

## Alternative Reference Rates Committee (ARRC)

### Minutes for the July 13, 2022 Meeting

The ARRC Chair welcomed participants to the virtual meeting and thanked everyone who attended and participated in the [Last Call on LIBOR: Final Steps to Transition](#) event held on July 11. The Chair briefly recapped 3 main highlights from the event: 1) the significant progress achieved in the shift away from LIBOR to SOFR in new activity across markets; 2) the importance for market participants to continue taking steps, where feasible, to remediate legacy LIBOR contracts ahead of June 30, 2023 to avoid potentially significant operational challenges (with the Chair noting that the ARRC published a [Legacy LIBOR Playbook](#) to help provide market participants with tools and resources to assist in the transition of legacy LIBOR cash products); and 3) the criticality of maintaining the major gains realized from the decade-long LIBOR transition effort by ensuring the market rests on robust rates like SOFR going forward. The Chair also noted separately the ARRC also welcomed a statement by Refinitiv that it intends to publish ARRC-recommended fallback rates for cash products based on CME Term SOFR plus the ARRC-recommended spread adjustments beginning in September.

Next, CME Group provided an update on its [SOFR First for Options](#) initiative that went into effect in June. The initiative encourages SOFR options trading through features including fee waivers for SOFR options, market making booster incentives, and sunseting back-end Eurodollar options expiries. Since the launch of the initiative, SOFR options average daily volumes (ADV) have been on an upward trajectory and reached a record 46 percent of Eurodollar options ADV. It was noted that SOFR futures have also extended their strong growth, with SOFR futures ADV further surpassing Eurodollar futures ADV. (see Appendix A for details) CME Group subsequently announced that it is extending SOFR First for Options through August.

Federal Reserve staff then provided an overview of the USD LIBOR transition more broadly, using the charts provided in the [July 13 Meeting Readout](#). Staff noted the data shows that the strong uptick in momentum in cash and derivative markets observed in the first quarter of the year has continued throughout the second quarter. In particular, SOFR swaps have accounted for about 80 percent of interest rate risk traded in the outright linear swaps market for the last 3 months while LIBOR swaps have declined to less than 10 percent. Additionally, almost all new debt, mortgage, and syndicated lending has been based on SOFR. Staff then provided an overview of the results of the most recent sentiment survey of ARRC members (see Appendix B for summary slides), where respondents mentioned the encouraging growth in SOFR futures and options activity and continued to characterize the LIBOR transition overall as progressing “smoothly” or “generally smoothly”. Areas of focus

highlighted by ARRC members included Federal Reserve rulemaking<sup>1</sup> pursuant to the [LIBOR Act](#).

Next, the Operations/Infrastructure Working Group provided an update on their ongoing work to facilitate effective and efficient communication to clients and counterparties regarding rate changes in LIBOR contracts. After consulting with a number of stakeholders, the Working Group proposed implementing a notification process for rate changes via a pre-determined term sheet format that would be disseminated through a new system that is being created by DTCC. (See Appendix C for details)

The Term Rate Task Force provided an update on its discussions of participants' views on issues related to Term SOFR derivatives, including the overnight SOFR/Term SOFR basis, internal or external offsets to Term SOFR risk, clearing, capital, and accounting considerations. It was noted, however, that the ARRC's best practice recommendations regarding [scope of use for Term SOFR](#) remain unchanged.

The ARRC Chair ended the meeting by directing members to review and finalize the [July 13 Meeting Readout](#). The ARRC Chair then thanked everyone and reminded everyone of the next ARRC meeting to be held in person on September 8th.

---

<sup>1</sup> On July 19, 2022, the Federal Reserve Board published a [notice of proposed rulemaking](#) that would implement the Adjustable Interest Rate (LIBOR) Act.

## Attendance at the July 13, 2022 Meeting\*

### ARRC Members

American Bankers Association	Hu Benton
American Bankers Association	Sayee Srinivasan
Association for Financial Professionals	Tom Hunt
Bank of America	Janet Choi
Bank of America	Gregory Todd
Bank of America	Sonali Theisen
Bank of New York Mellon	Oliver Bader
Bank of New York Mellon	Jason Granet
Bank of New York Mellon	Jeanne Naughton-Carr
Citigroup	Peter Phelan
Citigroup	Rodrigo Fernandez
CME Group	Agha Mirza
CRE Finance Council	Lisa Pendergast
CRE Finance Council	Sairah Burki
CRE Finance Council	Raj Aidasani
Deutsche Bank	Kayam Rajaram
Equitable Life	Julien Zusslin
Fannie Mae	Robert Ives
Fannie Mae	Wells Engledow
Federal Home Loan Bank Office of Finance	Kyle Lynch
Federal Home Loan Bank of New York	Rei Shinozuka
Federal Home Loan Bank of New York	Philip Scott
Ford	Jason Behnke
Freddie Mac	Ameez Nanjee
Freddie Mac	Guim Barbour
Freddie Mac	Allan Krinsman
Freddie Mac	Karen Pilewski
Freddie Mac	Samuel Chapin
GE	Mike Taets
GE	Fred Robustelli
Goldman Sachs	Richard Chambers
Goldman Sachs	Guillaume Helie
Government Finance Officers Association	Patrick McCoy
HSBC	Shirley Hapangama
Huntington National Bank	Larry Heath
Intercontinental Exchange	Harvey Flax
International Swaps and Derivatives Association	Ann Battle

JP Morgan Chase & Co.  
JP Morgan Chase & Co.  
KKR  
London Clearing House  
Loan Syndications and Trading Association  
Loan Syndications and Trading Association  
MetLife  
MetLife  
MetLife  
Morgan Stanley  
Morgan Stanley  
Morgan Stanley  
Morgan Stanley  
National Association of Corporate Treasurers  
PIMCO  
PNC  
PNC  
Prudential Financial  
Prudential Financial  
Securities Industry and Financial Markets Association  
TD Bank  
TD Bank  
U.S. Chamber of Commerce  
Wells Fargo  
Wells Fargo  
World Bank

Alice Wang  
Emilio Jimenez  
Tal Reback  
Phil Whitehurst  
Meredith Coffey  
Tess Virmani  
Joseph Demetrick  
William Ding  
Alex Strickler  
Paige Mandy  
Tom Wipf  
Maria Douvas  
Matt Ochs  
Tom Deas  
Jerry Woytash  
Alex Spiro  
Andrew Wilson  
Gary Horbacz  
Chris McAlister  
Chris Killian  
Priya Misra  
Greg Moore  
Kristen Malinconico  
Alexis Pederson  
Jessica Murphy  
Don Sinclair

**Ex-Officio ARRC Members**

Consumer Financial Protection Bureau  
Federal Deposit Insurance Corporation  
Federal Housing Finance Agency  
Federal Housing Finance Agency  
Federal Reserve Bank of New York  
Federal Reserve Bank of New York  
Federal Reserve Bank of New York  
Federal Reserve Bank of New York  
Federal Reserve Bank of New York  
Federal Reserve Bank of New York  
Federal Reserve Bank of New York  
Federal Reserve Board of Governors  
Federal Reserve Board of Governors  
Federal Reserve Board of Governors

Abhishek Agarwal  
Irina Leonova  
Daniel Coates  
Muna Sisay  
Pooja Gupta  
Sophie Legrand-Green  
Jamie Pfeifer  
Nathaniel Wuerffel  
Jennifer Wolgemuth  
Mari Baca  
Scott Sherman  
Jeffrey Huther  
David Bowman  
Erik Heitfield

Ginnie Mae  
Ginnie Mae  
Office of Financial Research  
Office of the Comptroller of the Currency  
U.S. Department of Housing and Urban Development  
U.S. Securities and Exchange Commission  
U.S. Securities and Exchange Commission  
U.S. Securities and Exchange Commission  
U.S. Treasury  
U.S. Treasury  
U.S. Treasury

**Observers**

Bank of Canada  
BNP Paribas  
Brunswick Group  
Cadwalader  
Citigroup  
Morgan Lewis  
State Street

Carol Vilsack  
Diego Leguizamon  
Jay Kahn  
Kevin Walsh  
Maria Chelo De Venecia  
Robert Errett  
Michelle Danis  
Jason Leung  
Sally Au Yeung  
Fatima Madhany  
Daniel Harty

Sheryl King  
Simon Winn  
Nathan Kline  
Lary Stromfeld  
Jugvinder Singh  
Jon Roellke  
Scott Longo

\*This meeting was held via WebEx; asterisk indicates participation by dial-in.

## Appendix A

### SOFR Futures & Options reached 2.4M ADV in June, Current OI at 14.4M

	SOFR Futures		SOFR Options		OTC SOFR	CME Term SOFR (Cumulative)	
	ADV	OI*	ADV	OI*	CME Swaps ADN (\$B)	Licenses*	# of Firms Under License*
<b>Q4 2021</b>	277,000	1,800,000	4	2,600	\$7	2,100	450
<b>Q1 2022</b>	1,200,000	4,500,000	39,000	1,400,000	\$12	3,800	850
<b>June 2022</b>	2,000,000	6,400,000	412,000	7,200,000	\$14	5,200+	1,250+
<b>% Growth vs. Q4</b>	616%	245%	>100x	>100x	100%	152%	160%

**SOFR Futures:** Record 2M ADV in June was higher than June ED Fut. ADV of 1.7M. Over 1,800 global participants now account for more than 98% of Eurodollar Futures ADV. In July, SOFR Futures ADV has advanced further ahead of Eurodollar Futures running at 126% of ED Fut. ADV.

**SOFR Options:** CME SOFR First for Options initiative has contributed to substantial growth in SOFR Options, reaching record 412k ADV in June (46% of Eurodollar options ADV) and 7.2M in OI by the end of June. The initiative has included fee waivers, market making booster incentives, and sunsetting back-end ED Options expiries.

**CME OTC SOFR Swaps:** SOFR-indexed trades now represent about 77% of all USD trades (\$14B notional in June), up from about 65% in May.

**CME Term SOFR:** Licensing and usage has grown, with over 5,200 licenses extended to 1250+ firms.

## ARRC Sentiment Survey - Responses Overview

### Overall:

The LIBOR Transition is progressing:

- a) Smooth
- b) Generally smooth, working through some obstacles
- c) Significant obstacles

Responses	July 2022 (12 responses)
a:	33.0%
b:	66.0%
c:	0.0%

### Derivatives:

The LIBOR Transition is progressing:

- a) Smooth
- b) Generally smooth, working through some obstacles
- c) Significant obstacles

Responses	July 2022 (12 responses)
a:	50.0%
b:	41.7%
c:	8.3%

# ARRC Sentiment Survey - Responses Overview

*For discussion purposes only*

## Business Loans:

The LIBOR Transition is progressing:

- a) Smooth
- b) Generally smooth, working through some obstacles
- c) Significant obstacles

Responses	July 2022 (12 responses)
a:	20.0%
b:	80.0%
c:	0.0%

## Consumer Loans:

The LIBOR Transition is progressing:

- a) Smooth
- b) Generally smooth, working through some obstacles
- c) Significant obstacles

Responses	July 2022 (12 responses)
a:	62.5%
b:	37.5%
c:	0.0%



# ARRC Sentiment Survey - Responses Overview

*For discussion purposes only*

## Floating Rates Notes:

The LIBOR Transition is progressing:

- a) Smooth
- b) Generally smooth, working through some obstacles
- c) Significant obstacles

Responses	July 2022 (12 responses)
a:	77.8%
b:	22.2%
c:	0.0%

## Securitizations:

The LIBOR Transition is progressing:

- a) Smooth
- b) Generally smooth, working through some obstacles
- c) Significant obstacles

Responses	July 2022 (12 responses)
a:	12.5%
b:	87.5%
c:	0.0%

# ARRC Sentiment Survey - Responses Overview

*For discussion purposes only*

## Key Messages:

- Overall, continued positive momentum - 100% of respondents indicated the transition overall is progressing smoothly or generally smoothly into 2022.
  - No meaningful change in sentiment regarding most asset classes<sup>1</sup>. Respondents largely kept their assessments little changed from prior survey responses.

## Areas Highlighted by Respondents:

- Remain very similar to areas highlighted in the [May 2022 survey results](#). Areas of focus include:
  - Federal Reserve rule-making process and determination of replacement benchmark rate per the LIBOR Act
  - Very encouraging progress in SOFR futures
  - Following the introduction of CME's SOFR First for Options initiative, streaming and RFQ liquidity for SOFR options have notably improved
  - Remediation of legacy contracts
  - Usage of Term SOFR in derivatives market

<sup>1</sup> Any apparent changes mainly due to differences in respondent composition between surveys rather than a shift in sentiment.

# Appendix C



ARRC Meeting Update  
July 13, 2022

**ARRC Operations & Infrastructure Working Group**

**Oliver Bader, Scott Longo**

# How are Bondholders informed in different jurisdictions today about rate replacement decisions?



<b>Rate Change Event</b>	<ul style="list-style-type: none"> <li>Is treated as a Corporate Action</li> </ul>	<ul style="list-style-type: none"> <li>Is currently <u>not treated as a Corporate Action</u></li> <li>Rates Changes are a <u>non-serviceable event</u></li> </ul>
<b>Announcement of the Change</b>	<ul style="list-style-type: none"> <li>International Central Securities Depositories (ICSDs) will send corporate action notification via SWIFT when received from issuer or agents</li> </ul>	<ul style="list-style-type: none"> <li>Change notifications received from Issuers or Agents are published on DTCC LENS message board (subscription service)</li> <li>Notifications are comingled with redemption and default notices and are therefore difficult to identify</li> </ul>
<b>Details of the Change</b>	<ul style="list-style-type: none"> <li>ICSDs distribute detailed term sheet via other channels to their network</li> </ul>	<ul style="list-style-type: none"> <li>Are included on the LENS messaging board</li> </ul>
<b>Informed Parties</b>	<ul style="list-style-type: none"> <li>Broad range of investors, infrastructure providers and data providers</li> </ul>	<ul style="list-style-type: none"> <li>Limited reach due to subscription model and difficult data extraction process</li> </ul>

**ARRC O&I Working Group does not believe that the current US process will be fit for purpose to deal with transition event in June 2023**

# ARRC Operations & Infrastructure Working Group Efforts so far

## Activities to date

- We developed a process to improve how interest rate changes about how changes at transition will be communicated in the market
- We have engaged with numerous market participants (buy & sell side, agents, custodians) to understand their perspectives also to include their feedback into our proposals
- Developed a template “Term Sheets” of all data elements needed to transition off LIBOR – one for Term SOFR and one for O/N Rates
- We have had regular meeting with DTCC to discuss our proposal and to develop a recommended approach

## Progress since last meeting

- We have spent the last 30 days seeking a commitment from “determining parties” and “their agents” that they would communicate decisions leveraging the “terms sheets” and proposed DTCC solution.
- **Based on the feedback received from Issuers, Agents and ARRC Committee firms and the engagement of the ABA, DTCC is comfortable supporting the roadmap on slide 5 for development and testing of the solution**

NONCONFIDENTIAL // EXTERNAL

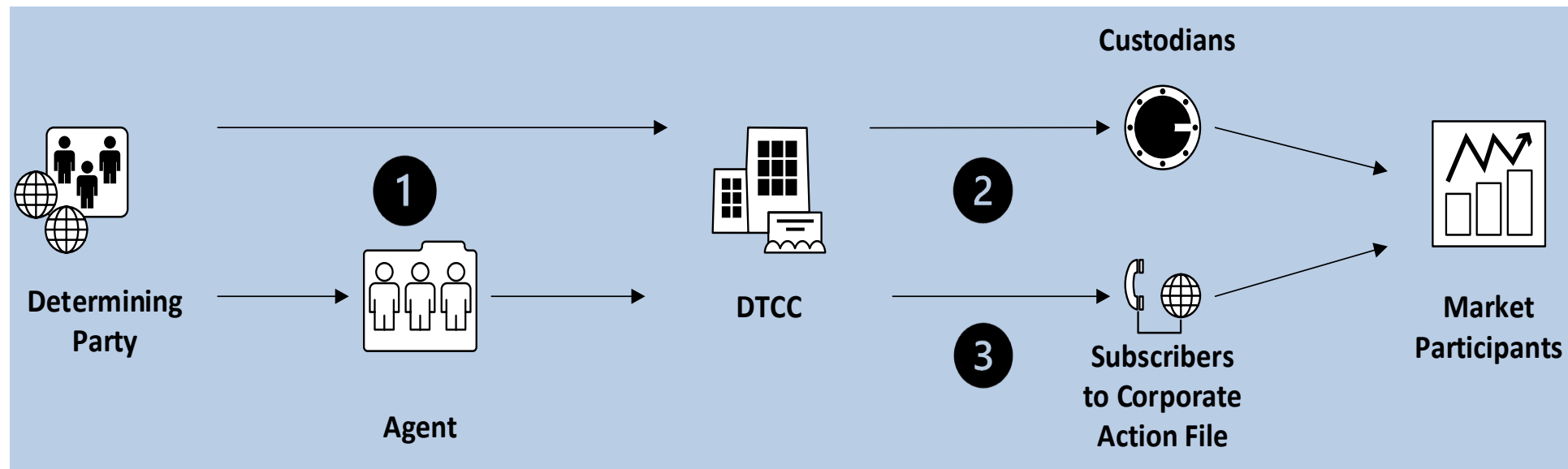
### How are Bondholders informed in different jurisdictions today about rate replacement decisions

<b>Rate Change Event</b>	• Is treated as a Corporate Action	• Is currently <b>not treated as a Corporate Action</b> • Rates Changes are a <b>non-serviceable event</b>
<b>Announcement of the Change</b>	• 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 messaging board (subscription service) • Notifications are conmingled with redemption and default notices and are therefore difficult to identify
<b>Details of the Change</b>	• ICSDs distribute detailed term sheet via other channels to their network	• Are included on the LENS messaging board
<b>Informed Parties</b>	• 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 does not believe that the current US process will be fit for purpose to deal with transition event in June 2023

ID #	Description of Security	Subsection	Characteristics
1	Swap (or CMS)	A CMS (or CMS) is a security identifier and is composed of five characters and can include letters and numbers.	3-digit agreement code that uniquely identifies a specific security.
2	Determining Party Type	An individual or entity that is responsible for determining the conversion changes to a security.	Issued via: Issuance Agent, Administrative Agent, Information Agent, Pricing Agent, Transfer Agent, Issuance Agent, Administrative Agent, Information Agent, Pricing Agent, Transfer Agent
3	Outstanding Date	DTCC can accept conversion changes if new term sheets from only Pricing Agent and/or Transfer Agent	
4	Physical Covered Securities (under the 2023 BCFR)	Security has entered into and is covered by 2023 BCFR. *If Day is set to year, party rate spans fields 5,29	Y/N
<b>Benchmark replacement changes</b>			
5	Benchmark Replacement	The index which is used to secure reference rate	Open field
6	Benchmark Replacement Term	Term of the reference rate used	Search: C, N, A, W, 10, 20, 30, 40, 45, 50, 55, 60, 65, 70, 75, 80, 85, 90, 95, 100, 105, 110, 115, 120, 125, 130, 135, 140, 145, 150, 155, 160, 165, 170, 175, 180, 185, 190, 195, 200, 205, 210, 215, 220, 225, 230, 235, 240, 245, 250, 255, 260, 265, 270, 275, 280, 285, 290, 295, 300, 305, 310, 315, 320, 325, 330, 335, 340, 345, 350, 355, 360, 365, 370, 375, 380, 385, 390, 395, 400, 405, 410, 415, 420, 425, 430, 435, 440, 445, 450, 455, 460, 465, 470, 475, 480, 485, 490, 495, 500, 505, 510, 515, 520, 525, 530, 535, 540, 545, 550, 555, 560, 565, 570, 575, 580, 585, 590, 595, 600, 605, 610, 615, 620, 625, 630, 635, 640, 645, 650, 655, 660, 665, 670, 675, 680, 685, 690, 695, 700, 705, 710, 715, 720, 725, 730, 735, 740, 745, 750, 755, 760, 765, 770, 775, 780, 785, 790, 795, 800, 805, 810, 815, 820, 825, 830, 835, 840, 845, 850, 855, 860, 865, 870, 875, 880, 885, 890, 895, 900, 905, 910, 915, 920, 925, 930, 935, 940, 945, 950, 955, 960, 965, 970, 975, 980, 985, 990, 995, 1000
7	Index Rate Index Type	Unique ticker for the index replacement	3-digit agreement code that uniquely identifies a specific security.
8	Rate Floor	Check the security has a contractual rate floor	Y/N
9	Rate Ceiling	Check the security has a contractual rate ceiling	Y/N
10	Rate Floating guidelines	If security has a rate floor please select between floating the daily rate vs floating the final coupon rate	floating the daily rate, floating the final coupon rate
11	Rate Floor number	Please floor at 4 level	provide floor number: 4 floor = 4, 1000 = 10
12	Rate Cap	Check the security has a contractual rate cap	Y/N
13	Rate Cap guidelines	If security has a rate cap please select between capping the daily rate vs floating the final coupon rate	floating the daily rate, floating the final coupon rate
14	Rate Cap number	Please cap at 4 level	provide floor number: 4 floor = 4, 1000 = 10
<b>Spread Adjustment</b>			
15	Spread Adjustment	The difference in basis points between BCFR and the new ARRC/ARRC/ARRC recommends a 3 year historical mean however users can set spread level at any custom amount. This can be referred to as spread, margin, or applicable margin.	Any basis point number with its sign (positive or negative)
16	Client Spread Amount (bps)	Additional spread assigned by the issuer for the deal. This can be referred to as spread, margin, or applicable margin.	Any basis point number with its sign (positive or negative)
17	Spread Methodology	This defines how the spread will be incorporated into the interest calculation. It can be compounded, partially compounded, flat, or deferred (no compounding).	Choose the best option / arrangement
<b>Confirming changes</b>			
18	Day Count	The spread convention to be used for the interest amount	360/360 (fixed)
19	Interest Methodology	Defined as how the interest amount will be calculated: a simple interest, compound interest in arrears or in advance, or term interest	Simple interest, compound interest in arrears or in advance, or term
20	Interest Period	Check the contract has a business day	Y/N
21	Observation Date	The number of business days prior to the current day to observe the rate	Number of days
22	Observation Date	Check the contract has a "Observation Date" whereby the day count between coupon dates is aligned to the day count in the observation period when a contract is used.	Y/N
23	Accrual Period Dates	Used to account for a custom accrual period, please select number of days within custom period	Number of days
24	Observation Date weighting	Check how the contract includes a weighting specified as the Observation Date, and may weight weekends differently than weekdays depending on the prescribed method in the contract terms. Simple is equal weighting (Friday, Saturday, Sunday, Monday)	Equal weight, unequal (Friday = 1, weight Monday = 3)
25	Lookup	Check the contract includes a lookup	Y/N
26	Lookup Dates	Specifies the lookup to only apply for a certain number of days at the end of the accrual period or applied to looking the rate over the whole period	A non-negative integer number or equal to the number of days between the start date and the end date
27	Payment Notes	Check the contract includes a payment delay to allow the borrower additional time at the end of the accrual period to pay the interest	Y/N

## Proposed Solution – Detailed Design to take place in July/August



1

- Agent, Issuer or any other party responsible for disseminating the information will leverage existing LENS service to submit new Lens Event type through a UI to populate information on the UI or upload through a standardized template

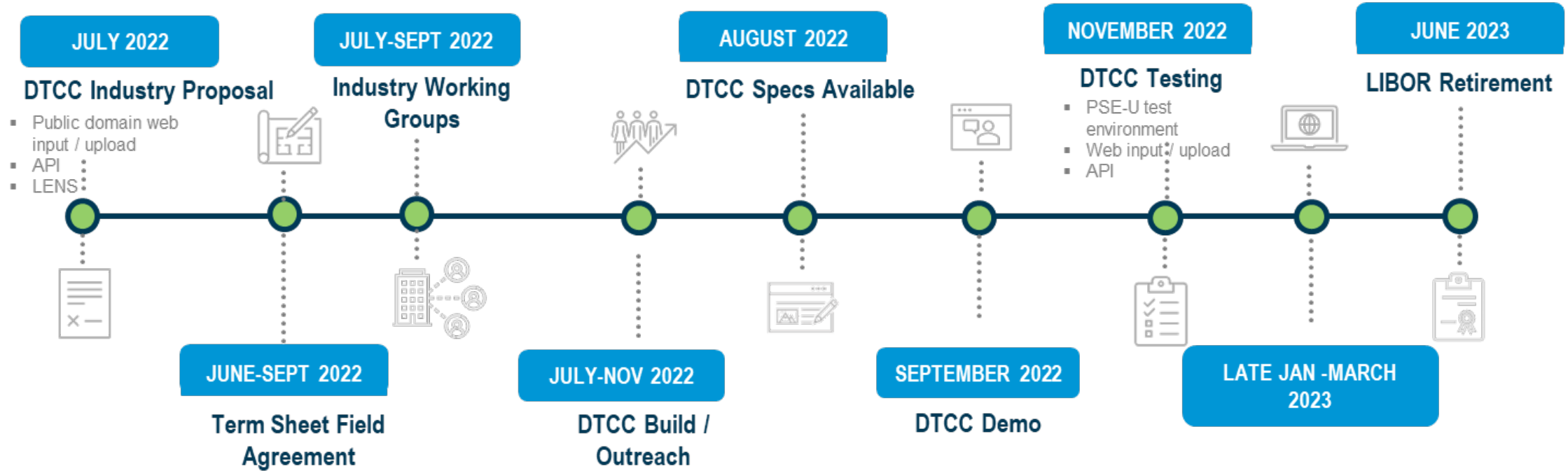
2

- Document available through traditional Lens interface and subscription model

3

- Fielded data available through API enabled subscription service which includes detailed content of the data mapping template from step 1
- Market Data providers would use data to populate their own static data masterfiles

# LIBOR Transition Timeline



\*Production Go-Live dependent on PSE testing results