Swaps: €STR	0.0	0.0	0.0	0.0
Other*	9,733.3	2,119.1	51,410.3	7,751.3
<b>Total**</b>	<b>40,891.6</b>	<b>4,588.5</b>	<b>171,968.8</b>	<b>17,455.8</b>
*Other includes IRD with other reference rates and IBOR/non-RFR basis swaps				
**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 IRD SEF and Off-SEF Traded Notional**

	Q3 2020		YTD Q3 2020	
	SEF Traded Notional (US\$ billions)	Off-SEF Traded Notional (US\$ billions)	SEF Traded Notional (US\$ billions)	Off-SEF Traded Notional (US\$ billions)
USD LIBOR	18,035.3	3,231.5	68,905.5	15,359.5
SOFR	21.9	102.5	45.7	331.6
Basis Swaps: SOFR	46.5	57.1	111.4	228.1
GBP LIBOR	1,774.1	1,084.4	6,872.6	3,858.3
SONIA	1,044.2	2,424.8	3,093.7	10,479.9
Basis Swaps: SONIA	5.9	80.1	18.2	198.5
CHF LIBOR	58.0	46.4	209.1	211.1
SARON	3.46	6.7	3.49	26.6
Basis Swaps: SARON	0.0	0.0	0.0	0.0
JPY LIBOR	439.3	278.3	1,717.1	1,009.8
TIBOR/Euroyen TIBOR	0.4	1.3	0.4	5.8
TONA	24.0	11.4	149.9	54.1
Basis Swaps: TONA	0.0	0.01	0.0	0.05
EUR LIBOR	0.0	0.5	0.2	1.3
EURIBOR	2,784.9	2,040.7	9,519.3	7,814.2
€STR	0.3	23.9	0.4	37.1
Basis Swaps: €STR	0.0	0.0	0.0	0.0
Other*	5,054.6	6,797.8	22,446.4	36,715.2
<b>Total**</b>	<b>29,292.6</b>	<b>16,187.4</b>	<b>113,093.4</b>	<b>76,331.2</b>

\*Other includes IRD with other reference rates and IBOR/non-RFR basis swaps  
 \*\*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

Most IRD transactions referencing alternative RFRs had a tenor up to one year<sup>10</sup>. For example, out of \$228.0 billion of SOFR-linked IRD traded notional in the third quarter of 2020, \$133.5 billion (58.6%) had a tenor up to one year, \$54.9 billion (24.1%) was between one and five years and only \$39.5 (17.3%) billion had a tenor over five years (see Table 6).

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

**Table 6:** US RFR-linked IRD Traded Notional and Trade Count by Tenor

	Q3 2020		YTD Q3 2020	
	Traded Notional (US\$ billions)	Trade Count	Traded Notional (US\$ billions)	Trade Count
<b>SOFR</b>	228.0	1,504	716.9	3,778
Up to 1 year	133.5	196	471.2	749
Over 1 year and up to 5 years	54.9	573	189.2	1,879
Over 5 years	39.5	735	56.4	1,150
<b>SONIA</b>	3,554.9	5,646	13,790.3	19,233
Up to 1 year	3,333.8	1,670	13,064.7	6,438
Over 1 year and up to 5 years	125.5	1,116	395.4	3,316
Over 5 years	95.5	2,860	330.1	9,479
<b>SARON</b>	10.2	27	30.1	70
Up to 1 year	8.7	18	27.8	50
Over 1 year and up to 5 years	1.3	6	1.8	11
Over 5 years	0.2	3	0.5	9
<b>TONA</b>	35.4	99	204.1	512
Up to 1 year	32.4	51	188.6	309
Over 1 year and up to 5 years	2.2	22	10.8	71
Over 5 years	0.8	26	4.8	132
<b>€STR</b>	24.2	132	37.5	202
Up to 1 year	17.7	30	27.2	45
Over 1 year and up to 5 years	5.2	68	7.1	90
Over 5 years	1.3	34	3.3	67

This data includes only the transactions required to be disclosed under US regulations and does not include any exchange-traded derivatives (futures)

Source: DTCC SDR

The majority of RFR-linked IRD traded notional comprised basis swaps and OIS. For example, out of 1,504 SOFR-based contracts traded in the third quarter of 2020, 814 were OIS transactions, 660 were basis swaps, seven were fixed-for-floating interest rate swaps and 23 were cap floor products (see Table 7).

**Table 7: US RFR-linked IRD Traded Notional and Trade Count by Product**

	Q3 2020		YTD Q3 2020	
	Traded Notional (US\$ billions)	Trade Count	Traded Notional (US\$ billions)	Trade Count
<b>SOFR</b>	228.0	1,504	716.9	3,778
<b>OIS</b>	122.0	814	368.8	2,397
<b>Basis Swaps</b>	103.6	660	339.5	1,288
<b>Fixed-for-Floating IRS</b>	1.5	7	3.0	50
<b>Cross Currency IRS</b>	0.0	0	0.0	0
<b>Inflation Swaps</b>	0.0	0	0.0	0
<b>Exotics</b>	0.0	0	4.3	18
<b>Options</b>	0.0	0	0.3	2
<b>Cap Floor</b>	0.9	23	0.9	23
<b>SONIA</b>	3,554.9	5,646	13,790.3	19,233
<b>OIS</b>	3,465.2	5,293	13,529.1	17,899
<b>Basis Swaps</b>	85.9	336	216.7	1,214
<b>Fixed-for-Floating IRS</b>	0.0	0	38.4	43
<b>Cross Currency IRS</b>	0.2	3	0.4	6
<b>Inflation Swaps</b>	0.2	3	0.2	3
<b>Exotics</b>	3.3	11	5.5	68
<b>Options</b>	0.0	0	0.0	0
<b>Cap Floor</b>	0.0	0	0.0	0
<b>SARON</b>	10.2	27	30.1	70
<b>OIS</b>	10.2	27	30.1	70
<b>Basis Swaps</b>	0.0	0	0.0	0
<b>Fixed-for-Floating IRS</b>	0.0	0	0.0	0
<b>Cross Currency IRS</b>	0.0	0	0.0	0
<b>Inflation Swaps</b>	0.0	0	0.0	0
<b>Exotics</b>	0.0	0	0.0	0
<b>Options</b>	0.0	0	0.0	0
<b>Cap Floor</b>	0.0	0	0.0	0
<b>TONA</b>	35.4	99	204.1	512
<b>OIS</b>	35.2	96	202.4	505
<b>Basis Swaps</b>	0.01	1	0.05	3
<b>Fixed-for-Floating IRS</b>	0.0	0	0.0	0
<b>Cross Currency IRS</b>	0.0	0	0.0	0
<b>Inflation Swaps</b>	0.0	0	0.0	0
<b>Exotics</b>	0.2	2	1.6	4
<b>Options</b>	0.0	0	0.0	0
<b>Cap Floor</b>	0.0	0	0.0	0
<b>€STR</b>	24.2	132	37.5	202
<b>OIS</b>	24.2	132	37.5	202
<b>Basis Swaps</b>	0.0	0	0.0	0
<b>Fixed-for-Floating IRS</b>	0.0	0	0.0	0
<b>Cross Currency IRS</b>	0.0	0	0.0	0
<b>Inflation Swaps</b>	0.0	0	0.0	0
<b>Exotics</b>	0.0	0	0.0	0
<b>Options</b>	0.0	0	0.0	0
<b>Cap Floor</b>	0.0	0	0.0	0

This data includes only the transactions required to be disclosed under US regulations and does not include any exchange-traded derivatives (futures)



## US IBOR-LINKED OTC IRD

In the third quarter of 2020, OTC IRD traded notional referencing LIBOR denominated in US dollars, sterling, Swiss franc, yen and euro, as well as EURIBOR and TIBOR, equaled \$29.8 trillion and represented 65.5% of total IRD traded notional<sup>11</sup>. The number of IRD trades referencing IBORs totaled 233,109, accounting for 64.9% of total IRD trade count.

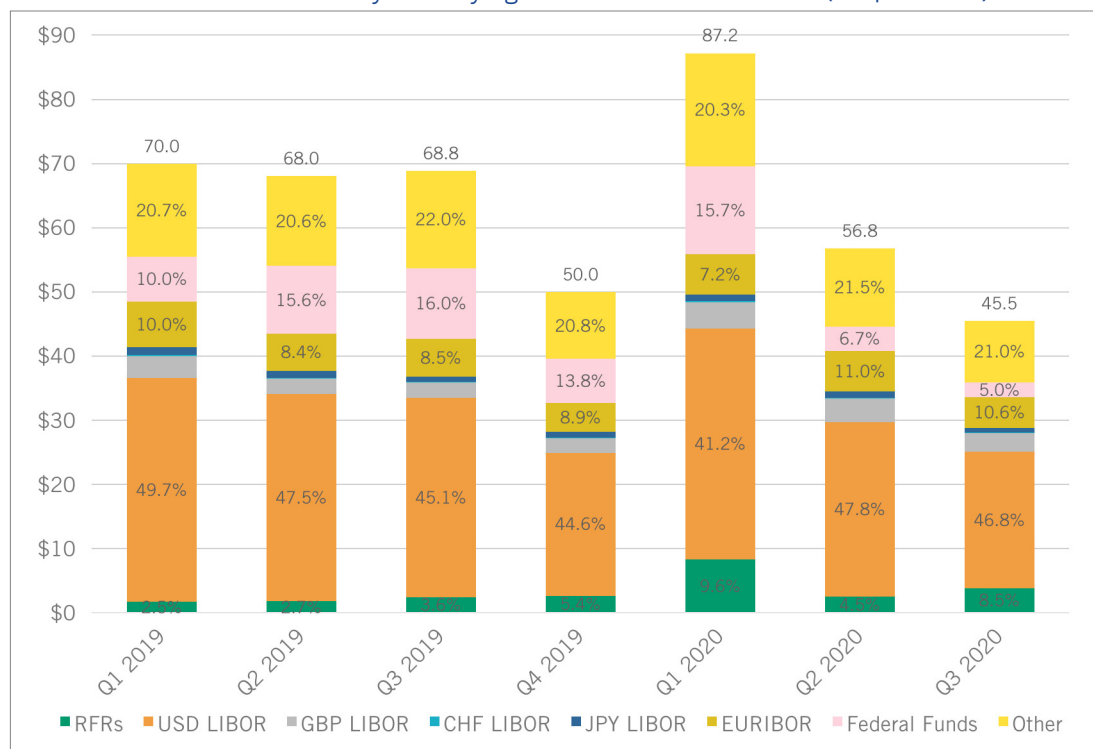
\$21.3 trillion of IRD traded notional was based on US dollar LIBOR, accounting for 46.8% of total IRD traded notional in the third quarter of 2020 (see Chart 7). EURIBOR and sterling LIBOR traded notional was \$4.8 trillion and \$2.9 trillion, respectively. IRD traded notional referencing the effective federal funds rate totaled \$2.3 trillion and accounted for 5.0% of IRD traded notional.

In comparison, IRD traded notional referencing LIBOR denominated in US dollar, sterling, Swiss franc, yen and euro, as well as EURIBOR and TIBOR, equaled \$38.2 trillion and represented 67.3% of total IRD traded notional in the second quarter of 2020.

In the nine months to September 30, 2020, IRD traded notional referencing IBORs totaled \$115.5 trillion and represented 61.0% of total IRD traded notional. The number of trades referencing IBORs totaled 828,744, comprising 66.2% of total IRD trade count.

\$84.3 trillion of IRD traded notional was based on US dollar LIBOR, accounting for 44.5% of total IRD traded notional in the nine months to September 30, 2020. EURIBOR and sterling LIBOR traded notional was \$17.3 trillion and \$10.7 trillion, respectively. IRD traded notional referencing fed funds totaled \$19.8 trillion and accounted for 10.4% of IRD traded notional.

**Chart 7: IRD Traded Notional by Underlying Interest Rate Benchmark (US\$ trillions)**

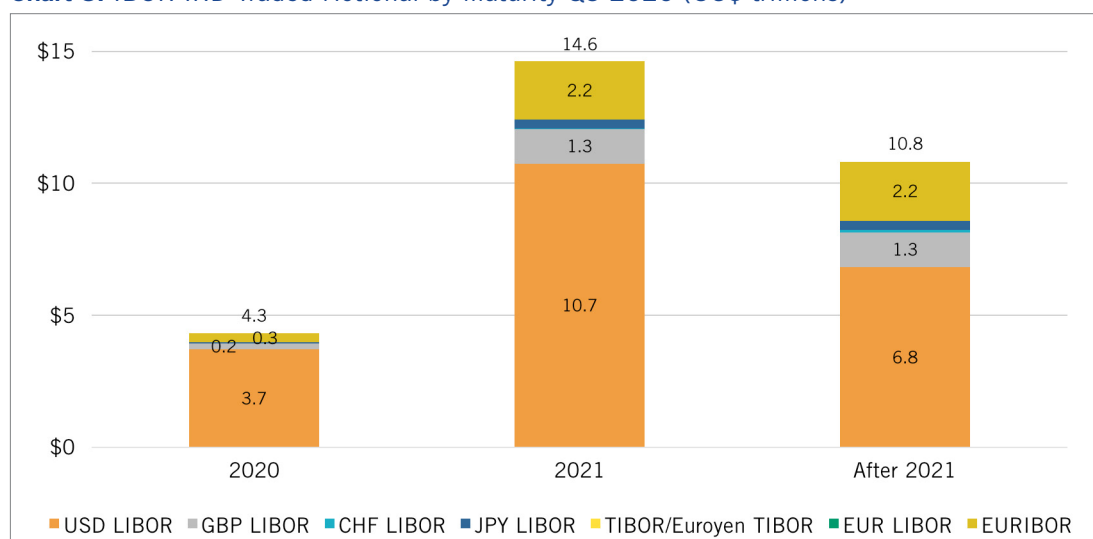


Source: DTCC SDR

In the third quarter of 2020, \$4.3 trillion of IRD traded notional referencing IBORs had a 2020 maturity, including \$3.7 trillion based on US dollar LIBOR, \$0.3 trillion based on EURIBOR and \$0.2 trillion based on sterling LIBOR (see Chart 8).

\$14.6 trillion of IRD traded notional referencing LIBOR had a 2021 maturity, including \$10.7 trillion based on US dollar LIBOR, \$2.2 trillion based on EURIBOR and \$1.3 trillion based on sterling LIBOR. \$10.8 trillion of LIBOR-linked IRD traded notional had a maturity after 2021, including \$6.8 trillion based on US dollar LIBOR.

**Chart 8: IBOR IRD Traded Notional by Maturity Q3 2020 (US\$ trillions)**



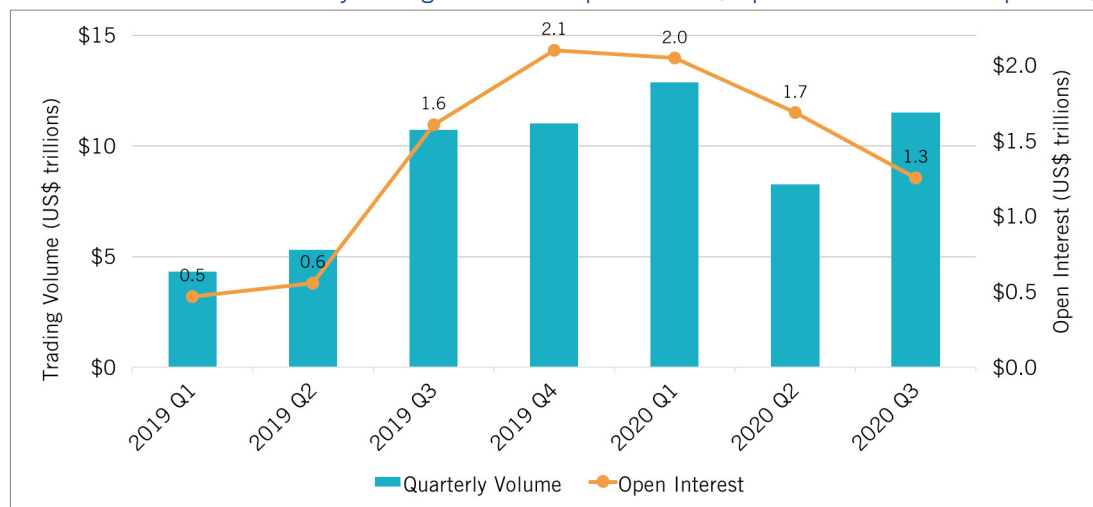
Source: DTCC SDR

## SOFR AND SONIA FUTURES

Trading volume in SOFR futures increased by 39.3% to \$11.5 trillion in the third quarter of 2020, from \$8.3 trillion in the second quarter of 2020 (see Chart 9).

Open interest in SOFR futures declined to \$1.3 trillion at the end of September 2020, compared to \$1.7 trillion at the end of June 2020<sup>12</sup>.

**Chart 9: SOFR Futures Quarterly Trading Volume and Open Interest (Implied Notional in OTC Equivalent)**

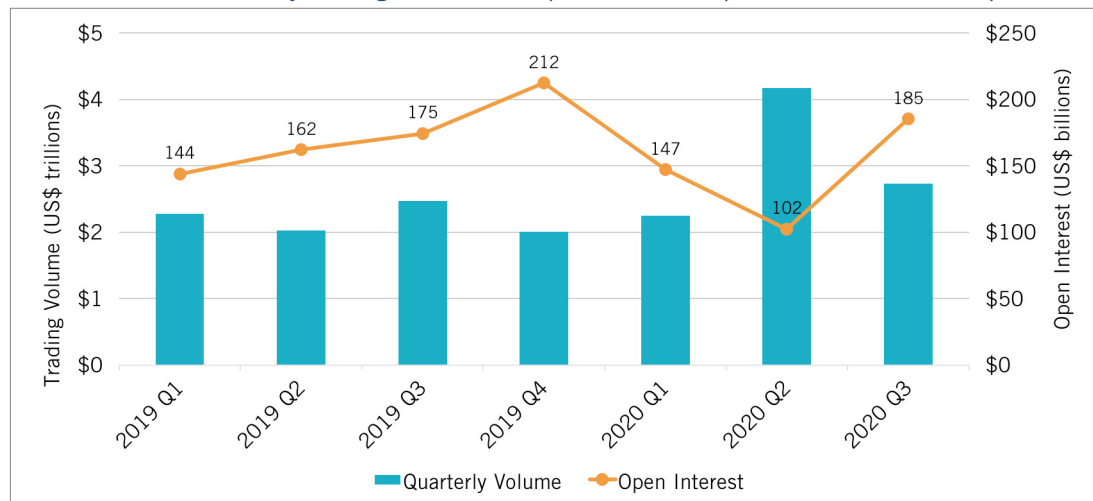


Source: CME and ICE

Trading volume in SONIA futures decreased to \$2.7 trillion in the third quarter of 2020, from \$4.2 trillion in the second quarter of 2020 (see Chart 10).

Open interest increased to \$185.3 billion at the end of September 2020, compared with \$102.2 billion at the end of June 2020.

**Chart 10: SONIA Quarterly Trading Volume and Open Interest (Implied Notional in OTC Equivalent)**



Source: CME, ICE and LCH

<sup>12</sup> The analysis of trading activity in SOFR and SONIA exchange-traded futures is based on data from CME, ICE and LCH



ISDA has published other recent research papers:

- ***ISDA-Clarus RFR Adoption Indicator: September 2020***

<https://www.isda.org/a/furTE/ISDA-Clarus-RFR-Adoption-Indicator-2020-09.pdf>

- ***Interest Rate Benchmarks Review: First Half of 2020 and Second Quarter of 2020, July 2020***

<https://www.isda.org/a/Xy9TE/Interest-Rate-Benchmarks-Review-1H-2020-and-Q2-2020.pdf>

- ***SwapsInfo First Half of 2020 and Second Quarter of 2020 Review, July 2020***

<https://www.isda.org/a/tlmTE/SwapsInfo-1H-and-Q2-of-2020-Review-Full-Report.pdf>

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

Olga Roman

Head of Research

International Swaps and Derivatives Association, Inc. (ISDA)

Office: 212-901-6017

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

## ABOUT ISDA

Since 1985, ISDA has worked to make the global derivatives markets safer and more efficient.

Today, ISDA has over 925 member institutions from 75 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](#).