Operations/Infrastructure:
Briefing on LIBOR Replacement Index Communication Tool

This material is provided for discussion purposes only. The views expressed in this material do not necessarily represent those of the Federal Reserve or the Alternative Reference Rates Committee.

Topics for Todays Meeting

1	Comms process of security rate replacements differed between EU and US
2	Development Journey for DTCC's LIBOR Replacement Index Comms Tool
3	Relevant metrics for the LIBOR Replacement Index Comms Tool
4	How data flows through the LIBOR Replacement Index Comms Tool
5	How to upload data to the DTCC's Tool
6	Use Cases for the Tool
7	Further information and background

ARRC O&I identified in 2021 that the communication process of security rate replacements differed between the EU and US
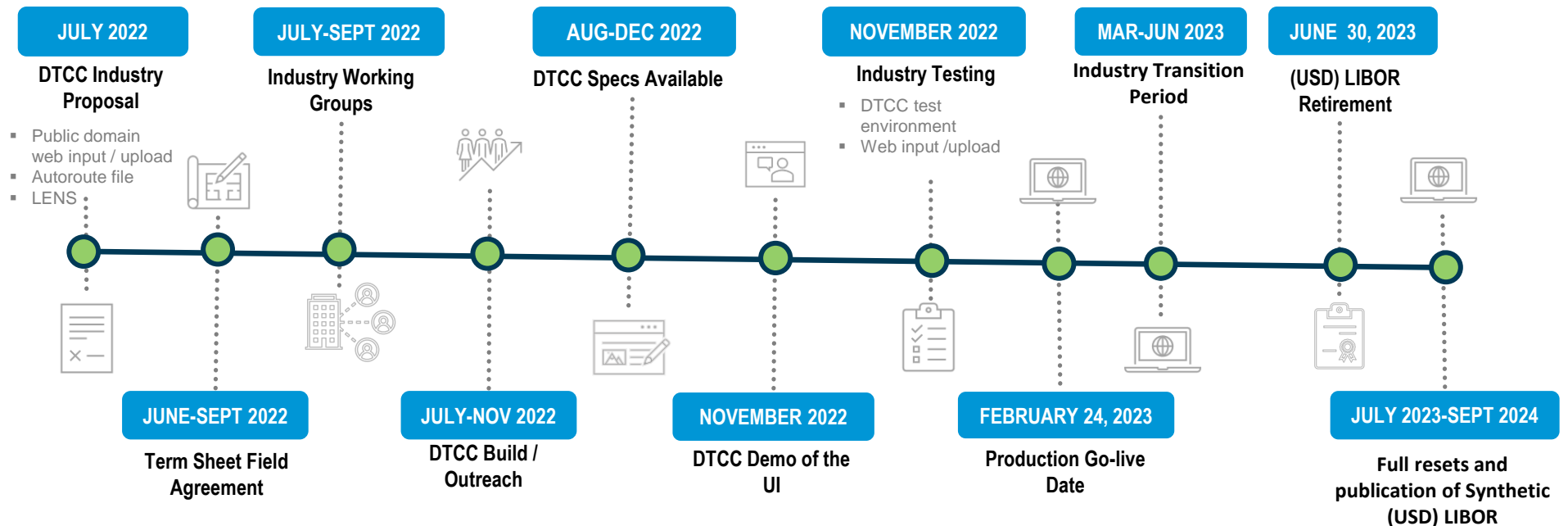
	European Union	United States
Rate Change Event	• Is treated as a Corporate Action	• Is currently <u>not treated as a Corporate Action</u> • Rates Changes are a <u>non-serviceable event</u>
Announcement of the Change	• International Central Securities Depositories (ICSDs) will send corporate action notification via SWIFT when received from issuer or agents	• Change notifications received from Issuers or Agents are published on DTCC LENS message board (subscription service) • Notifications are comingled with redemption and default notices and are therefore difficult to identify
Details of the Change	• ICSDs distribute detailed term sheet via other channels to their network	• Are included on the LENS messaging board
Informed Parties	• Broad range of investors, infrastructure providers and data providers	• Limited reach due to subscription model and difficult data extraction process

ARRC O&I Working Group concluded in 2021 that the existing US process was not fit for purpose to deal with the transition event in 2023

Development Journey for the DTCC's LIBOR Replacement Index Communication Tool

- Create standardized data term sheets (one for TERM SOFR and one for ARRs) which can be used to communicate the transition decision in a harmonized fashion
- DTCC to develop
  - an API and Web Interface which will be used to ingest the information from Agents / Issuers
  - develop a sub event type used for a Corporate Actions notifications
  - develop a database and API to make the combined data term sheets available for market participants and market data providers (prerequisite to populate Security Master file products)
- The process aims to reduce the risk of
  - Valuation inconsistencies
  - Reconciliation breaks, which could overwhelm back-office functions.

JULY 2022
DTCC Industry Proposal
▪ Public domain web input / upload
▪ Autoroute file
▪ LENS

JULY-SEPT 2022
Industry Working Groups

AUG-DEC 2022
DTCC Specs Available

NOVEMBER 2022
Industry Testing
▪ DTCC test environment
▪ Web input /upload

MAR-JUN 2023
Industry Transition Period

JUNE 30, 2023
(USD) LIBOR Retirement

JUNE-SEPT 2022
Term Sheet Field Agreement

JULY-NOV 2022
DTCC Build / Outreach

NOVEMBER 2022
DTCC Demo of the UI

FEBRUARY 24, 2023
Production Go-live Date

JULY 2023-SEPT 2024
Full resets and publication of Synthetic (USD) LIBOR

LIBOR Tool Metrics

- LIBOR Tool has been operational since February for submitters to upload their securities information for market data service providers to disseminate the information to end users.

- Since the start of the tool in February, 91,302 securities have been submitted as of May 16th via the LIBOR tool.

- There has been significant progress in securities submissions in May, accounting to more than 90% of the total submissions.

- Even though major spike of submissions occurred, there is still an outstanding population of USD LIBOR securities to be submitted to the tool.
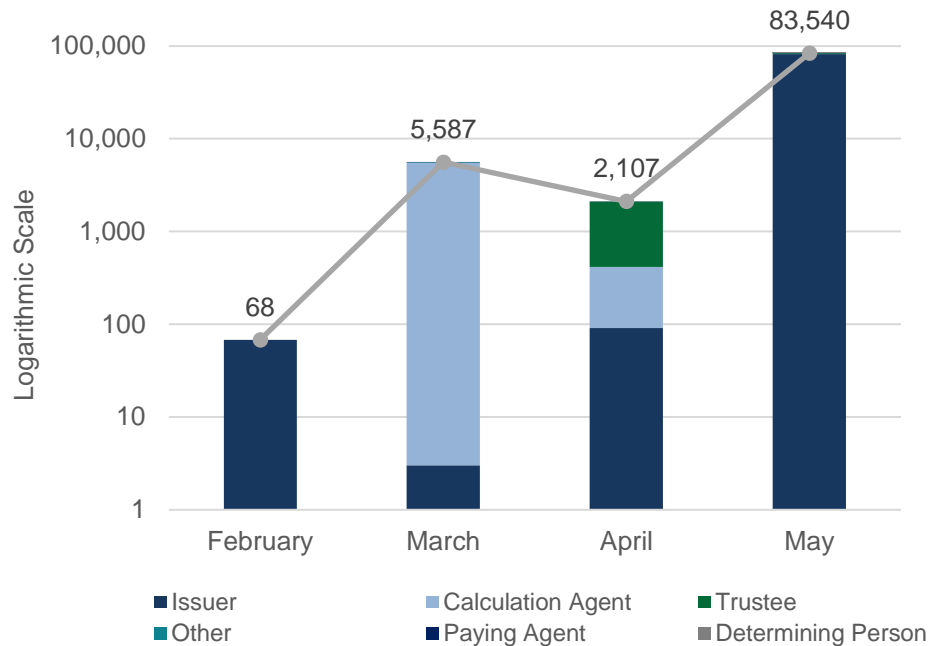
Securities Submitted to LIBOR Tool (Cumulative)
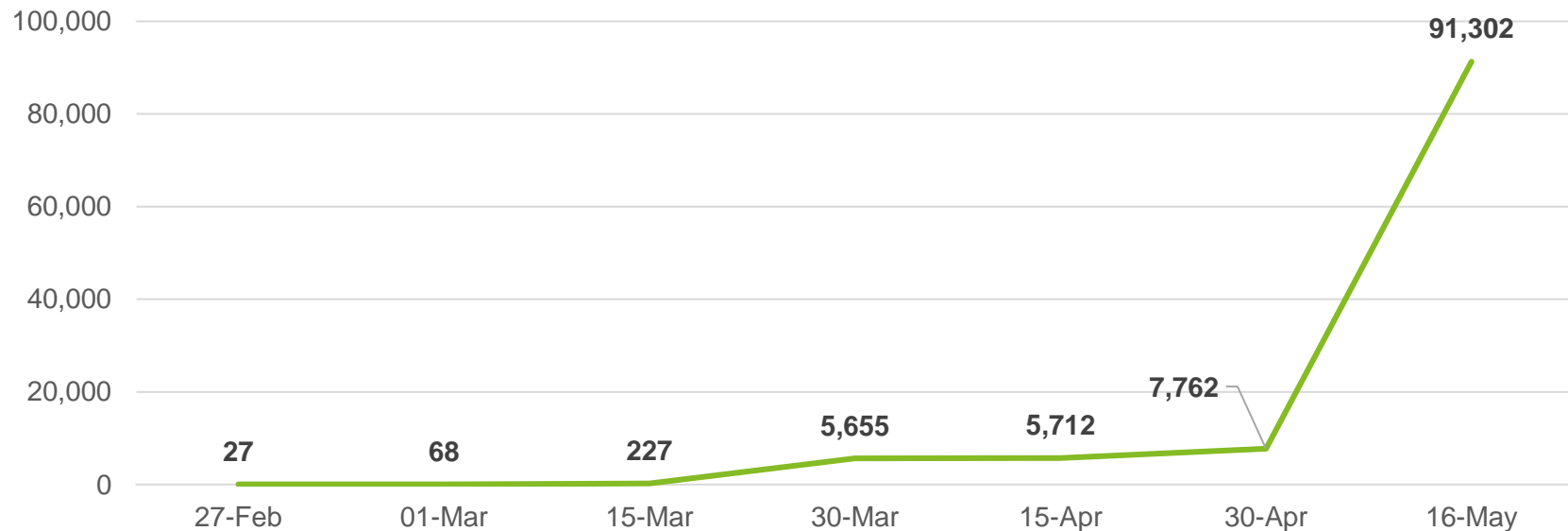
Data as of May 16th ; Submissions from unique 19 institutions

LIBOR Tool Metrics

Securities Submitted by Month

- There has been significant progress in submissions in May with a large spike of 83,540 compared to 2,107 in April.

- Largest number of submissions have been from issuers where Fannie Mae and Freddie Mac accounted for 56.6% and 42.7% of the total issuer submissions, respectively.

- In terms of the benchmarks submitted to the tool, majority was Term SOFR with 63%, followed by other SOFR Based ARRs (e.g., SOFR 30,90,180) with 37%.

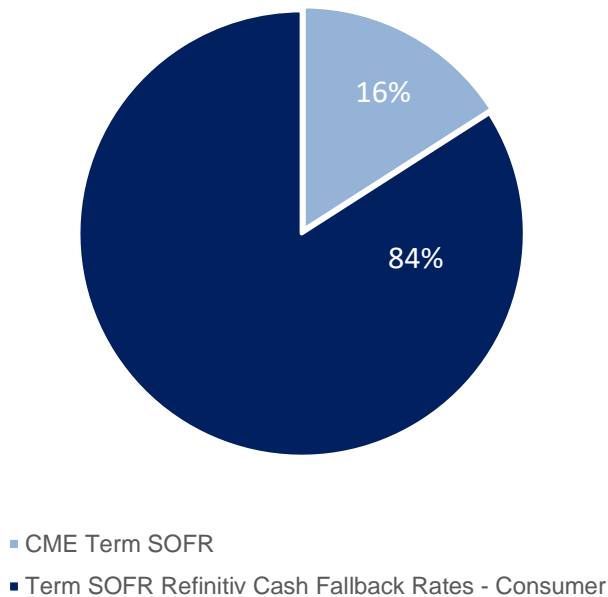| Submitter Type	Term SOFR	SOFR Based ARRs*	Other ARR**	Total	% of Total
Issuer	48,415	33,140	350	81,905	89.71%
Calculation Agent	5,563	29	234	5,826	6.38%
Trustee	3,253	81	-	3,334	3.65%
Other	94	100	-	194	0.21%
Paying Agent	30	-	-	30	0.03%
Determining Person	-	13	-	13	0.01%
Grand Total	**57,355**	**33,363**	**584**	**91,302**	**100%**

*SOFR Based ARRs include SOFR 30, SOFR 90, SOFR 180, SOFR Spread-Adjusted ISR 5Y, SOFR Spread-Adjusted ISR 10Y, and SOFR Spread-Adjusted ISR 30Y
**Other ARR also includes submissions where Fallback Rate Index value is blank
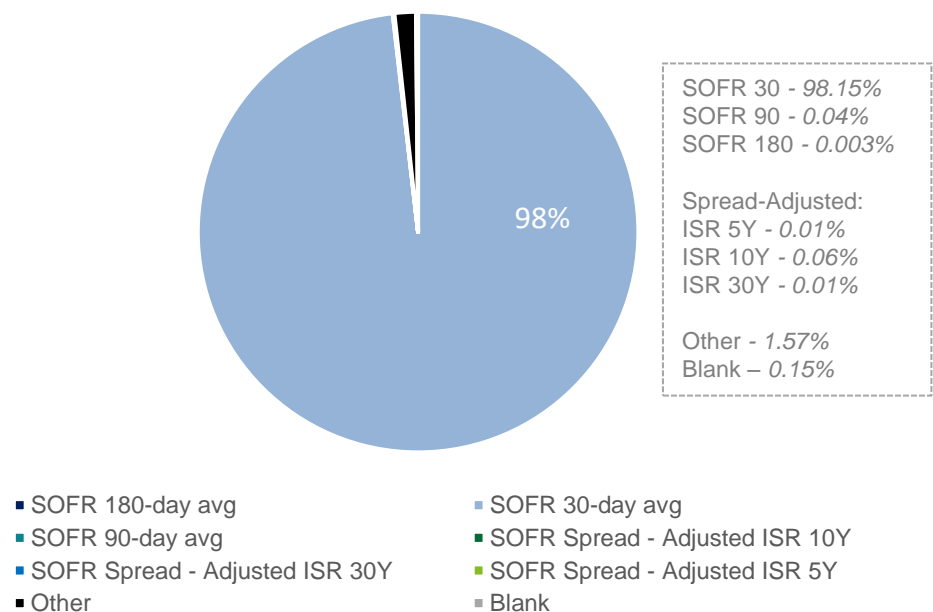
LIBOR Tool Metrics

- Within the Term SOFR submissions, 84% were Refinitiv Cash Fallback Rates and CME Term SOFR accounted for 16% of the submitted benchmarks.

- In terms of the SOFR Based ARR submissions, SOFR 30-day average benchmark was the highest used benchmark with 98%.

- Remaining 2% of the population for the SOFR Based ARRs included SOFR 90 and180-day average and SOFR Spread Adjusted ISRs (USD LIBOR ICE Swap Rate).

Fallback Index Rate – TERM SOFR

16%

84%

■ CME Term SOFR

■ Term SOFR Refinitiv Cash Fallback Rates - Consumer

Fallback Index Rate – SOFR Based ARRs

98%

SOFR 30 - *98.15%*
SOFR 90 - *0.04%*
SOFR 180 - *0.003%*

Spread-Adjusted:
ISR 5Y - *0.01%*
ISR 10Y - *0.06%*
ISR 30Y - *0.01%*

Other - *1.57%*
Blank – *0.15%*

■ SOFR 180-day avg   ■ SOFR 30-day avg
■ SOFR 90-day avg   ■ SOFR Spread - Adjusted ISR 10Y
■ SOFR Spread - Adjusted ISR 30Y   ■ SOFR Spread - Adjusted ISR 5Y
■ Other   ■ Blank

Data as of May 16th ; Submissions from unique 19 institutions

How data flows through the LIBOR Replacement Index Comms Tool

There are different paths by which end-users receive post-LIBOR reference rates:
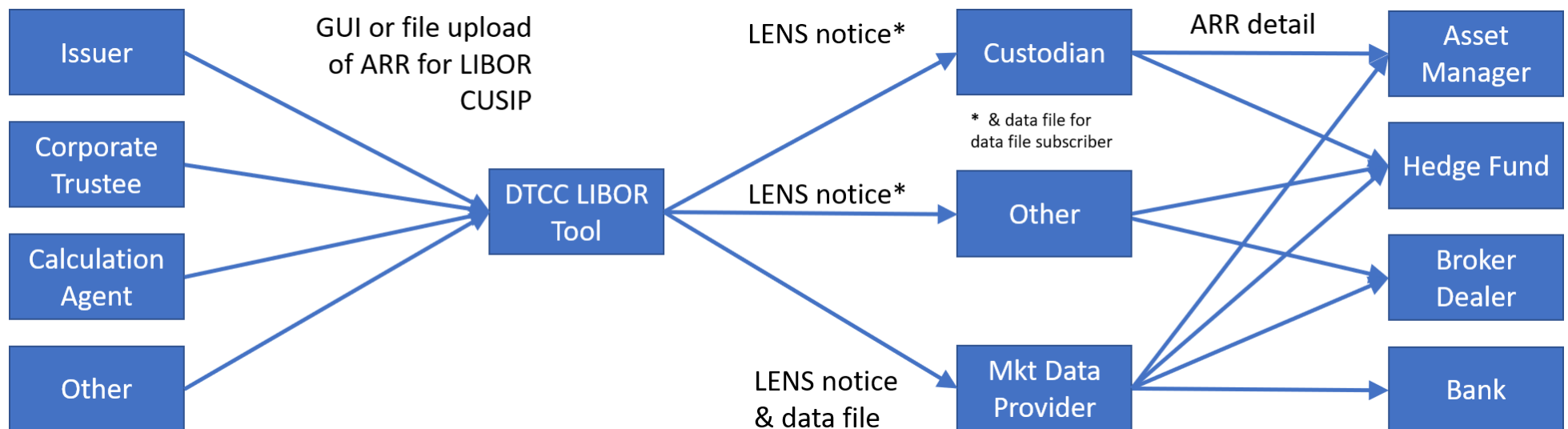
How to upload data to the DTCC's LIBOR Replacement Index Communication Tool

The Tool is used by determining persons or their agents entering post-LIBOR rate information into a DTCC webpage at https://libor.dtcc.com. The webpage allows entry of single securities via GUI as well as multiple securities via file uploads.

Data submitted to the LIBOR Tool flows onward to two destinations on an intraday basis. The first destination is LENS, a DTCC service predating the LIBOR Tool. The second destination is an Autoroute file, part of a service subscribed to by market data providers. Market data providers then supply the data to their own subscribers.
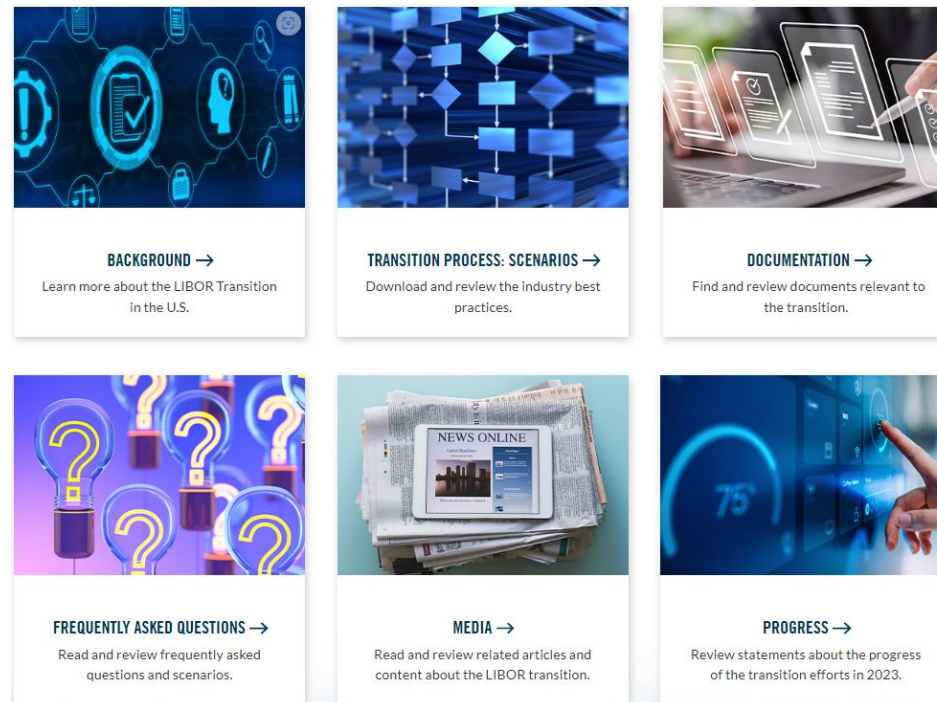
Use Cases for the Tool

The Tool can be used for securities:

- referencing USD LIBOR and is identified with a CUSIP
- falling back to a specific non-LIBOR benchmark (such as SOFR, Prime, or Fed Funds)
- falling back to a benchmark that is based upon a contractual "waterfall" (such as the ARRC's recommended fallback language)
- where the replacement benchmark is applied by operation of law under the Federal LIBOR Act
- where the replacement benchmark for a security is selected by a "determining person" under the Federal LIBOR Act
- governed by non-U.S. law if they have a CUSIP

Further information and background can be found ….

1. Learn more about DTCC's LIBOR Tool at https://www.dtcc.com/libor, especially:

BACKGROUND →
Learn more about the LIBOR Transition in the U.S.

TRANSITION PROCESS: SCENARIOS →
Download and review the industry best practices.

DOCUMENTATION →
Find and review documents relevant to the transition.

FREQUENTLY ASKED QUESTIONS →
Read and review frequently asked questions and scenarios.

MEDIA →
Read and review related articles and content about the LIBOR transition.

PROGRESS →
Review statements about the progress of the transition efforts in 2023.

2. For questions not answered by the site above, ask them at https://www.dtcc.com/forms/libor-contact-client-support-form.

3. Use https://libor.dtcc.com to notify the market of post-LIBOR rates for securities of which you are a determining person or their agent.

Appendix

ARRC Best Practices and Final Rules

On July 11, 2022, the NYFRB ARRC published [best practices](a.k.a. playbook) for the LIBOR transition

The best practice document speaks to "an enhanced" LENS system
>   The enhanced system would include the Replacement Index Rate upload web app

It is therefore recommended that determining parties (e.g. agents, trustees, etc.) should use the enhanced LENS process to decrease operational risk

Fed rules for LIBOR Transition:
https://www.federalreserve.gov/newsevents/pressreleases/files/bcreg20221216a1.pdf