

INTEREST RATE BENCHMARKS REVIEW

Third Quarter of 2018 and Nine Months
Ended September 30, 2018

As the financial industry is preparing to transition from LIBOR and other interbank offered rates (IBORs) to alternative risk-free rates (RFRs), ISDA is launching a quarterly review of trading volumes of interest rate derivatives (IRD) referencing alternative RFRs and major IBORs.

This report provides an analysis of the trading volumes of IRD transactions referencing the Secured Overnight Financing Rate (SOFR), as well as other selected alternative 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 (ESTER) to its analysis once it is published and traded. In addition, the report analyzes IRD traded notional referencing LIBOR denominated in US dollar, 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 THIRD QUARTER OF 2018 AND NINE MONTHS ENDED SEPTEMBER 30, 2018

Transactions referencing alternative RFRs accounted for less than 5% of total IRD traded notional during the third quarter of 2018. SONIA swaps represented the majority of the transactions referencing RFRs, which is expected as 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) were miniscule. This is also expected, as the effective federal funds rate (EFFR), not SOFR, 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 IBORs and report on trends as the market transitions from the IBORs to alternative RFRs. During this time, volumes of IRD referencing alternative RFRs are expected to increase, while volumes referencing major IBORs are anticipated to decrease. ESTER will be added once it is published and traded¹.

In the third quarter of 2018:

IRD traded notional referencing alternative RFRs, including SOFR, SONIA, SARON and TONA, totaled \$1.8 trillion and represented 3.3% of total IRD traded notional. The number of trades referencing alternative RFRs was 2,077, which accounted for 0.7% of total IRD trade count.

- SOFR traded notional totaled \$1.6 billion, including \$1.4 billion of basis swaps. Trade count totaled 15, including 12 basis swaps².
- SONIA traded notional was \$1.7 trillion, including \$29.4 billion of basis swaps. Trade count totaled 1,987, including 183 basis swaps.
- SARON traded notional and trade count was \$0.4 billion and two, respectively.
- TONA traded notional totaled \$20.5 billion, including \$0.7 billion of basis swaps. Trade count totaled 73, including three basis swaps.

¹ The European Central Bank has indicated that it will publish ESTER prior to October 2019. Trading is expected to begin sometime after its publication

² See the note below regarding why basis swaps are tracked separately for the alternative RFRs

IRD traded notional referencing IBORs totaled \$33.8 trillion and represented 63% of total IRD traded notional. \$25.2 trillion of IRD traded notional was based on US dollar LIBOR, accounting for 47% of total IRD traded notional.

In the nine months ended September 30, 2018:

IRD traded notional referencing alternative RFRs, including SOFR, SONIA, SARON and TONA, totaled \$6.0 trillion and represented 3.3% of total IRD traded notional. The number of trades referencing RFRs was 5,667, which accounted for 0.6% of total IRD trade count.

- SOFR traded notional totaled \$1.6 billion, including \$1.4 billion of basis swaps. Trade count totaled 15, including 12 basis swaps.
- SONIA traded notional was \$5.9 trillion, including \$78.9 billion of basis swaps. Trade count totaled 5,430, including 561 basis swaps.
- SARON traded notional and trade count was \$1.3 billion and 10, respectively.
- TONA traded notional totaled \$63.1 billion, including \$1.2 billion of basis swaps. Trade count totaled 212, including four basis swaps.

IRD traded notional referencing IBORs totaled \$113 trillion and represented 63% of total IRD traded notional. \$84.7 trillion of IRD traded notional was based on US dollar LIBOR, accounting for 47% of total IRD traded notional.

Table 1: Interest Rate Benchmarks Traded Notional and Trade Count

	Q3 2018		YTD Q3 2018	
	Traded Notional (US\$ billions)	Trade Count	Traded Notional (US\$ billions)	Trade Count
USD LIBOR	25,190.9	139,545	84,650.4	476,927
SOFR	0.2	3	0.2	3
Basis Swaps: SOFR	1.4	12	1.4	12
GBP LIBOR	2,553.1	18,126	7,456.0	58,718
SONIA	1,714.7	1,804	5,800.4	4,869
Basis Swaps: SONIA	29.4	183	78.9	561
CHF LIBOR	94.2	1,537	363.8	5,153
SARON	0.4	2	1.3	10
Basis Swaps: SARON	0.0	0	0.0	0
JPY LIBOR	919.4	10,088	2,627.8	26,876
TIBOR/Euroyen TIBOR	0.6	17	2.0	56
TONA	19.7	70	62.0	208
Basis Swaps: TONA	0.7	3	1.2	4
EUR LIBOR	0.2	4	2.9	60
EURIBOR	5,023.7	35,995	17,837.1	127,011
ESTER	0.0	0	0.0	0
Other*	18,271.2	96,149	60,599.4	303,510
Total	53,819.7	303,538	179,484.7	1,003,978

*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 the 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.

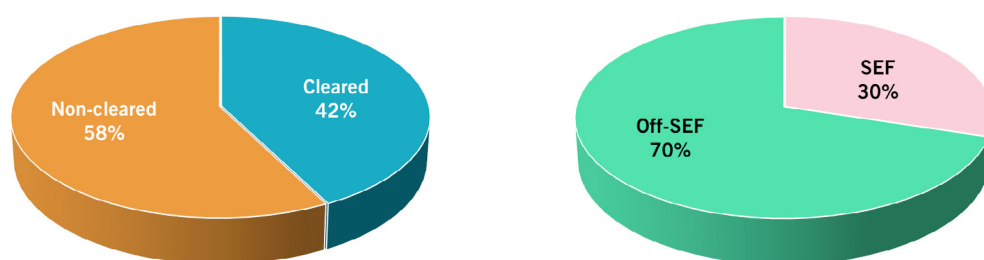
SOFR

SOFR swaps started trading in the third quarter of 2018. During the quarter, there were 15 SOFR trades, including three OIS and 12 basis swaps. Total traded notional was \$1.6 billion, including \$0.2 billion OIS and \$1.4 billion basis swaps traded notional.

\$0.7 billion of SOFR swaps was cleared, including \$0.2 billion of OIS and \$0.5 billion of basis swaps. Cleared swaps accounted for 42% of total SOFR traded notional.

Nine out of 15 transactions were traded on swap execution facilities (SEFs). SEF-traded notional totaled \$0.5 billion and represented 30% of total SOFR traded notional.

Chart 1: SOFR Traded Notional Q3 2018



Source: DTCC and Bloomberg SDRs

In the nine months ended September 30, 2018, SOFR traded notional was \$1.6 billion, including \$1.4 billion of basis swaps³. Total trade count was 15, including 12 basis swaps. Cleared notional totaled \$0.7 billion and accounted for 42% of total traded notional. SEF-traded notional totaled \$0.5 billion and represented 30% of total traded notional.

SONIA

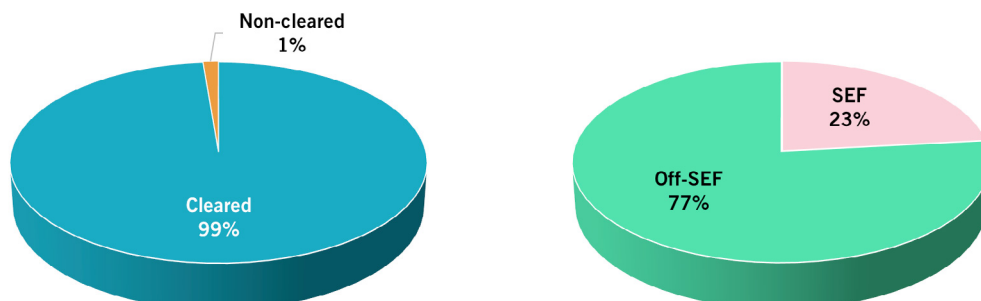
During the third quarter of 2018, there were 1,987 SONIA trades, including 183 basis swaps. Total traded notional was \$1.7 trillion, including \$29.4 billion of basis swaps.

\$1.7 trillion of SONIA swaps was cleared, including \$26.6 billion of basis swaps. Cleared transactions accounted for 99% of total SONIA traded notional.

SEF-traded notional totaled \$406.3 billion and represented 23% of total SONIA traded notional.

³ As SOFR swaps started trading during the third quarter of 2018, the nine months ended September 30, 2018 numbers are the same as quarterly numbers

Chart 2: SONIA Traded Notional Q3 2018



Source: DTCC and Bloomberg SDRs

In the nine months ended September 30, 2018, SONIA traded notional was \$5.9 trillion, including \$78.9 billion of basis swaps. Total trade count was 5,430, including 561 basis swaps. Cleared notional totaled \$5.8 trillion and accounted for 99% of total traded notional. SEF-traded notional totaled \$1.2 trillion and represented 20% of total traded notional.

SARON

During the third quarter of 2018, there were two SARON trades with total traded notional of \$0.4 billion.

All SARON swaps (100% of traded notional) were cleared.

SEF-traded notional totaled \$0.3 billion and represented 71% of total traded notional.

In the nine months ended September 30, 2018, SARON traded notional was \$1.3 billion and trade count totaled 10. Cleared notional was \$1.1 billion, accounting for 91% of total traded notional. SEF-traded notional totaled \$1 billion and represented 80% of total traded notional.

TONA

During the third quarter of 2018, there were 73 TONA trades, including three basis swaps. Total traded notional was \$20.5 billion, including \$0.7 billion of basis swaps.

\$19.7 billion of TONA swaps was cleared, while \$0.7 billion of TONA basis swaps was non-cleared. Cleared transactions accounted for 97% of total SONIA traded notional.

SEF-traded notional totaled \$17.4 billion and represented 85% of total TONA traded notional.

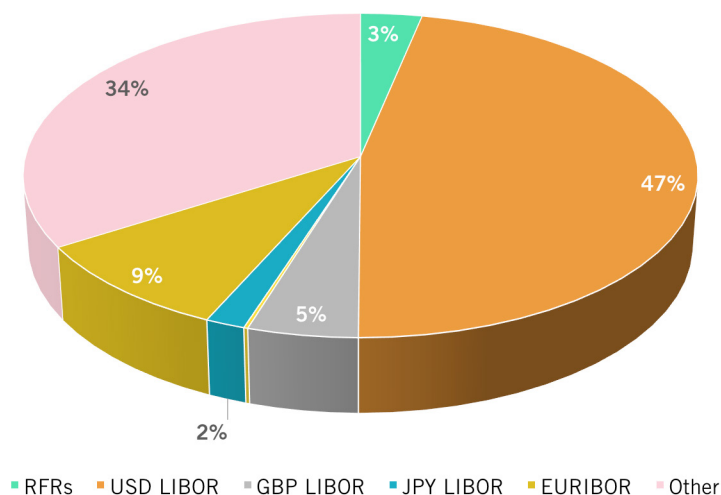
In the nine months ended September 30, 2018, TONA traded notional was \$63.1 billion, including \$1.2 billion of basis swaps. Total trade count was 212, including four basis swaps. Cleared notional totaled \$61.3 billion and accounted for 97% of total traded notional. SEF-traded notional totaled \$54.4 billion and represented 85% of total TONA traded notional.

IBORs

During the third quarter of 2018, traded notional of IRD referencing LIBOR denominated in US dollar, sterling, Swiss franc, yen and euro, as well as EURIBOR and TIBOR totaled \$33.8 trillion and represented 63% of total IRD traded notional. The number of trades referencing IBORs totaled 205,312, accounting for 68% of total IRD trade count.

\$25.2 trillion of IRD traded notional was based on US dollar LIBOR, accounting for 47% of total IRD traded notional in the third quarter of 2018. EURIBOR and sterling LIBOR traded notional was \$5 trillion and \$2.6 trillion, respectively.

Chart 3: IRD Traded Notional Q3 2018



Source: DTCC and Bloomberg SDRs

In the nine months ended September 30, 2018, traded notional of IRD referencing IBORs totaled \$113 trillion and represented 63% of total IRD traded notional. The number of trades referencing IBORs totaled 694,801, accounting for 69% of total IRD trade count.

In the nine months ended September 30, 2018, \$84.7 trillion of IRD traded notional was based on US dollar LIBOR, accounting for 47% of total IRD traded notional. EURIBOR and sterling LIBOR traded notional was \$17.8 trillion and \$7.5 trillion, respectively.



ISDA has published other recent research papers:

- ***SwapsInfo Third Quarter of 2018 and Year-to-September 30, 2018 Review***

<https://www.isda.org/a/QjCEE/Swaps-review-Q3-2018.pdf>

- ***Actual Cleared Volumes vs. Mandated Cleared Volumes: Analyzing the US Derivatives Market, July 2018***

<https://www.isda.org/a/6yYEE/Actual-Cleared-Volumes-vs-Mandated-Cleared-Volumes.pdf>

- ***Uses of Notional Amount in Derivatives Regulation, May 25, 2018***

<https://www.isda.org/a/1trEE/Notional-Based-Regs.pdf>

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Since 1985, ISDA has worked to make the global derivatives markets safer and more efficient. Today, ISDA has more than 900 member institutions from 70 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 web site: www.isda.org. Follow us on Twitter @ISDA.