

INTEREST RATE BENCHMARKS REVIEW: First Quarter of 2020

In the first quarter of 2020, traded notional of interest rate derivatives (IRD) referencing alternative risk-free rates (RFRs) increased to \$8.4 trillion and accounted for 9.6% of total IRD traded notional. In comparison, RFR-linked IRD traded notional equaled \$2.7 trillion in the fourth quarter of 2019, comprising 5.4% of total IRD traded notional.

The ISDA Interest Rate Benchmarks Review analyzes the trading volumes of IRD transactions in the US referencing the Secured Overnight Financing Rate (SOFR) and other selected alternative RFRs, including the Sterling Overnight Index Average (SONIA), the Swiss Average Rate Overnight (SARON), the Tokyo Overnight Average Rate (TONA) and the Euro Short-Term Rate (€STR). In addition, the report analyzes IRD traded notional referencing LIBOR denominated in US dollars, sterling, Swiss franc, yen and euro, as well as EURIBOR and TIBOR.

This report uses data 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.

KEY HIGHLIGHTS FOR THE FIRST QUARTER OF 2020

Traded notional of IRD referencing alternative RFRs increased to \$8.4 trillion in the first quarter of 2020 compared to \$2.7 trillion in the fourth quarter of 2019¹. RFR-linked transactions accounted for 9.6% of total IRD traded notional in the first quarter of 2020 compared with 5.4% in the fourth quarter of 2019. The number of IRD trades referencing alternative RFRs increased to 10,054 in the first quarter of 2020 from 4,166 in the fourth quarter of 2019.

IRD traded notional referencing SOFR increased to \$280.4 billion in the first quarter of 2020 from \$166.0 billion in the fourth quarter of 2019. The number of SOFR-linked IRD transactions increased to 1,366 from 541 over the same period. Despite this growth, the proportion of SOFR-linked IRD traded notional remained very small and accounted for 0.52% and 0.32% of US dollar-denominated IRD and total IRD traded notional, respectively, in the first quarter of 2020.

Traded notional of IRD referencing SONIA increased to \$8.0 trillion in the first quarter of 2020 from \$2.4 trillion in the fourth quarter of 2019. The number of SONIA-linked IRD transactions increased to 8,385 from 3,432 over the same period. IRD traded notional referencing SONIA accounted for 9.2% of total IRD traded notional in the first quarter of 2020.

SOFR-linked transactions accounted for 3.3% of IRD traded notional referencing alternative RFRs (which include SOFR, SONIA, SARON, TONA and €STR), while SONIA-linked transactions represented 95.2% of IRD referencing those RFRs in the first quarter of 2020².

Trading volume in SOFR futures totaled \$16.8 trillion in the first quarter of 2020 compared with \$11.0 trillion in the fourth quarter of 2019. Open interest in SOFR futures decreased to \$2.05 trillion at the end of March 2020 from \$2.1 trillion at the end of December 2019³.

¹ This data covers only transactions that are required to be disclosed under US regulations

² This is expected, as the effective federal funds rate (EFFR) is still widely used as the reference rate for US dollar OIS, and SOFR was not published until the second quarter of 2018. SONIA has been and is currently used as the reference rate for sterling overnight index swaps (OIS)

³ The analysis of trading activity in SOFR and SONIA exchange-traded futures is based on data from CME, ICE and LCH

Trading volume in SONIA futures totaled \$2.5 trillion in the first quarter of 2020 compared with \$2.0 trillion in the fourth quarter of 2019. Open interest decreased to \$147.1 billion at the end of March 2019 from \$212.3 billion at the end of December 2019.

In the first quarter of 2020:

- Traded notional of IRD referencing SOFR increased by 68.9% compared with the fourth quarter of 2019 and totaled \$280.4 billion, including \$135.0 billion of basis swaps. Trade count increased by 152.5% over the same period and totaled 1,366, including 402 basis swaps⁴.
- SONIA-linked IRD traded notional rose by 237.4% to \$8.0 trillion, including \$76.0 billion of basis swaps. Trade count increased by 144.3% and totaled 8,385, including 517 basis swaps.
- Traded notional of IRD referencing SARON decreased by 40.5% to \$7.5 billion, while trade count declined by 5.6% to 17
- TONA-linked IRD traded notional decreased by 5.2% to \$111.2 billion, while trade count increased by 53.7% to 252
- €STR-linked IRD traded notional decreased by 7.1% to \$4.4 billion, while trade count increased by 209.1% to 34

Traded notional of IRD referencing LIBOR denominated in US dollars, sterling, Swiss franc, yen and euro, as well as EURIBOR and TIBOR, totaled \$47.5 trillion and represented 54.3% of total IRD traded notional.

\$23.7 trillion of IRD traded notional referencing LIBOR had a 2020 maturity, \$8.5 trillion had a 2021 maturity and \$15.3 trillion had a maturity after 2021, including \$9.9 trillion of traded notional based on US dollar LIBOR.

⁴ See the note below regarding why we track basis swaps separately for the alternative RFRs

Table 1: Interest Rate Benchmarks Traded Notional and Trade Count

	Q1 2020		YTD Q1 2020	
	Traded Notional (US\$ billions)	Trade Count	Traded Notional (US\$ billions)	Trade Count
USD LIBOR	35,890.5	212,329	35,890.5	212,329
SOFR	145.3	964	145.3	964
Basis Swaps: SOFR	135.0	402	135.0	402
GBP LIBOR	4,184.2	31,771	4,184.2	31,771
SONIA	7,952.5	7,868	7,952.5	7,868
Basis Swaps: SONIA	76.0	517	76.0	517
CHF LIBOR	157.3	2,906	157.3	2,906
SARON	7.5	17	7.5	17
Basis Swaps: SARON	0.0	0	0.0	0
JPY LIBOR	1,002.2	10,654	1,002.2	10,654
TIBOR/Euroyen TIBOR	1.0	16	1.0	16
TONA	111.2	251	111.2	251
Basis Swaps: TONA	0.0	1	0.0	1
EUR LIBOR	0.6	14	0.6	14
EURIBOR	6,251.2	60,042	6,251.2	60,042
€STR	4.4	34	4.4	34
Basis Swaps: €STR	0.0	0	0.0	0
Other*	31,521.3	153,834	31,521.3	153,834
Total**	87,440.0	481,620	87,440.0	481,620

*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

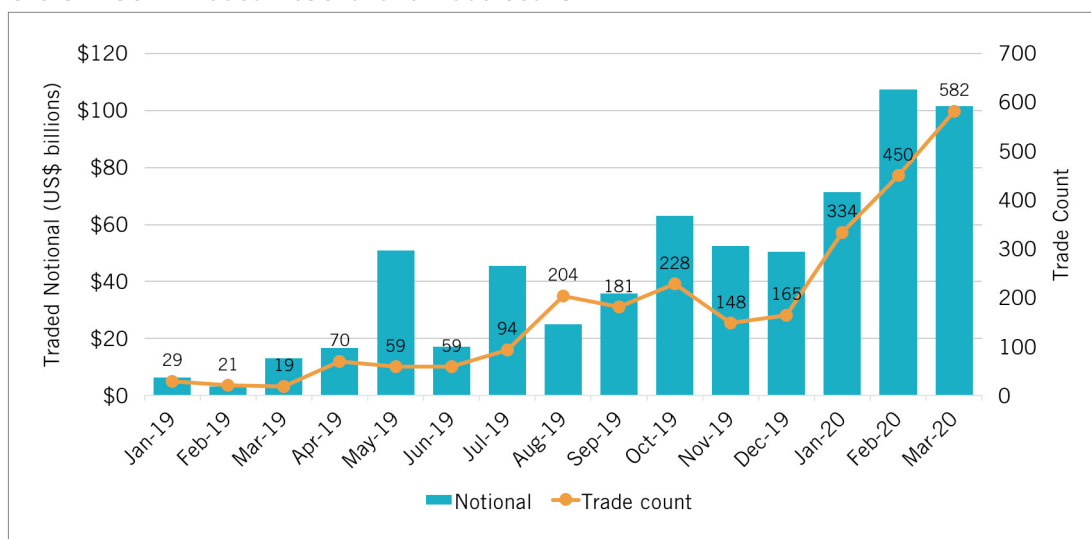
The RFR basis swap data covers all basis swaps with the relevant alternative RFR as one of the underlying assets. This includes alternative RFR/IBOR basis swaps. The IBOR data does not cover any basis swaps. The 'Other' category covers non-alternative RFR/IBOR basis swaps and IRD with reference rates 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.

SOFR

Trading activity in SOFR swaps picked up in the first quarter of 2020⁵. Traded notional of IRD referencing SOFR jumped by 68.9% to \$280.4 billion from \$166.0 billion in the fourth quarter of 2019. The number of SOFR-linked IRD transactions increased by 152.5% to 1,366 from 541 over the same period.

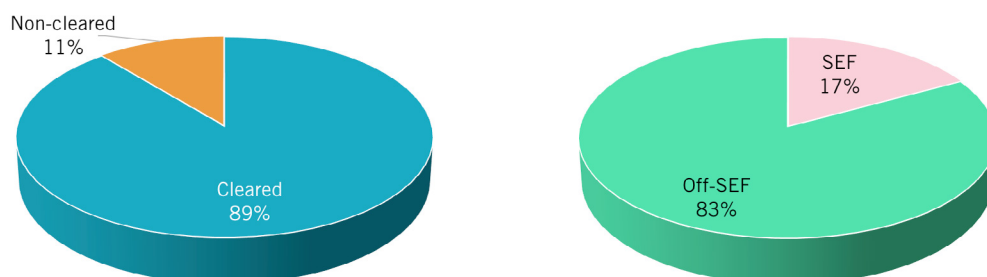
Chart 1: SOFR Traded Notional and Trade Count



Source: DTCC SDR

In the first quarter of 2020, \$249.3 billion of SOFR swaps was cleared, including \$128.8 billion of basis swaps. Cleared swaps accounted for 88.9% of total SOFR-linked IRD traded notional. \$47.8 billion of SOFR-linked IRD traded notional was traded on swap execution facilities (SEFs), representing 17.0% of total SOFR-based IRD traded notional. 211 out of 1,366 SOFR-linked IRD transactions were traded on SEFs.

Chart 2: SOFR Traded Notional Q1 2020



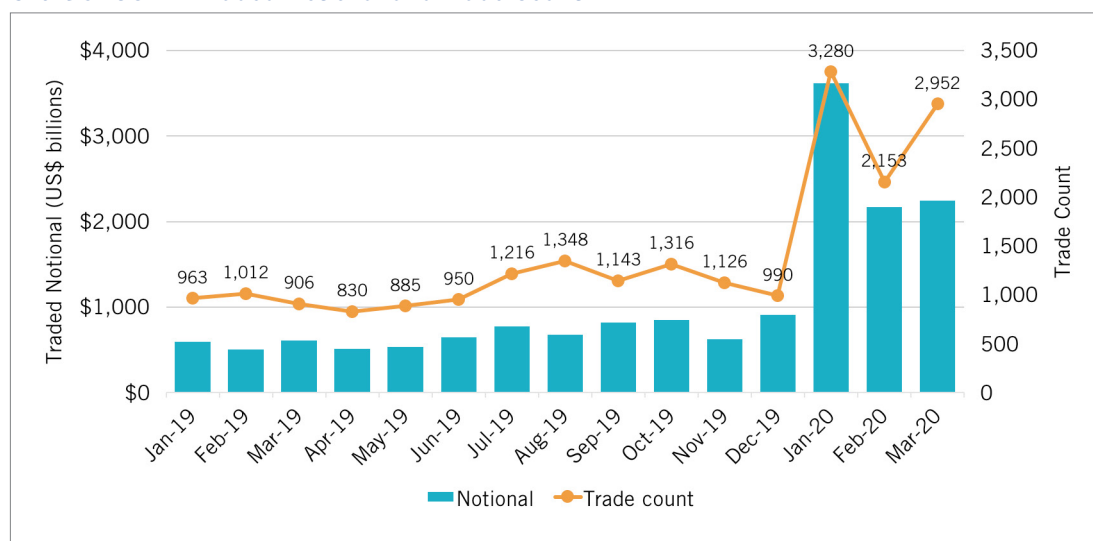
Source: DTCC SDR

⁵ SOFR swaps started trading in the third quarter of 2018

SONIA

Traded notional of IRD referencing SONIA grew by 237.4% to \$8.0 trillion in the first quarter of 2020 from \$2.4 trillion in the fourth quarter of 2019. Trade count increased by 144.3% to 8,385 from 3,432 over the same period.

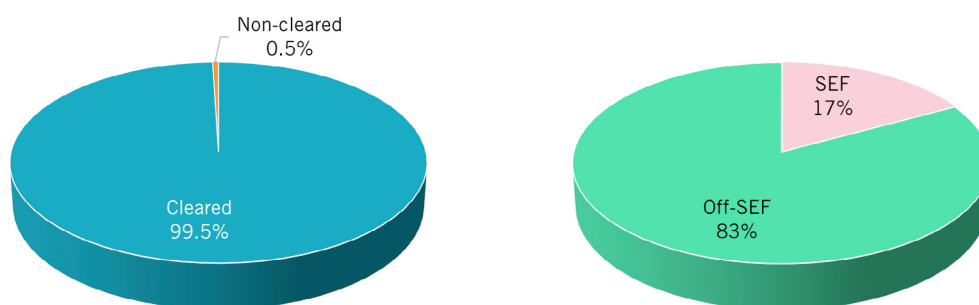
Chart 3: SONIA Traded Notional and Trade Count



Source: DTCC SDR

In the first quarter of 2020, \$8.0 trillion of SONIA swaps was cleared, including \$71.4 billion of basis swaps. Cleared transactions accounted for 99.5% of total SONIA-linked IRD traded notional. SEF traded notional equaled \$1.4 trillion and represented 17.1% of total SONIA-linked IRD traded notional.

Chart 4: SONIA Traded Notional Q1 2020

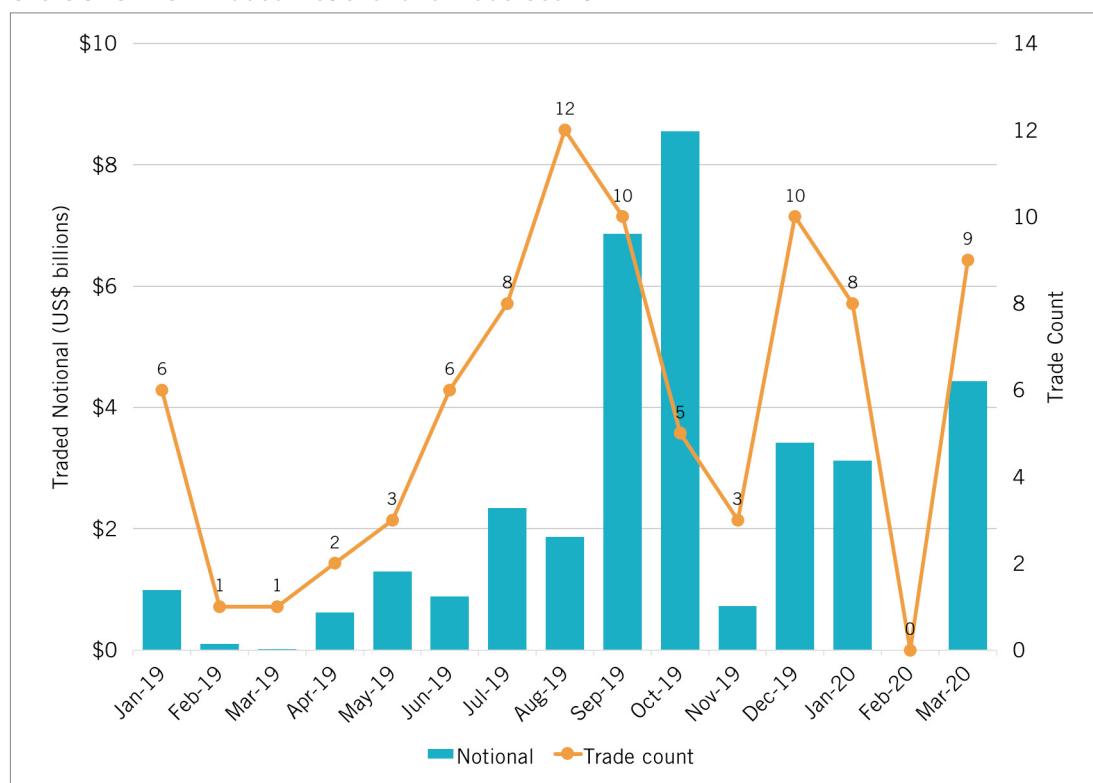


Source: DTCC SDR

SARON

IRD traded notional referencing SARON decreased by 40.5% to \$7.5 billion in the first quarter of 2020 from \$12.7 billion in the fourth quarter of 2019. Trade count decreased to 17 from 18 over the same period.

Chart 5: SARON Traded Notional and Trade Count



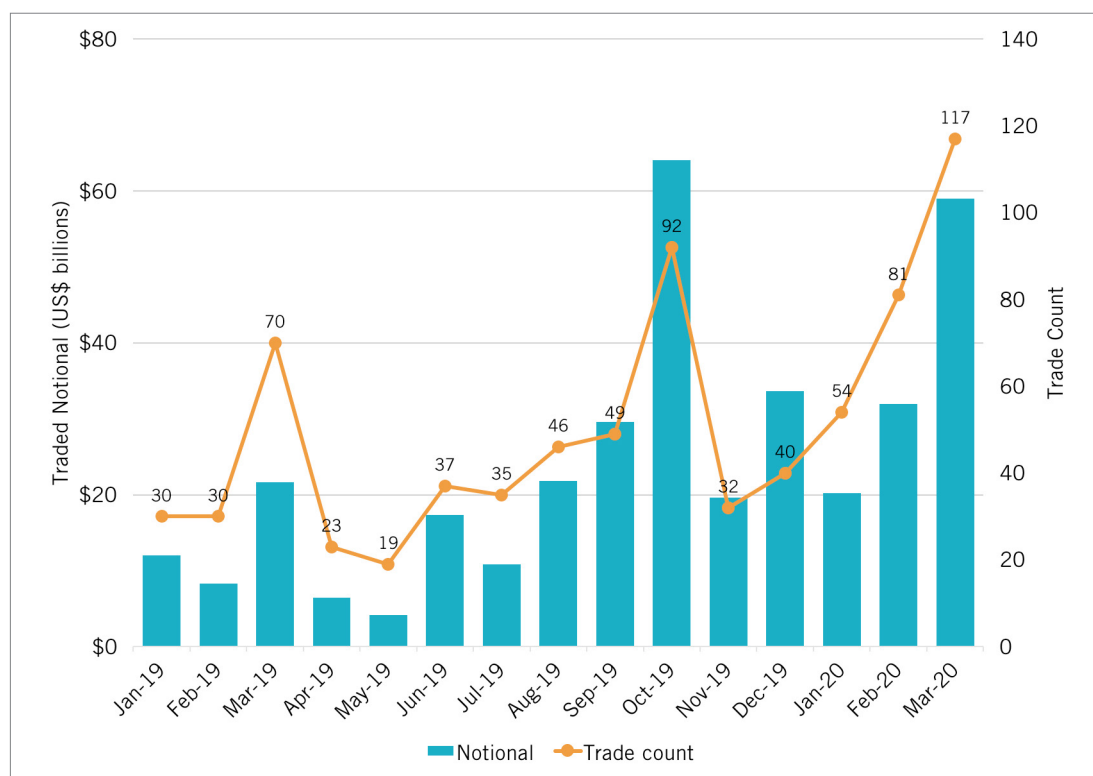
Source: DTCC SDR

Cleared notional totaled \$7.5 billion in the first quarter of 2020 and accounted for 100% of total SARON-linked IRD traded notional. There were no SARON-linked IRD trades executed on SEFs.

TONA

Traded notional of IRD referencing TONA decreased to \$111.2 billion in the first quarter of 2020 from \$117.3 billion in the fourth quarter of 2019. Trade count increased to 252 from 164 over the same period.

Chart 6: TONA Traded Notional and Trade Count



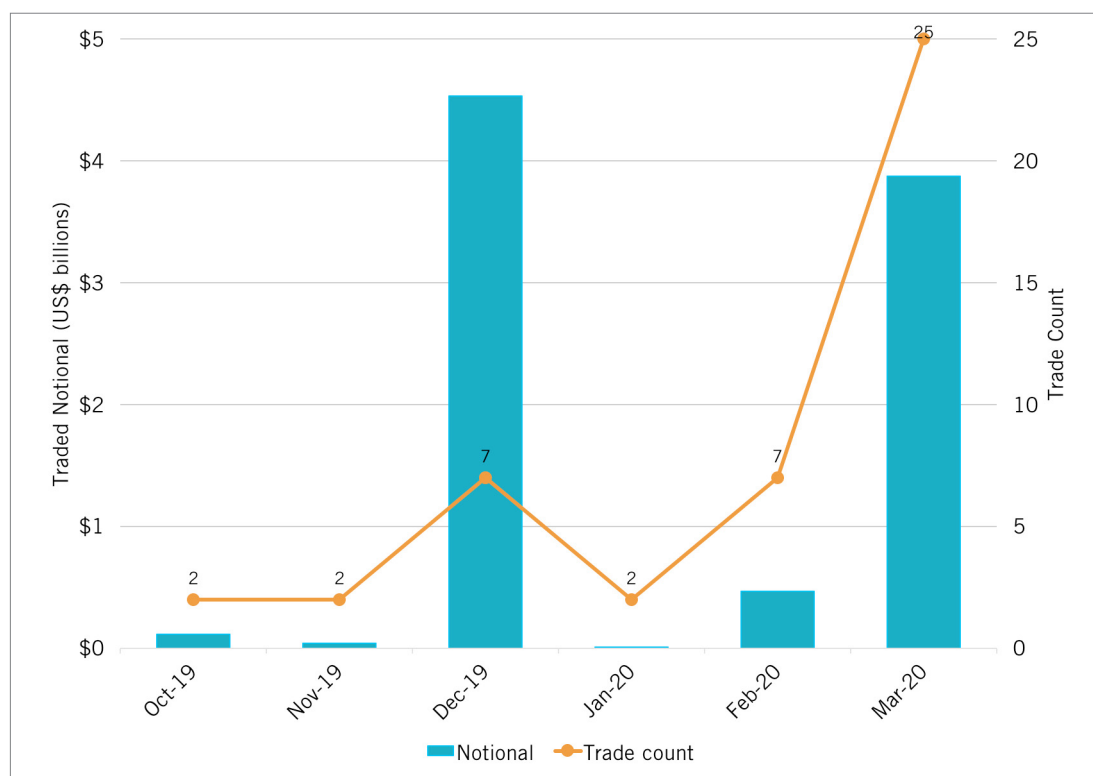
Source: DTCC SDR

In the first quarter of 2019, \$108.1 billion of TONA swaps was cleared, which accounted for 97.2% of total TONA-linked IRD traded notional. SEF traded notional equaled \$82.9 billion and represented 74.6% of total TONA-linked IRD traded notional.

€STR

€STR-linked IRD traded notional decreased to \$4.4 billion in the first quarter of 2020 from \$4.7 billion in the fourth quarter of 2019⁶. Trade count increased to 34 from 11 over the same period.

Chart 7: €STR Traded Notional and Trade Count



Source: DTCC SDR

All €STR-linked IRD transactions were cleared in the first quarter of 2020. SEF traded notional equaled \$0.1 billion and represented 1.4% of total €STR-linked IRD traded notional.

⁶€STR swaps started trading in the fourth quarter of 2019

Table 2: Interest Rate Benchmarks Traded Notional and Trade Count Q1 2020 vs. Q4 2019

	Q1 2020		Q4 2019		Q1 2020 vs. Q4 2019	
	Traded Notional (US\$ billions)	Trade Count	Traded Notional (US\$ billions)	Trade Count	Traded Notional	Trade Count
USD LIBOR	35,890.5	212,329	22,265.6	152,706	61.2%	39.0%
SOFR	280.4	1,366	166.0	541	68.9%	152.5%
GBP LIBOR	4,184.2	31,771	2,276.5	21,846	83.8%	45.4%
SONIA	8,028.4	8,385	2,379.7	3,432	237.4%	144.3%
CHF LIBOR	157.3	2,906	129.2	2,015	21.8%	44.2%
SARON	7.5	17	12.7	18	-40.5%	-5.6%
JPY LIBOR	1,002.2	10,654	886.2	9,402	13.1%	13.3%
TIBOR/Euroyen TIBOR	1.0	16	0.8	16	18.6%	0.0%
TONA	111.2	252	117.3	164	-5.2%	53.7%
EUR LIBOR	0.6	14	1.1	6	-44.7%	133.3%
EURIBOR	6,251.2	60,042	4,472.6	46,512	39.8%	29.1%
€STR	4.4	34	4.7	11	-7.1%	209.1%
Other*	31,521.3	153,834	17,249.5	107,543	82.7%	43.0%
Total**	87,440.0	481,620	49,961.9	344,212	75.0%	39.9%

*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: Interest Rate Benchmarks Traded Notional and Trade Count Q1 2020 vs. Q1 2019

	Q1 2020		Q1 2019		Q1 2020 vs. Q1 2019	
	Traded Notional (US\$ billions)	Trade Count	Traded Notional (US\$ billions)	Trade Count	Traded Notional	Trade Count
USD LIBOR	35,890.5	212,329	34,772.0	171,518	3.2%	23.8%
SOFR	280.4	1,366	22.6	69	1140.2%	1879.7%
GBP LIBOR	4,184.2	31,771	3,449.7	24,593	21.3%	29.2%
SONIA	8,028.4	8,385	1,715.2	2,881	368.1%	191.0%
CHF LIBOR	157.3	2,906	188.6	2,462	-16.6%	18.0%
SARON	7.5	17	1.1	8	576.8%	112.5%
JPY LIBOR	1,002.2	10,654	1,235.7	11,241	-18.9%	-5.2%
TIBOR/Euroyen TIBOR	1.0	16	0.9	21	5.8%	-23.8%
TONA	111.2	252	42.0	130	164.9%	93.8%
EUR LIBOR	0.6	14	0.01	1	5143.3%	1300.0%
EURIBOR	6,251.2	60,042	7,027.7	50,119	-11.0%	19.8%
€STR*	4.4	34	0.0	0		
Other**	31,521.3	153,834	21,500.9	114,959	46.6%	33.8%
Total***	87,440.0	481,620	69,956.5	378,002	25.0%	27.4%

*€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 US regulations and does not include any exchange-traded derivatives (futures)

Source: DTCC SDR

Table 4: Interest Rate Benchmarks Cleared and Non-cleared Notional

	Q1 2020		YTD Q1 2020	
	Cleared Notional (US\$ billions)	Non-cleared Notional (US\$ billions)	Cleared Notional (US\$ billions)	Non-cleared Notional (US\$ billions)
USD LIBOR	33,064.3	2,826.2	33,064.3	2,826.2
SOFR	120.5	24.8	120.5	24.8
Basis Swaps: SOFR	128.8	6.2	128.8	6.2
GBP LIBOR	3,817.2	366.9	3,817.2	366.9
SONIA	7,916.3	36.2	7,916.3	36.2
Basis Swaps: SONIA	71.4	4.5	71.4	4.5
CHF LIBOR	157.0	0.3	157.0	0.3
SARON	7.5	0.0	7.5	0.0
Basis Swaps: SARON	0.0	0.0	0.0	0.0
JPY LIBOR	915.9	86.2	915.9	86.2
TIBOR/Euroyen TIBOR	0.5	0.5	0.5	0.5
TONA	108.1	3.1	108.1	3.1
Basis Swaps: TONA	0.0	0.0	0.0	0.0
EUR LIBOR	0.4	0.2	0.4	0.2
EURIBOR	5,433.2	818.0	5,433.2	818.0
€STR	4.4	0.0	4.4	0.0
Basis Swaps: €STR	0.0	0.0	0.0	0.0
Other*	28,016.5	3,504.7	28,016.5	3,504.7
Total**	79,762.1	7,677.8	79,762.1	7,677.8

*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: Interest Rate Benchmarks SEF and Off-SEF Traded Notional

	Q1 2020		YTD Q1 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	28,122.0	7,768.5	28,122.0	7,768.5
SOFR	17.2	128.1	17.2	128.1
Basis Swaps: SOFR	30.5	104.5	30.5	104.5
GBP LIBOR	2,323.7	1,860.5	2,323.7	1,860.5
SONIA	1,366.1	6,586.4	1,366.1	6,586.4
Basis Swaps: SONIA	5.3	70.7	5.3	70.7
CHF LIBOR	62.3	95.1	62.3	95.1
SARON	0.0	7.5	0.0	7.5
Basis Swaps: SARON	0.0	0.0	0.0	0.0
JPY LIBOR	545.1	457.1	545.1	457.1
TIBOR/Euroyen TIBOR	0.0	1.0	0.0	1.0
TONA	82.9	28.2	82.9	28.2
Basis Swaps: TONA	0.0	0.0	0.0	0.0
EUR LIBOR	0.1	0.5	0.1	0.5
EURIBOR	3,225.1	3,026.1	3,225.1	3,026.1
€STR	0.1	4.3	0.1	4.3
Basis Swaps: €STR	0.0	0.0	0.0	0.0
Other*	10,351.3	21,170.0	10,351.3	21,170.0
Total**	46,131.5	41,308.4	46,131.5	41,308.4

*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 year⁷. For example, out of \$280.4 billion SOFR-linked IRD notional traded in the first quarter of 2020, \$192.1 billion had a tenor up to one year, \$77.2 billion was between one and five years and only \$11.1 billion had a tenor over five years.

⁷ Tenor is calculated as the difference between the effective date and the maturity date

Table 6: RFR Traded Notional and Trade Count by Tenor

	Q1 2020		YTD Q1 2020	
	Traded Notional (US\$ billions)	Trade Count	Traded Notional (US\$ billions)	Trade Count
SOFR	280.4	1,366	280.4	1,366
Up to 1 year	192.1	325	192.1	325
Over 1 year and up to 5 years	77.2	789	77.2	789
Over 5 years	11.1	252	11.1	252
SONIA	8,028.4	8,385	8,028.4	8,385
Up to 1 year	7,750.2	3,664	7,750.2	3,664
Over 1 year and up to 5 years	142.8	1,133	142.8	1,133
Over 5 years	135.4	3,588	135.4	3,588
SARON	7.5	17	7.5	17
Up to 1 year	7.2	13	7.2	13
Over 1 year and up to 5 years	0.2	2	0.2	2
Over 5 years	0.1	2	0.1	2
TONA	111.2	252	111.2	252
Up to 1 year	104.4	161	104.4	161
Over 1 year and up to 5 years	4.3	25	4.3	25
Over 5 years	2.6	66	2.6	66
€STR	4.4	34	4.4	34
Up to 1 year	2.3	6	2.3	6
Over 1 year and up to 5 years	0.8	8	0.8	8
Over 5 years	1.2	20	1.2	20
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 1,366 SOFR-based contracts traded in the first quarter of 2020, 929 were OIS transactions, 402 were basis swaps, 17 were fixed-for-floating interest rate swaps, 16 were exotic products and two were swaptions.

Table 7: RFR Traded Notional and Trade Count by Product

	Q1 2020		YTD Q1 2020	
	Traded Notional (US\$ billions)	Trade Count	Traded Notional (US\$ billions)	Trade Count
SOFR	280.4	1,366	280.4	1,366
OIS	141.2	929	141.2	929
Basis Swaps	135.0	402	135.0	402
Fixed-for-Floating IRS	0.6	17	0.6	17
Exotic	3.2	16	3.2	16
Swaptions	0.3	2	0.3	2
SONIA	8,028.4	8,385	8,028.4	8,385
OIS	7,912.9	7,795	7,912.9	7,795
Basis Swaps	76.0	517	76.0	517
Fixed-for-Floating IRS	38.4	43	38.4	43
Exotic	1.2	30	1.2	30
Swaptions	0.0	0	0.0	0
SARON	7.5	17	7.5	17
OIS	7.5	17	7.5	17
Basis Swaps	0.0	0	0.0	0
Fixed-for-Floating IRS	0.0	0	0.0	0
Exotic	0.0	0	0.0	0
Swaptions	0.0	0	0.0	0
TONA	111.2	252	111.2	252
OIS	109.8	249	109.8	249
Basis Swaps	0.0	1	0.0	1
Fixed-for-Floating IRS	0.0	0	0.0	0
Exotic	1.4	2	1.4	2
Swaptions	0.0	0	0.0	0
€STR	4.4	34	4.4	34
OIS	4.4	34	4.4	34
Basis Swaps	0.0	0	0.0	0
Fixed-for-Floating IRS	0.0	0	0.0	0
Exotic	0.0	0	0.0	0
Swaptions	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)

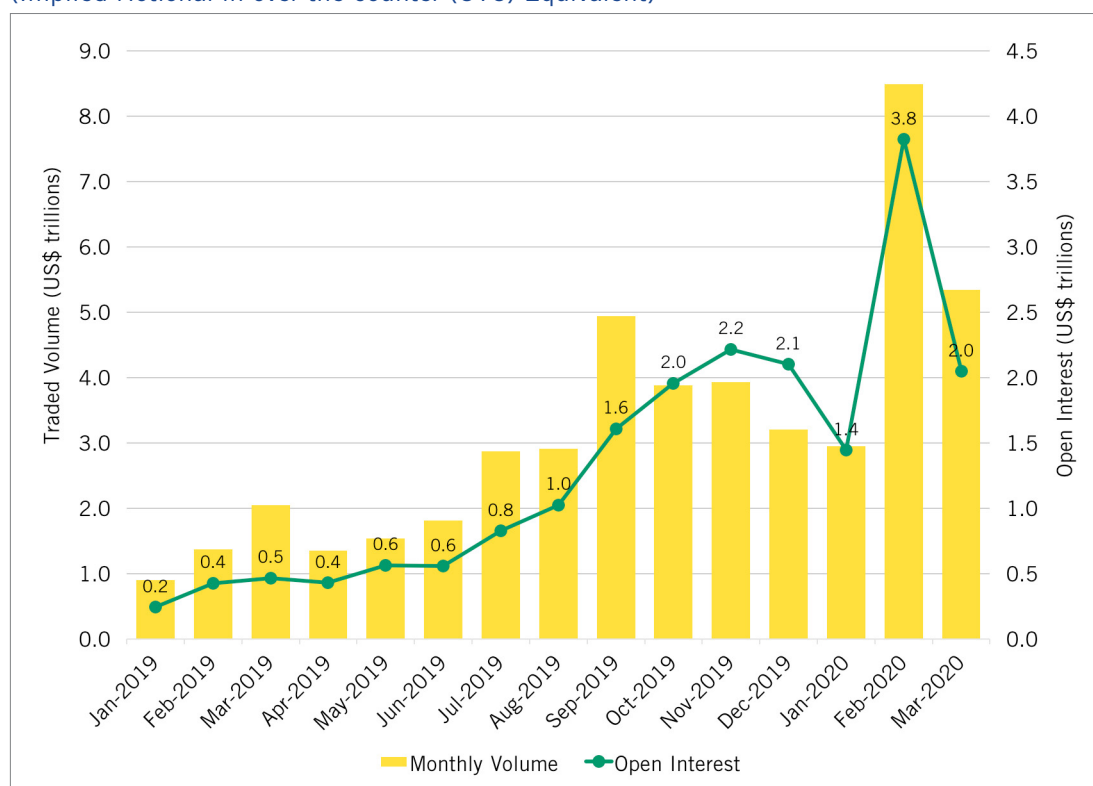
Source: DTCC SDR

SOFR and SONIA Futures

Trading volume in SOFR futures increased to \$16.8 trillion in the first quarter of 2020 from \$11.0 trillion in the fourth quarter of 2019. The increase was driven by a jump in trading volume in February 2020.

Open interest in SOFR futures was \$2.0 trillion at the end of March 2020 compared to \$2.1 trillion at the end of December 2019⁸.

Chart 8: SOFR Futures Monthly Trading Volume and Open Interest
(Implied Notional in over-the-counter (OTC) Equivalent)



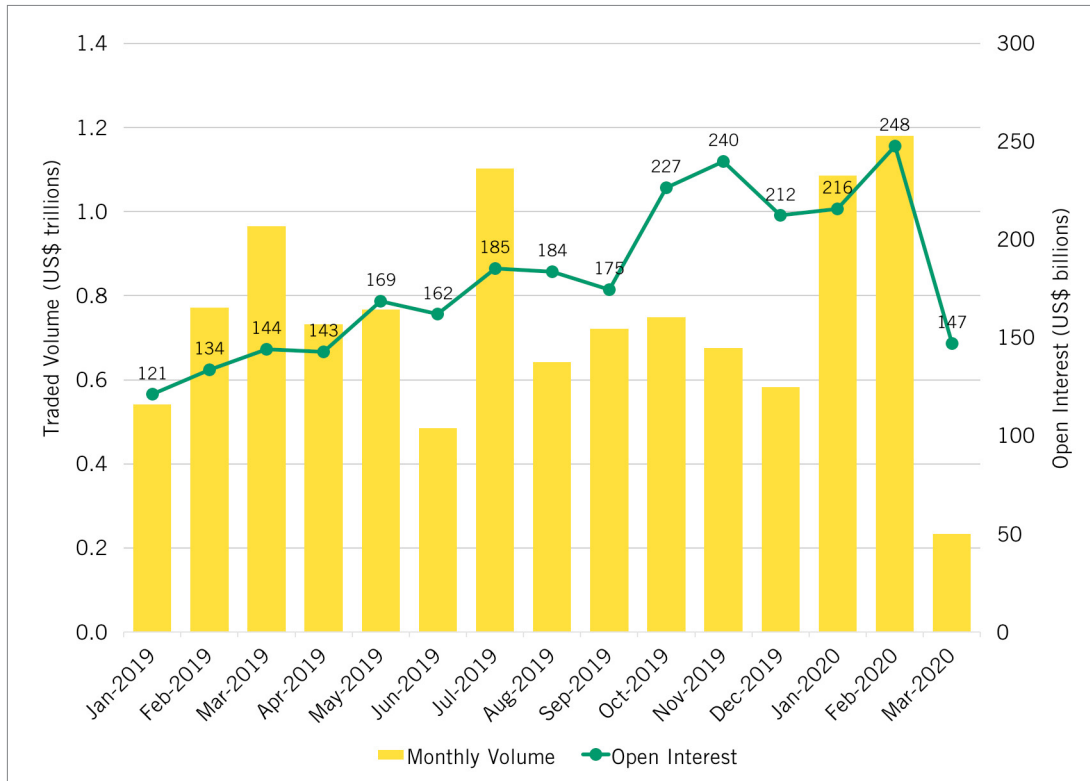
Source: CME and ICE

Trading volume in SONIA futures increased to \$2.5 trillion in the first quarter of 2020 from \$2.0 trillion in the fourth quarter of 2019, although it was significantly lower in March 2020.

Open interest declined to \$147.1 billion at the end of March 2020 from \$212.3 billion at the end of December 2019.

⁸ The analysis of trading activity in SOFR and SONIA exchange-traded futures is based on data from CME, ICE and LCH

Chart 9: SONIA Monthly Trading Volume and Open Interest
(Implied Notional in OTC Equivalent)



Source: CME, ICE and LCH

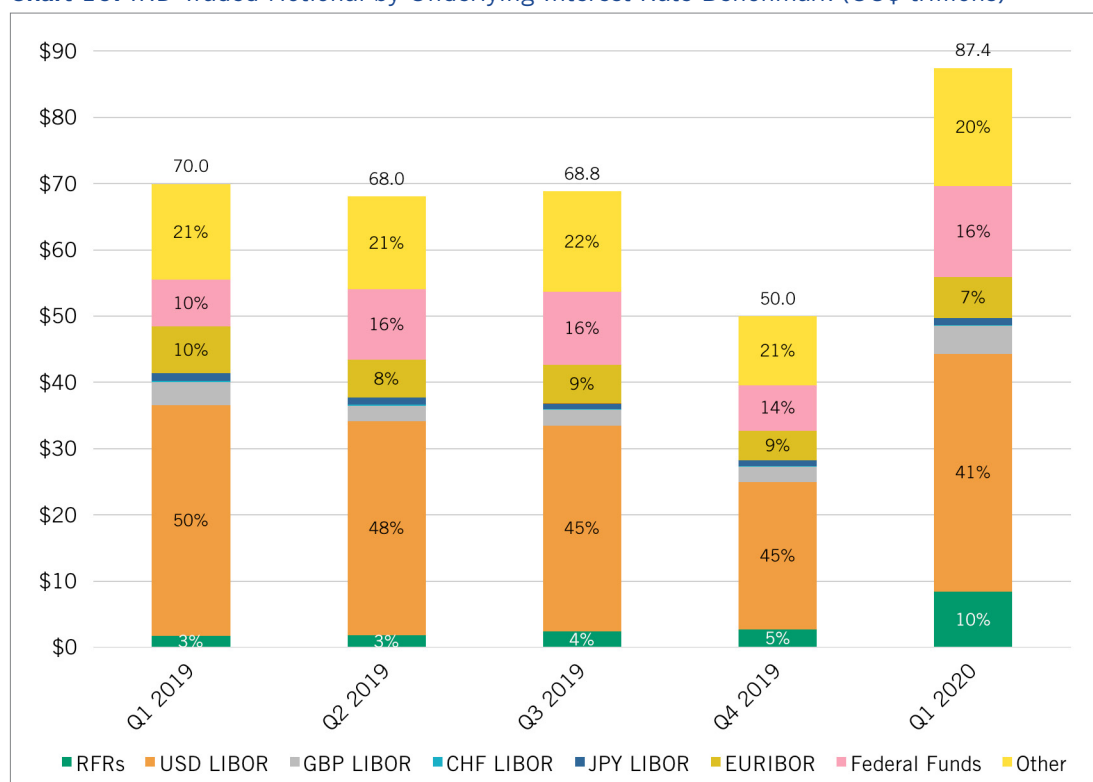
IBORs

Traded notional of IRD referencing LIBOR denominated in US dollars, sterling, Swiss franc, yen and euro, as well as EURIBOR and TIBOR, equaled \$47.5 trillion and represented 54.3% of total IRD traded notional in the first quarter of 2020. The number of IRD trades referencing IBORs totaled 317,732, accounting for 66.0% of total IRD trade count.

\$35.9 trillion of IRD traded notional was based on US dollar LIBOR, accounting for 41.0% of total IRD traded notional in the first quarter of 2020. EURIBOR and sterling LIBOR traded notional was \$6.3 trillion and \$4.2 trillion, respectively. IRD traded notional referencing the effective federal funds rate totaled \$13.7 trillion and accounted for 15.6% of IRD traded notional.

In comparison, traded notional of IRD referencing LIBOR denominated in US dollar, sterling, Swiss franc, yen and euro, as well as EURIBOR and TIBOR, equaled \$30.0 trillion and represented 60.1% of total IRD traded notional in the fourth quarter of 2019.

Chart 10: IRD Traded Notional by Underlying Interest Rate Benchmark (US\$ trillions)

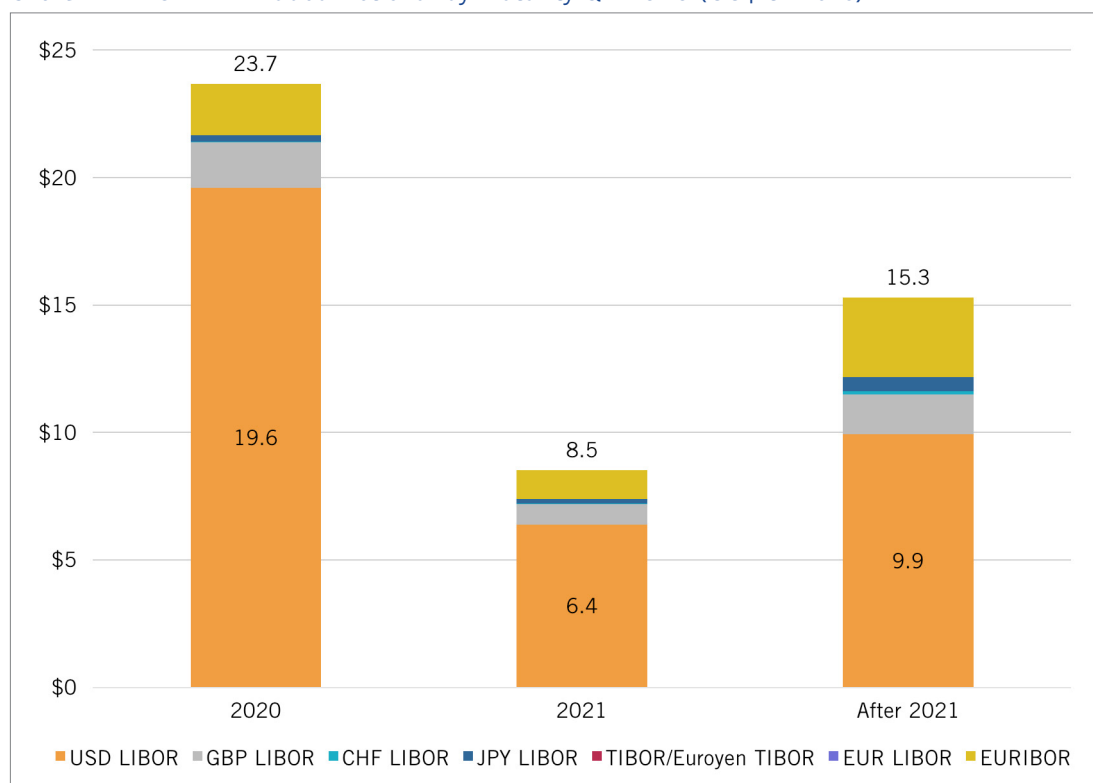


Source: DTCC SDR

In the first quarter 2020, \$23.7 trillion of IRD traded notional referencing LIBOR had a 2020 maturity, including \$19.6 trillion based on US dollar LIBOR, \$2.0 trillion based on EURIBOR and \$1.8 trillion based on sterling LIBOR.

\$8.5 trillion of IRD traded notional referencing LIBOR had a 2021 maturity, including \$6.4 trillion based on US dollar LIBOR, \$1.1 trillion based on EURIBOR and \$0.8 trillion based on sterling LIBOR. \$15.3 trillion of LIBOR-linked IRD traded notional had a maturity after 2021, including \$9.9 trillion based on US dollar LIBOR.

Chart 11: IBOR IRD Traded Notional by Maturity Q1 2020 (US\$ trillions)



Source: DTCC SDR



ISDA has published other recent research papers:

- ***ISDA Margin Survey Year-End 2019, April 2020***

<https://www.isda.org/a/1F7TE/ISDA-Margin-Survey-Year-end-2019.pdf>

- ***Adoption of Risk-Free Rates: Major Developments in 2020, February 2020***

<https://www.isda.org/a/WhXTE/Adoption-of-Risk-Free-Rates-Major-Developments-in-2020.pdf>

- ***Interest Rate Benchmarks Review: Full Year 2019 and the Fourth Quarter of 2019, January 2020***

<https://www.isda.org/a/W5LTE/Interest-Rate-Benchmarks-Review-Full-Year-2019-and-Q4-2019.pdf>

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