

INTEREST RATE BENCHMARKS REVIEW: First Quarter of 2019

The ISDA Interest Rate Benchmarks Review analyzes trading volumes of over-the-counter interest rate derivatives (IRD) transactions in the US referencing the Secured Overnight Financing Rate (SOFR) and other selected alternative risk-free rates (RFRs), including the Sterling Overnight Index Average (SONIA), the Swiss Average Rate Overnight (SARON) and the Tokyo Overnight Average Rate (TONA). ISDA expects to add the Euro Short-Term Rate (€STR) to its analysis once it is published and traded. In addition, the report analyzes IRD traded notional referencing the London Interbank Offered Rate (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) and Bloomberg swap data repositories (SDRs). It therefore only covers trades that are required to be disclosed under US regulations.

KEY HIGHLIGHTS FOR THE FIRST QUARTER OF 2019

Transactions referencing alternative RFRs accounted for less than 3% of total IRD traded notional during the first quarter of 2019. SONIA swaps represented the majority of transactions referencing RFRs, reflecting the fact that SONIA is currently used as the reference rate for sterling overnight index swaps (OIS). Trading volumes of IRD referencing SOFR (the first of which were executed in the third quarter of 2018) increased during the first quarter of 2019, but remained relatively small. This is also 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.

ISDA will continue to monitor trading volumes of IRD referencing alternative RFRs and major interbank offered rates (IBORs), and will report on trends as the market transitions from IBORs to alternative RFRs. During this time, volumes of IRD referencing alternative RFRs are expected to increase, while volumes referencing major IBORs are expected to fall. €STR will be added once it is published and traded¹.

In the first quarter of 2019:

IRD traded notional referencing alternative RFRs, including SOFR, SONIA, SARON and TONA, totaled \$1.8 trillion and represented 2.5% of total IRD traded notional. The number of trades referencing alternative RFRs was 3,088, which accounted for 0.8% of total IRD trade count.

- SOFR traded notional totaled \$22.6 billion, including \$3.0 billion of basis swaps. Trade count totaled 69, including 23 basis swaps.
- SONIA traded notional was \$1.7 trillion, including \$41.0 billion of basis swaps. Trade count totaled 2,881, including 300 basis swaps.
- SARON traded notional and trade count was \$1.1 billion and eight, respectively.
- TONA traded notional totaled \$42.0 billion, including \$1.0 billion of basis swaps. Trade count totaled 130, including one basis swap.

¹ The European Central Bank has indicated that it will start publishing the €STR as of October 2, 2019

IRD traded notional referencing IBORs totaled \$46.7 trillion and represented 67% of total IRD traded notional. \$34.8 trillion of IRD traded notional was based on US dollar LIBOR, accounting for 50% of total IRD traded notional. \$22.1 trillion of IRD traded notional referencing LIBOR had a 2019 maturity, including \$18.7 trillion of traded notional based on US dollar LIBOR, \$1.6 trillion based on EURIBOR and \$1.4 trillion based on sterling LIBOR.

Table 1: Interest Rate Benchmarks Traded Notional and Trade Count

	Q1 2019		YTD Q1 2019	
	Traded Notional (US\$ billions)	Trade Count	Traded Notional (US\$ billions)	Trade Count
USD LIBOR	34,772.4	171,350	34,772.4	171,350
SOFR	19.6	46	19.6	46
Basis Swaps: SOFR	3.0	23	3.0	23
GBP LIBOR	3,442.8	24,566	3,442.8	24,566
SONIA	1,672.5	2,581	1,672.5	2,581
Basis Swaps: SONIA	41.0	300	41.0	300
CHF LIBOR	187.9	2,462	187.9	2,462
SARON	1.1	8	1.1	8
Basis Swaps: SARON	0.0	0	0.0	0
JPY LIBOR	1,237.3	11,219	1,237.3	11,219
TIBOR/Euroyen TIBOR	0.9	21	0.9	21
TONA	41.0	129	41.0	129
Basis Swaps: TONA	1.0	1	1.0	1
EUR LIBOR	0.0	1	0.0	1
EURIBOR	7,030.0	50,087	7,030.0	50,087
€STR	0.0	0	0.0	0
Other*	21,486.2	114,435	21,486.2	114,435
Total	69,936.9	377,229	69,936.9	377,229

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

Source: DTCC and Bloomberg SDRs

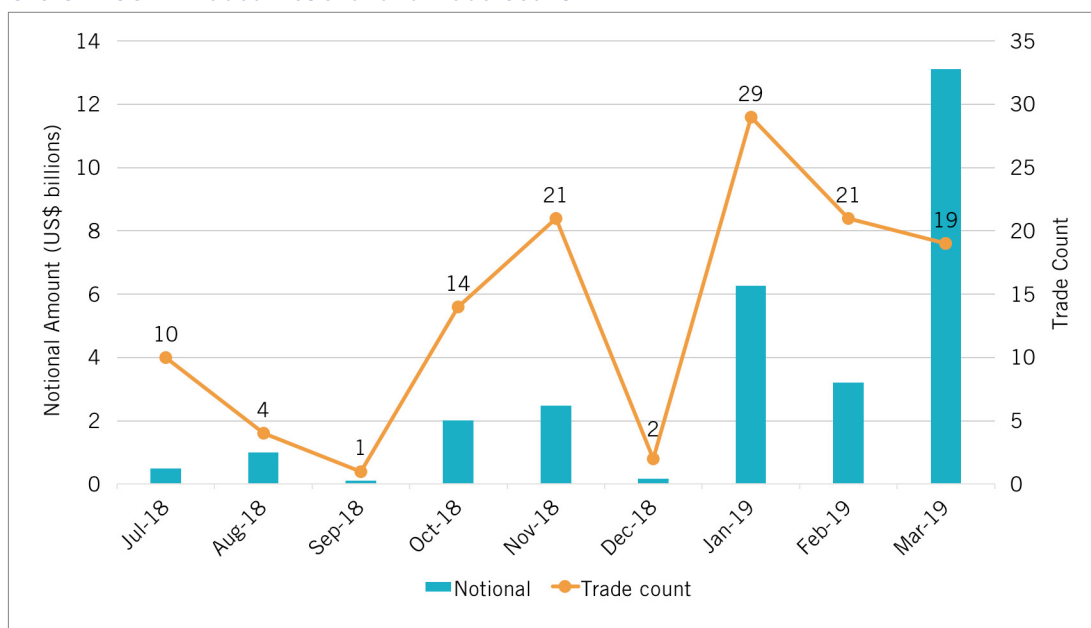
The alternative RFRs basis swap data covers all basis swaps with the relevant alternative RFR as one of the underlying assets. This includes alternative RFR/IBOR basis swaps. The IBOR data does not cover any basis swaps. The 'Other' category covers non-alternative RFR/IBOR basis swaps and IRD with reference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

SOFR

SOFR swaps started trading in the third quarter of 2018, and trading activity picked up in the first quarter of 2019. During the first three months of 2019, there were 69 SOFR trades, including 23 basis swaps. Total traded notional was \$22.6 billion, including \$3.0 billion of basis swaps traded notional.

Chart 1: SOFR Traded Notional and Trade Count

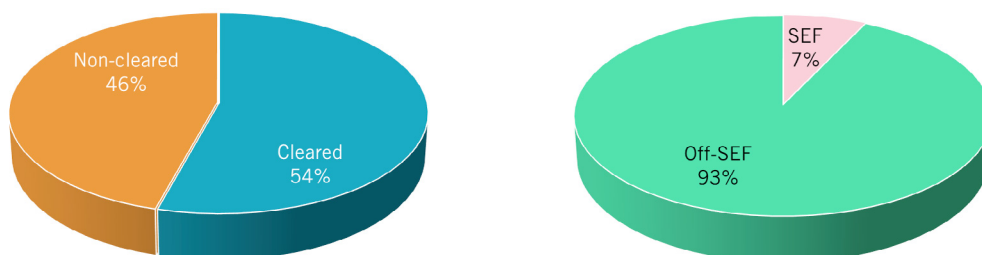


Source: DTCC and Bloomberg SDRs

\$12.3 billion of SOFR swaps was cleared, including \$9.9 billion of OIS and \$2.4 billion of basis swaps. Cleared swaps accounted for 54% of total SOFR traded notional.

Sixteen out of the 69 SOFR transactions were traded on swap execution facilities (SEFs). SEF-traded notional totaled \$1.6 billion and represented 7% of total SOFR traded notional.

Chart 2: SOFR Traded Notional Q1 2019

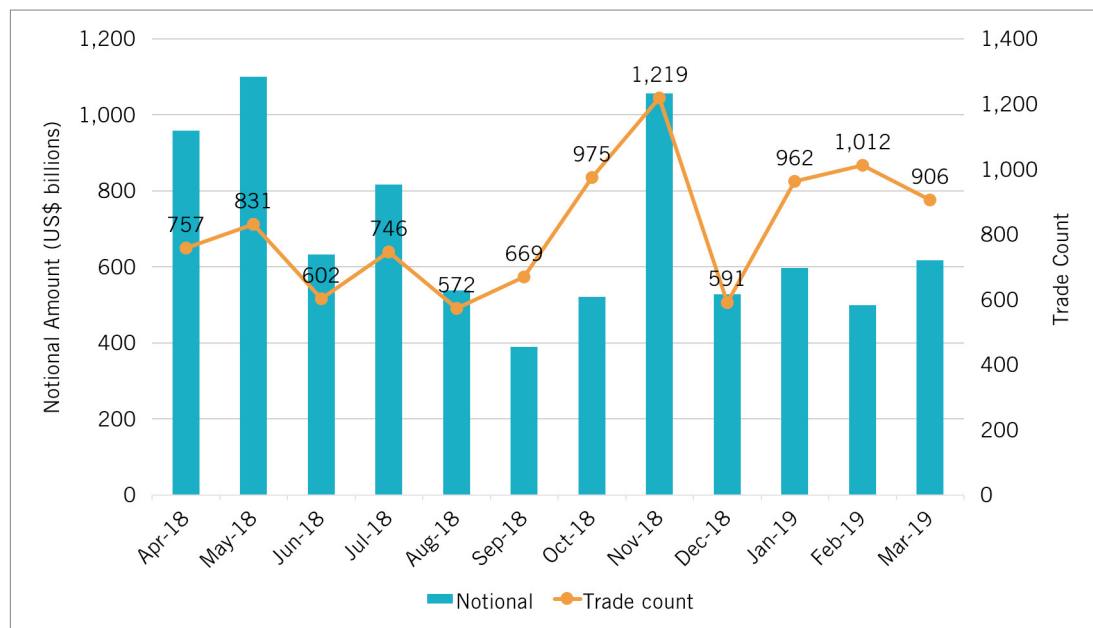


Source: DTCC and Bloomberg SDRs

SONIA

There were 2,881 SONIA trades in the first quarter of 2019, including 300 basis swaps. Total traded notional was \$1.7 trillion, including \$41.0 billion of basis swaps.

Chart 3: SONIA Traded Notional and Trade Count

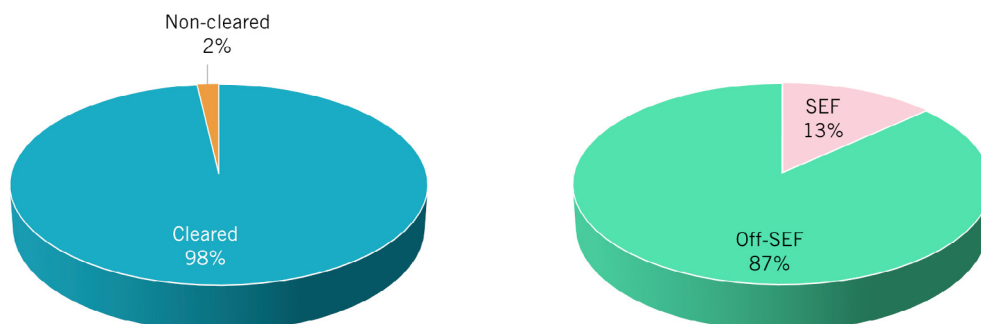


Source: DTCC and Bloomberg SDRs

\$1.7 trillion of SONIA swaps was cleared, including \$37.1 billion of basis swaps. Cleared transactions accounted for 98% of total SONIA traded notional.

SEF-traded notional totaled \$228.7 billion and represented 13% of total SONIA traded notional.

Chart 4: SONIA Traded Notional Q1 2019

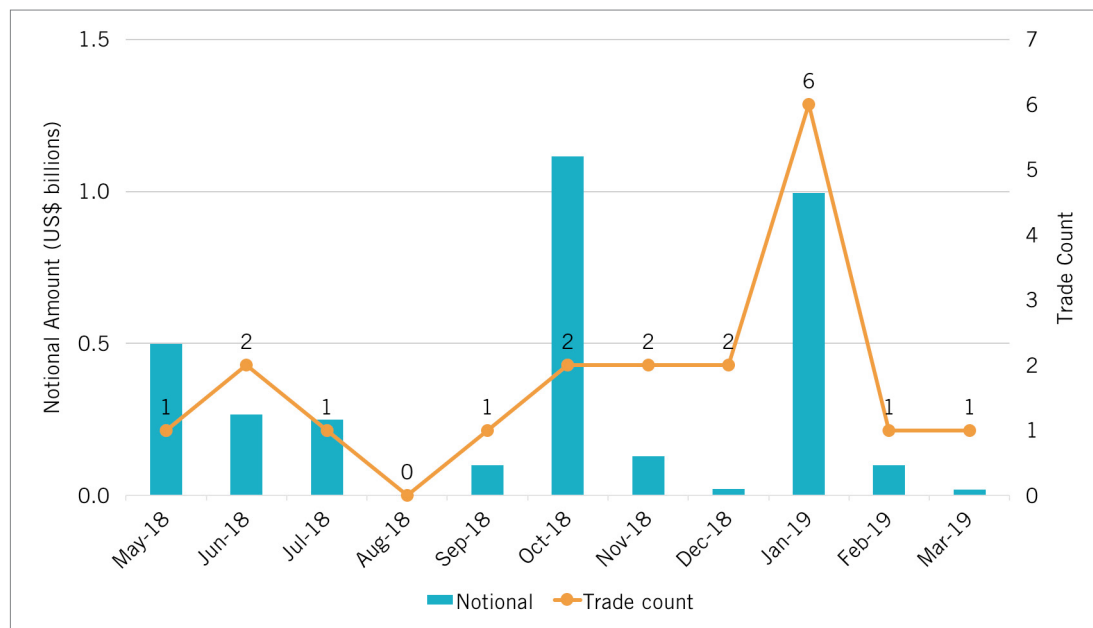


Source: DTCC and Bloomberg SDRs

SARON

During the first quarter of 2019, there were eight SARON trades with total traded notional of \$1.1 billion.

Chart 5: SARON Traded Notional and Trade Count



Source: DTCC and Bloomberg SDRs

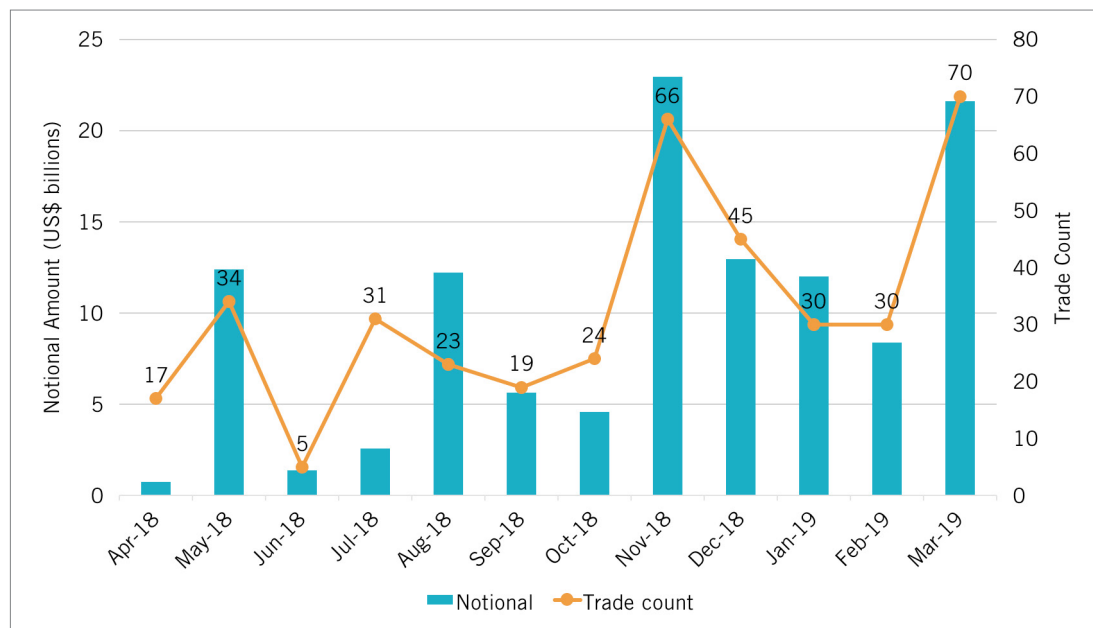
Cleared notional totaled \$1.1 billion and accounted for 100% of total traded notional.

SEF-traded notional totaled \$0.3 billion and represented 23% of total traded notional.

TONA

There were 130 TONA trades in the first quarter of 2019, including one basis swap. Total traded notional was \$42.0 billion, including \$1.0 billion of basis swaps.

Chart 6: TONA Traded Notional and Trade Count



Source: DTCC and Bloomberg SDRs

\$40.2 billion of TONA swaps was cleared, which accounted for 96% of total TONA traded notional.

SEF-traded notional totaled \$15.8 billion and represented 38% of total TONA traded notional.

Table 2: Interest Rate Benchmarks Cleared and Non-Cleared Notional

	Q1 2019		YTD Q1 2019	
	Cleared Notional (US\$ billions)	Non-cleared Notional (US\$ billions)	Cleared Notional (US\$ billions)	Non-cleared Notional (US\$ billions)
USD LIBOR	31,604.5	3,167.9	31,604.5	3,167.9
SOFR	9.9	9.7	9.9	9.7
Basis Swaps: SOFR	2.4	0.6	2.4	0.6
GBP LIBOR	3,142.2	300.7	3,142.2	300.7
SONIA	1,644.5	28.0	1,644.5	28.0
Basis Swaps: SONIA	37.1	3.9	37.1	3.9
CHF LIBOR	187.7	0.2	187.7	0.2
SARON	1.11	0.00	1.1	0.0
Basis Swaps: SARON	0.00	0.00	0.0	0.0
JPY LIBOR	1,161.5	75.8	1,161.5	75.8
TIBOR/Euroyen TIBOR	0.8	0.2	0.8	0.2
TONA	40.2	0.8	40.2	0.8
Basis Swaps: TONA	0.0	1.0	0.0	1.0
EUR LIBOR	0.0	0.0	0.0	0.0
EURIBOR	6,129.8	900.1	6,129.8	900.1
€STR	0.0	0.0	0.0	0.0
Other*	18,195.1	3,291.0	18,195.1	3,291.0
Total	62,156.9	7,780.0	62,156.9	7,780.0
*Other includes IRD with other reference rates and IBOR/non-RFR basis swaps				

Source: DTCC and Bloomberg SDRs

Table 3: Interest Rate Benchmarks SEF and Off-SEF Traded Notional

	Q1 2019		YTD Q1 2019	
	SEF Traded Notional (US\$ billions)	Off-SEF Traded Notional (US\$ billions)	SEF Traded Notional (US\$ billions)	Off-SEF Traded Notional (US\$ billions)
USD LIBOR	27,192.2	7,580.2	27,192.2	7,580.2
SOFR	0.0	19.6	0.0	19.6
Basis Swaps: SOFR	1.6	1.4	1.6	1.4
GBP LIBOR	2,067.9	1,374.9	2,067.9	1,374.9
SONIA	222.8	1,449.7	222.8	1,449.7
Basis Swaps: SONIA	5.9	35.2	5.9	35.2
CHF LIBOR	87.9	100.0	87.9	100.0
SARON	0.3	0.86	0.3	0.9
Basis Swaps: SARON	0.0	0.00	0.0	0.0
JPY LIBOR	894.2	343.2	894.2	343.2
TIBOR/Euroyen TIBOR	0.0	0.9	0.0	0.9
TONA	15.8	25.2	15.8	25.2
Basis Swaps: TONA	0.0	1.0	0.0	1.0
EUR LIBOR	0.0	0.0	0.0	0.0
EURIBOR	3,359.9	3,670.1	3,359.9	3,670.1
€STR	0.0	0.0	0.0	0.0
Other*	8,115.7	13,370.5	8,115.7	13,370.5
Total	41,964.1	27,972.8	41,964.1	27,972.8
*Other includes IRD with other reference rates and IBOR/non-RFR basis swaps				

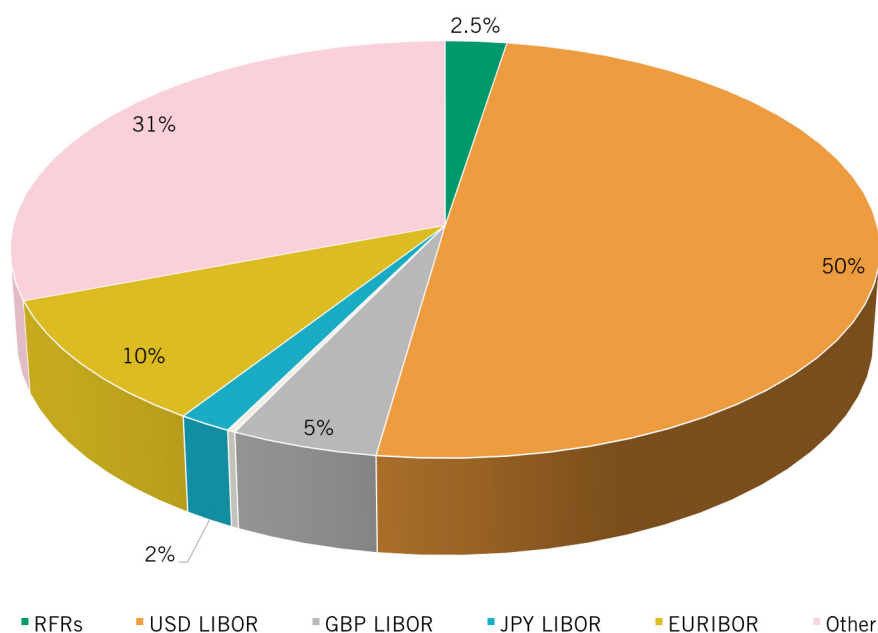
Source: DTCC and Bloomberg SDRs

IBORs

During the first quarter of 2019, traded notional of IRD referencing LIBOR denominated in US dollar, sterling, Swiss franc, yen and euro, as well as EURIBOR and TIBOR, totaled \$46.7 trillion and represented 67% of total IRD traded notional. The number of trades referencing IBORs totaled 259,706, accounting for 69% of total IRD trade count.

\$34.8 trillion of IRD traded notional was based on US dollar LIBOR, accounting for 50% of total IRD traded notional in the first quarter of 2019. EURIBOR and sterling LIBOR traded notional was \$7.0 trillion and \$3.4 trillion, respectively.

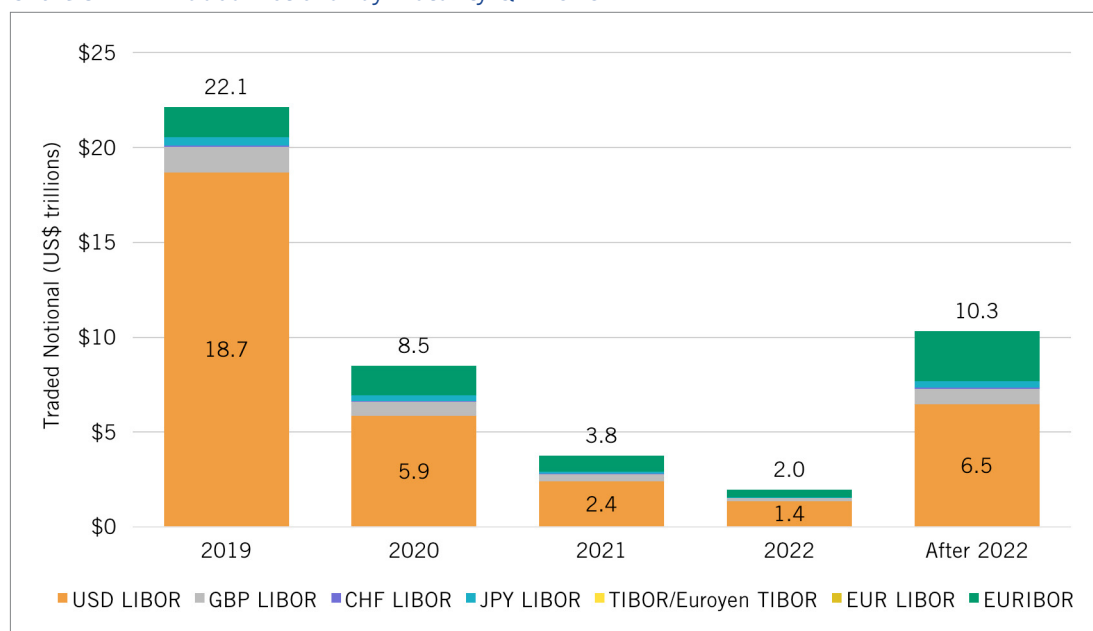
Chart 7: IRD Traded Notional Q1 2019



Source: DTCC and Bloomberg SDRs

In the first quarter of 2019, \$22.1 trillion of IRD traded notional referencing LIBOR had a 2019 maturity, including \$18.7 trillion of traded notional based on US dollar LIBOR, \$1.6 trillion based on EURIBOR and \$1.4 trillion based on sterling LIBOR. \$8.5 trillion of traded notional had a 2020 maturity. Traded notional maturing in 2021 and 2022 totaled \$3.8 trillion and \$2.0 trillion, respectively, while \$10.3 trillion of traded notional had a maturity after 2022.

Chart 8: IRD Traded Notional by Maturity Q1 2019



Source: DTCC and Bloomberg SDRs



ISDA has published other recent research papers:

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

<https://www.isda.org/2019/04/09/isda-margin-survey-year-end-2018/>

- ***Asia-Pacific Derivatives Survey, April 2019***

<https://www.isda.org/2019/04/08/asia-pacific-derivatives-survey/>

- ***Interest Rate Benchmarks Review: Full Year 2018 and the Fourth Quarter of 2018, January 2019***

<https://www.isda.org/2019/01/29/interest-rate-benchmarks-review-full-year-2018-and-the-fourth-quarter-of-2018/>

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