



Federal Home Loan Bank  
NEW YORK

# LIBOR Transition: The Halftime Report

June 25, 2020

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FHLBNY Transition Office



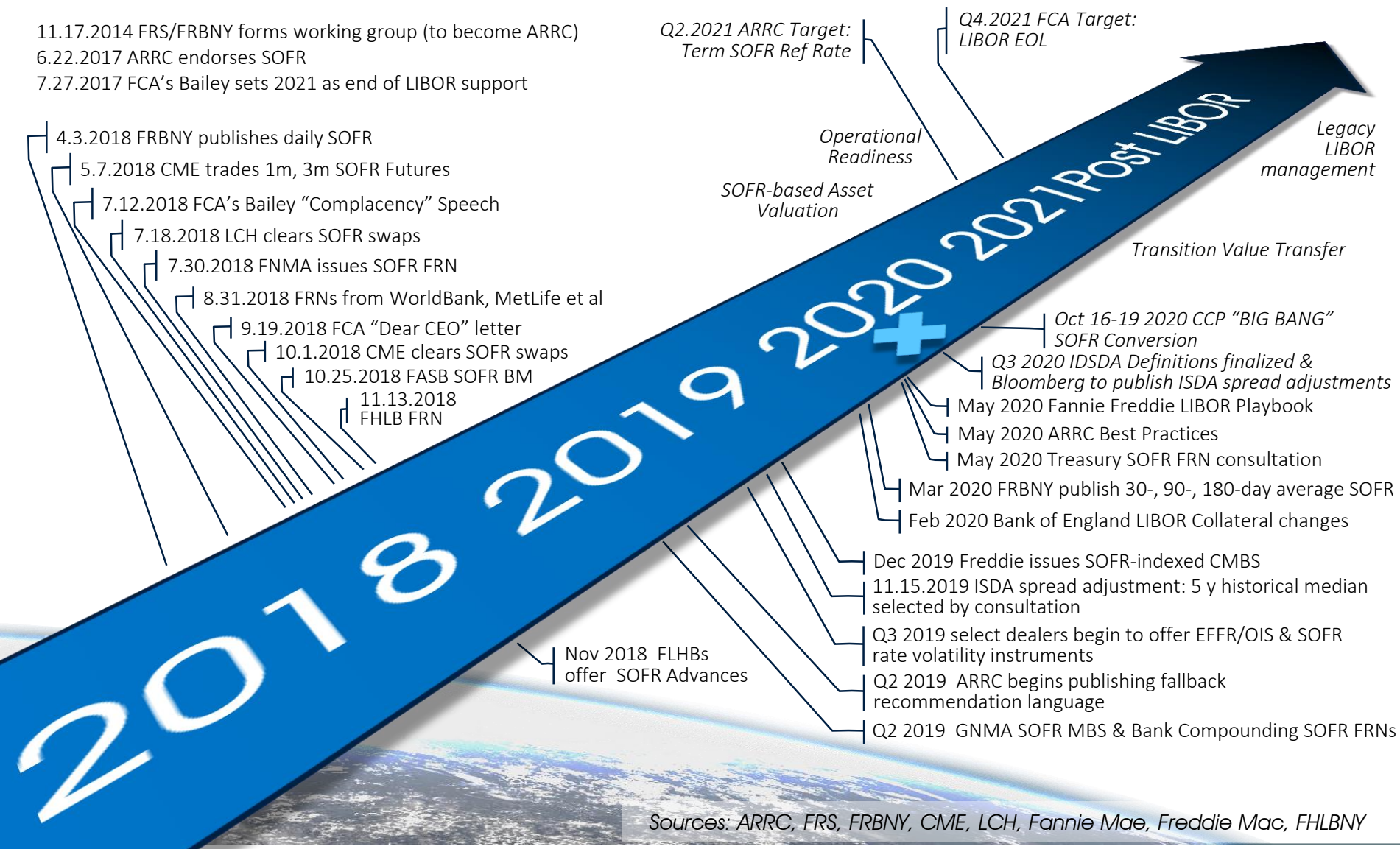
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# LIBOR TRANSITION JUNE 2020 RECAP

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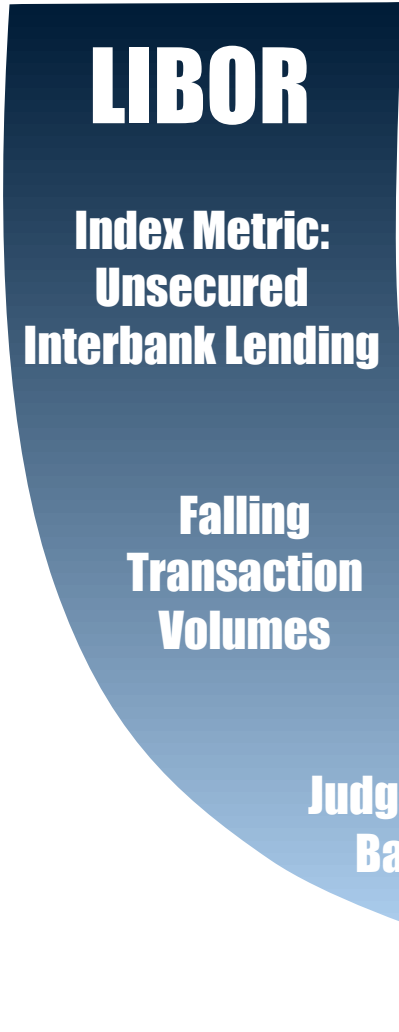


# Benchmark Index Transition Milestones: 2018-2021



Sources: ARRC, FRS, FRBNY, CME, LCH, Fannie Mae, Freddie Mac, FHLBNY

# Why did LIBOR fall from grace? How did this give rise to SOFR?

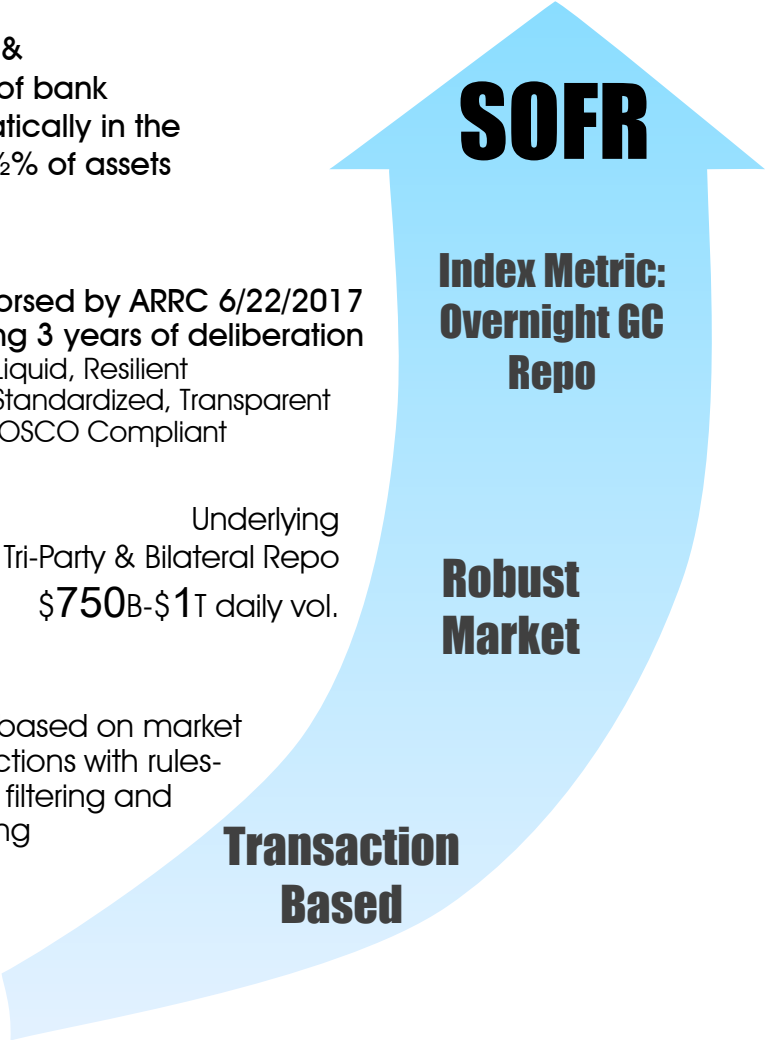


During the 80s Interbank lending (secured & unsecured) was robust and averaged 6% of bank assets. Unsecured lending dropped dramatically in the crisis -- by 2017 Interbank lending was < 1/2% of assets

3m LIBOR lending:  
\$1 1/2B daily transactions.

2.5%-30% of  
1m & 3m LIBOR  
submissions are  
Transaction-Based

**LIBOR misconduct:  
\$7.7B in Fines &  
Reforms**



SOFR endorsed by ARRC 6/22/2017 following 3 years of deliberation

- Liquid, Resilient
- Standardized, Transparent
- IOSCO Compliant

Underlying  
Tri-Party & Bilateral Repo  
\$750B-\$1T daily vol.

100% based on market  
transactions with rules-  
based filtering and  
trimming

**CONCLUSION: LIBOR Panel Banks have little motivation to participate beyond 2021**

Sources: FRBNY *Introducing SOFR* 11/2/2017, ICE *ICE LIBOR Evolution* 4/25/2018, Federal Reserve H.8 reports, Reuters, NY Times, Financial Times



# The Official Sector on COVID19 & LIBOR Transition: *Stay the Course*

- **ARRC** (June 2) *“given the latest announcements from the official sector reiterating the overall expected timeline, it remains clear that the financial system should **continue to move to transition by the end of 2021.**”*
- **U.K. Financial Conduct Authority** (March 25) *“The central assumption that firms cannot rely on LIBOR being published **after the end of 2021 has not changed** and should remain the target date for all firms to meet. ”*
- **Randal K. Quarles, Vice Chair for Supervision Board of Governors of the Federal Reserve System, Chair of Financial Stability Board** (April 11): *“The financial stability risks that would be associated with an unsuccessful transition away from LIBOR are as relevant in the current environment as they were before. Accordingly, FSB work on **benchmark transition remains a priority** for the G20 Presidency and the FSB.”*



# ARRC Publishes Transition Target Dates

- ARRC *Best Practices for Completing Transition* May 27, 2020
- Dates (**many in 2020**) establish priorities & expectations for LIBOR phase-out & SOFR readiness

Product	Hardwired fallbacks incorporated by	Tech / Ops Vendor Readiness	Target for Cessation of New use of USD LIBOR	Anticipated fallback rates to be chosen by
Floating Rate Notes	6/30/2020	6/30/2020	12/31/2020	6 months prior to reset after LIBOR's end
Business Loans	9/30/2020	9/30/2020	6/30/2021	6 months prior to reset after LIBOR's end
Consumer Loans	Mortgage: 6/30/2020 Student Loans: 9/30/2020	Mortgages: 9/30/2020	Mortgages: 9/30/2020	In accordance with relevant consumer regulations
Securitizations	6/30/2020	12/31/2020	CLOs: 9/30/2021 Other: 6/30/2021	6 months prior to reset after LIBOR's end
Derivatives	Within 4 months of ISDA 2006 Definitions	Dealers to take steps to provide liquid SOFR derivatives markets to clients	6/30/2021	

Source: ARRC *Best Practices for Completing Transition From LIBOR* 5/27/2020

<https://www.newyorkfed.org/medialibrary/Microsites/arrc/files/2020/ARRC-Best-Practices.pdf>



# Fannie and Freddie Timelines

- Fannie Mae and Freddie Mac's *LIBOR Transition Playbook* May 28, 2020
- Dates establish priorities & expectations for LIBOR phase-out

Product	Fannie Mae		Freddie Mac	
	Offer SOFR products	No longer offer LIBOR products	Offer SOFR products	No longer offer LIBOR products
Single Family ARMs & Pass-Through Securities	Aug 3, 2020	Dec 31, 2020	Nov 16, 2020	Dec 31, 2020
Single Family CMOs	July 2020	October 2020	July 2020	October 2020
Multifamily ARMs & Loans	Q4 2020	Dec 31, 2020	Sept 1, 2020	Cease purchase LIBOR loans: Dec 31, 2020
Multifamily Securities	Q4 2020	Dec 31, 2020	Q4 2020	Cease issuance LIBOR Securities: Q2 2021

Source: Fannie Mae and Freddie Mac's *LIBOR Transition Playbook* May 28, 2020  
<https://www.fanniemae.com/resources/file/libor/pdf/playbook.pdf>



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# SOFR MARKET GROWTH

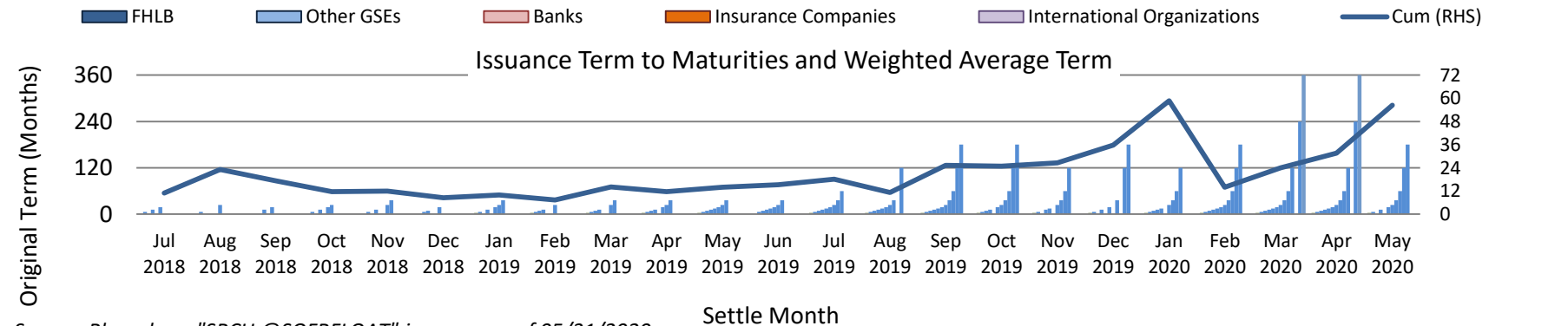
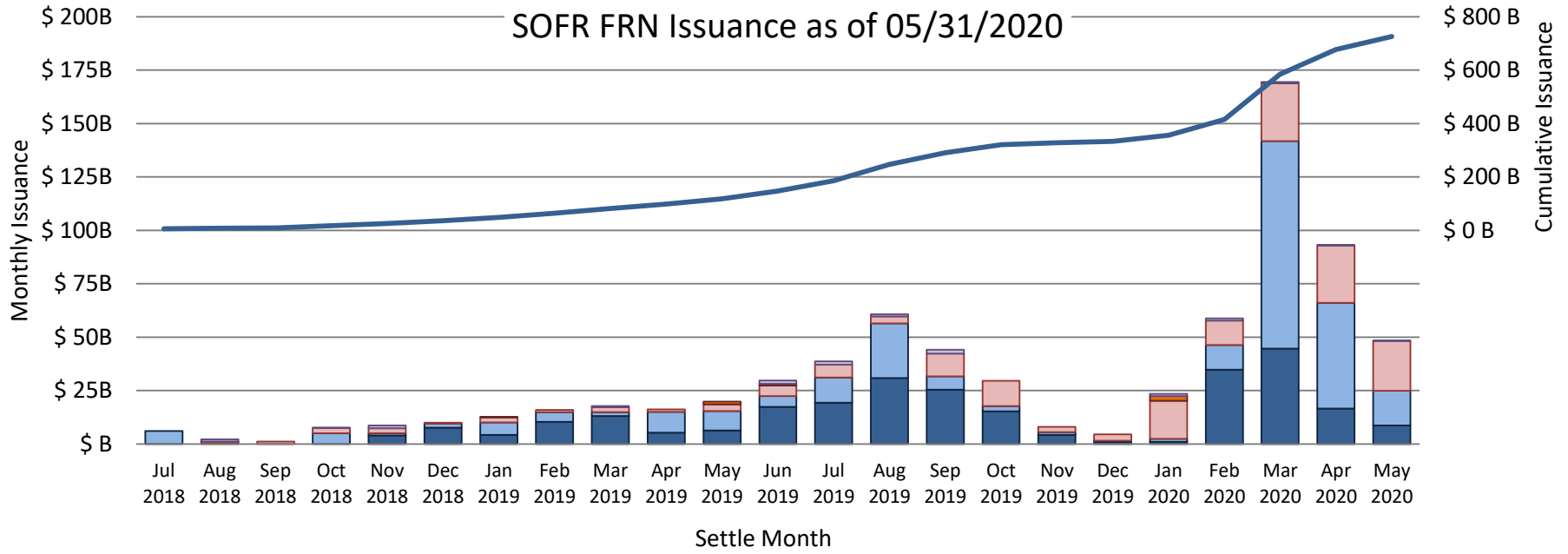
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# SOFR Floating Rate Note Issuance to Date

2020 shows Growth in Volumes, Issuers and Tenors



Source: Bloomberg "SRCH @SOFRFLOAT" issuance as of 05/31/2020

# SOFR FRNs: \$700B+ to date, 100+ Issuers, 14 Issuers with 8 or more SOFR FRNs

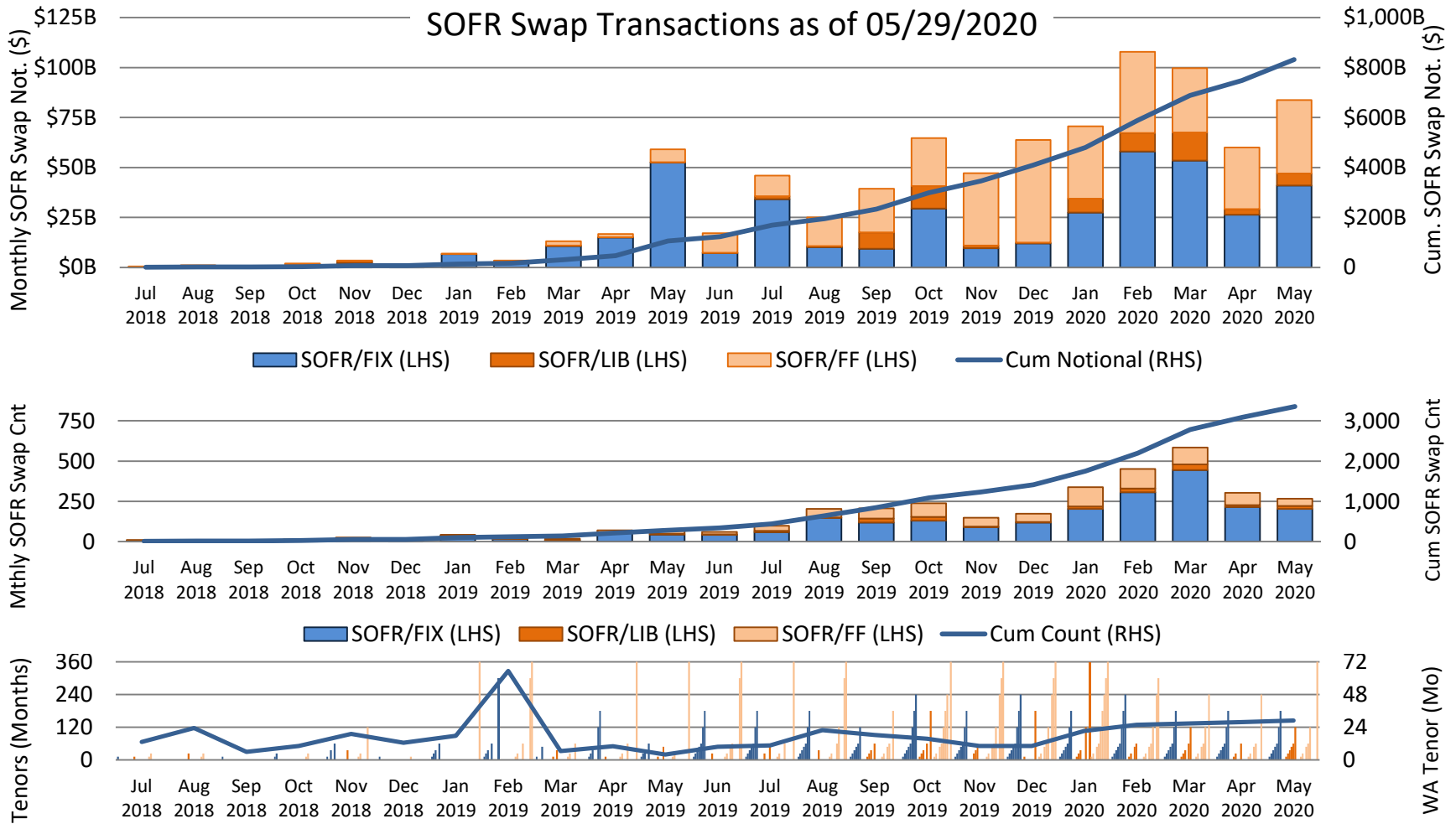
Issuer	Issuance (\$M)	Issues	Last Issuance	Issuer	Issuance (\$M)	Issues	Last Issuance	Issuer	Issuance (\$M)	Issues	Last Issuance
1 Federal Home Loan Banks	269,747	114	May 2020	38 Inter-American Development Bank	1,000	1	Sep 2019	75 Ameris Bancorp	120	1	Dec 2019
2 Federal National Mortgage Association	124,012	87	May 2020	39 Citibank NA	1,000	1	Mar 2019	76 Valley National Bancorp	115	1	May 2020
3 Federal Home Loan Mortgage Corp	121,397	87	May 2020	40 BNP Paribas SA/New York NY	985	5	Mar 2020	77 Lloyds Bank Corporate Markets PLC/New York NY	110	2	Jan 2020
4 JPMorgan Chase & Co	27,500	11	May 2020	41 Asian Development Bank	800	1	Sep 2019	78 National Bank of Canada/New York NY	100	1	Oct 2019
5 Federal Farm Credit Banks Funding Corp	27,107	48	May 2020	42 Royal Bank of Canada	721	7	May 2020	79 First Interstate BancSystem Inc	100	1	May 2020
6 Credit Suisse AG/New York NY	21,031	79	Apr 2020	43 Landeskreditbank Baden-Wuerttemberg Foerderbank	702	3	May 2020	80 Bar Harbor Bankshares	80	2	Feb 2020
7 Citigroup Inc	20,300	9	May 2020	44 Credit Agricole Corporate and Investment Bank/New York	660	4	Mar 2020	81 Societe Generale/New York NY	75	1	Oct 2019
8 Morgan Stanley	16,751	8	Apr 2020	45 Westpac Banking Corp/NY	652	2	Mar 2020	82 BancPlus Corp	60	1	May 2020
9 Wells Fargo & Co	12,500	4	May 2020	46 Sumitomo Mitsui Trust Bank Limited/ New York	630	4	Feb 2020	83 Enterprise Financial Services Corp	55	1	May 2020
10 Bank of Montreal/Chicago IL	5,445	19	Apr 2020	47 CIT Bank NA	550	1	Sep 2019	84 Northern Bancorp Inc	52	1	Dec 2019
11 Goldman Sachs Bank USA/New York NY	5,138	31	May 2020	48 BPCE SA	500	1	Feb 2020	85 Cooperatieve Rabobank UA/NY	50	1	Mar 2020
12 Credit Suisse Group AG	5,000	2	Mar 2020	49 Truist Bank	500	1	Mar 2020	86 F&M Financial Corp/TN	50	1	Sep 2019
13 European Investment Bank	4,500	4	Feb 2020	50 CPPIB Capital Inc	500	1	Dec 2019	87 VeraBank Inc	42	1	May 2020
14 Metropolitan Life Global Funding I	4,115	5	Jan 2020	51 First Republic Bank/CA	500	1	Feb 2020	88 Meridian Corp	40	1	Dec 2019
15 Bank of America Corp	4,000	2	May 2020	52 State Street Bank and Trust Co	500	2	Feb 2020	89 Volunteer State Bancshares Inc	40	1	Oct 2019
16 HSBC Holdings PLC	3,500	2	May 2020	53 MET Tower Global Funding	500	1	Jan 2020	90 Independent Bank Corp/MI	40	1	May 2020
17 Natixis SA/New York NY	2,900	11	Feb 2020	54 Synovus Bank/Columbus GA	400	1	Feb 2020	91 Southern First Bancshares Inc	34	2	Jan 2020
18 Royal Bank of Canada/New York NY	2,573	19	Mar 2020	55 Mizuho Bank Ltd/New York NY	400	2	Aug 2019	92 First Bank/Hamilton NJ	30	1	May 2020
19 International Bank for Reconstruction & Development	2,500	2	Jul 2019	56 Fulton Financial Corp	375	2	Feb 2020	93 Level One Bancorp Inc	30	1	Dec 2019
20 State Street Corp	2,250	4	Mar 2020	57 African Development Bank	350	1	Nov 2018	94 HSBC Bank USA NA	25	1	Apr 2020
21 Canadian Imperial Bank of Commerce/New York NY	2,075	8	Apr 2020	58 First Citizens BancShares Inc/NC	350	1	Feb 2020	95 Bay Banks of Virginia Inc	25	1	Oct 2019
22 QNB Finance Ltd	2,025	2	Feb 2020	59 Bank of China Ltd/Macau	350	1	Oct 2019	96 UB Bancorp	25	1	May 2020
23 Capital One Bank USA NA	2,000	2	Jan 2020	60 MUFG Union Bank NA	300	1	Dec 2019	97 Congressional Bancshares Inc	25	1	Nov 2019
24 BNP Paribas SA	2,000	1	Jan 2020	61 Bank of America NA	250	1	Jun 2019	98 Fidelity Federal Bancorp	24	1	Oct 2019
25 Deutsche Bank AG/New York NY	2,000	1	Nov 2019	62 Private Export Funding Corp	250	1	Apr 2020	99 Avidbank Holdings Inc	22	1	Dec 2019
26 Bank of Nova Scotia/Houston	1,700	1	Nov 2018	63 Western Alliance Bank	225	1	May 2020	100 Northpointe Bancshares Inc	20	1	Sep 2019
27 Sumitomo Mitsui Banking Corp/New York	1,620	6	Jan 2020	64 Hilltop Holdings Inc	200	2	May 2020	101 Grant Bancshares Inc	17	1	Aug 2019
28 European Bank for Reconstruction & Development	1,605	2	Mar 2020	65 CenterState Bank Corp	200	1	May 2020	102 Emmetsburg Bank Shares Inc	16	2	May 2020
29 Toyota Motor Credit Corp	1,550	1	Oct 2019	66 BNP Paribas Fortis SA/New York	200	1	Feb 2020	103 First State Bancorp Inc/OH	15	1	Apr 2020
30 Bank of Montreal	1,500	1	Mar 2020	67 Standard Chartered Bank/New York	200	1	Feb 2020	104 Jonesboro Bancshares Inc	14	2	Dec 2019
31 Toronto-Dominion Bank/The	1,417	7	May 2020	68 Midland States Bancorp Inc	200	4	Dec 2019	105 White River Bancshares Co	11	1	Dec 2019
32 Canadian Imperial Bank of Commerce	1,325	2	Jan 2020	69 First Financial Bancorp	150	1	Apr 2020	106 Fortis Financial Inc	10	1	Feb 2020
33 Federal Agricultural Mortgage Corp	1,216	30	Apr 2020	70 Veritex Holdings Inc	150	2	Feb 2020	107 Bradford Bancorp Inc	8	1	Oct 2019
34 Wells Fargo Bank NA	1,125	2	Sep 2018	71 Banco Del Estado De Chile/New York	126	4	Feb 2020	108 Morgan Stanley Bank NA	5	1	Oct 2019
35 Jackson National Life Global Funding	1,075	2	Jan 2020	72 OceanFirst Financial Corp	125	1	Apr 2020				
36 JPMorgan Chase Bank NA	1,050	2	Feb 2019	73 First Busey Corp	125	1	May 2020				
37 Toronto-Dominion Bank/NY	1,026	4	Mar 2020	74 Reliant Bancorp Inc	120	2	Feb 2020	<b>Grand Total</b>	<b>725,802</b>	<b>729</b>	<b>May 2020</b>



Source: Bloomberg "SRCH @SOFRFLOAT" 5/29/2020

# SOFR Swaps: Steady Growth

*Notional Volumes and Tenors are Growing as are SOFR/FIX transactions*



Source: BBG SDR 05/29/2020

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# BANKING SOFR CONCERNS

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# General Banking Concerns with LIBOR Transition

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- Is SOFR “the one alternative” index?
- What are the goals of NY State Legislation?
- Did the SOFR Market go “haywire” in September 2019?
- Can Banks use a Secured Rate?
- Is an Overnight Rate operationally viable?



# General Banking Concerns with LIBOR Transition

- **Is SOFR “the one alternative” index?**
  - ARRC encourages voluntary adoption of SOFR as preferred alternative to USD LIBOR
  - SOFR transactions > \$1T every day in 2020
- **What are the goals of NY State Legislation?**
  - Minimize litigation, breach of contract arising from LIBOR cessation
  - Applies where contracts are silent or fall back to LIBOR-based rates
  - Permits updating contracts otherwise requiring unanimous consent
- **Did the SOFR Market go “haywire” in September 2019?**
  - 1-day spike moved 90-day SOFR average +3.2bp
- **Can Banks use a Secured Rate?**
  - Viable alternatives? ICE data week of 3/16-20: only 2.5% 3m LIBOR submissions were transactional, 97.5% judgment or analysis-based
  - Ameribor spread to EFR long term average 10-11bp, peak 12.4bp March
- **Is an Overnight Rate operationally viable?**
  - NY Fed publishes 30-, 90-, 180-day and cumulative average rates
  - Fannie and Freddie will index floating bonds and ARMs to NY Fed



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# TRANSITIONING YOUR INSTITUTION

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# Your Transition Checklist

- ✓ 1. Appoint a **Senior Executive** to oversee & coordinate Transition Program
- ✓ 2. Mobilize an enterprise-wide **Transition Management Program**: Build an implementation Roadmap, request resources and establish budgets
- ✓ 3. Implement a **Communication Strategy**: Customers, Regulators, Vendors & other external and internal stakeholders, facilitate education and training
- ✓ 4. **Exposure Management**: product and asset/liability exposure by asset class, tenor and maturity, evaluate alternative reference rates for new transactions, seek offsets for legacy instruments, data needs for valuation models
- ✓ 5. Assess **Contractual Remediation** Impact: Assess Fallback Provisions, improve language for new transactions, consider negotiating legacy transactions
- ✓ 6. **Product and Portfolio Strategy**: initiate new SOFR product development, SOFR index for funding, investments and hedging instruments
- ✓ 7. **Risk Management**: identify, measure, monitor, control transition risks, financial exposures
- ✓ 8. **Operational and Technology Readiness**: review Pricing, Accounting, Risk Systems and Data for onboarding alternative rate and fallback processing
- ✓ 9. **Accounting and Reporting**: changes to hedge accounting, fair value, benchmarks
- ✓ 10. **Taxation and Regulation**: evaluate tax implication of fallback

*Patterned after ARRC Buy-Side Checklist 1/31/2020*

[https://www.newyorkfed.org/medialibrary/Microsites/arrc/files/2020/ARRC\\_Buy\\_Side\\_Checklist.pdf](https://www.newyorkfed.org/medialibrary/Microsites/arrc/files/2020/ARRC_Buy_Side_Checklist.pdf)

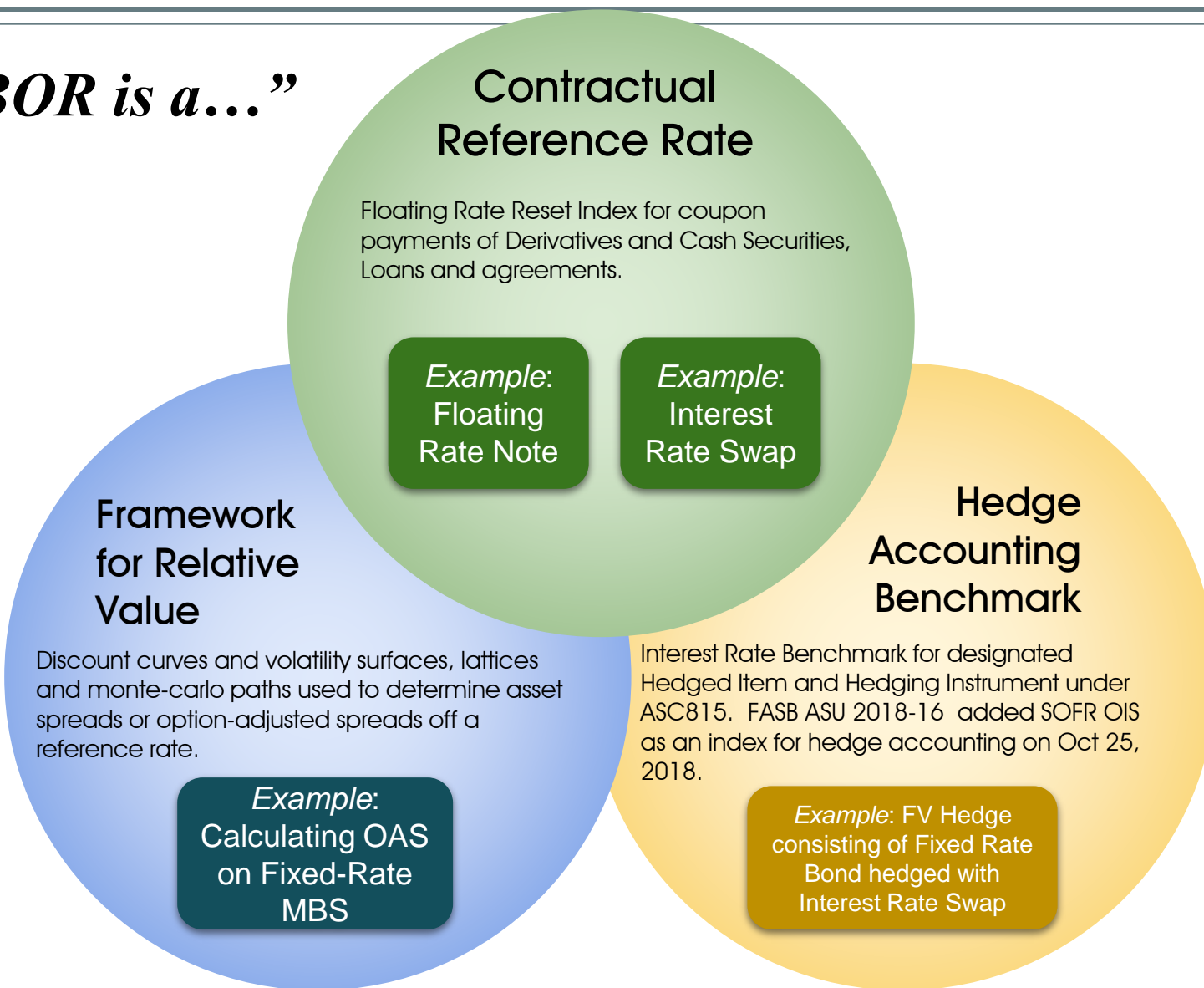




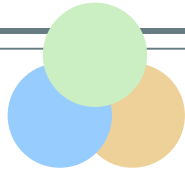
# An Operational Perspective on LIBOR Exposure:

## LIBOR Exposure is Bigger than Just the Index...

***“LIBOR is a...”***



# Organizing the Transition Initiatives



## Onboarding SOFR-Indexed Products and Frameworks

## Benchmark Transition Pre Cessation

## LIBOR Legacy At Cessation

Contractual Reference Rate

### Define Product

- Understand customer needs
- Design Product
- Marketing
- Documentation

### Augment Systems

- Index Coding
- Product Accounts
- SOFR Market Rates
- Accruals

### Execution

- Pricing

### Settling, Clearing

### Product Types

- Loans
- Securities
- Collateral

Implement changes to Financial Reporting

### Manage LIBOR Exposure

- Inventory/Monitor Exposure
- Control additional exposure
- Treat present exposure
- Monitor Exposure of Treatment (e.g., basis swaps)

### Manage LIBOR Fallback

- Inventory/Monitor Exposure
- Estimate Value Transfer
- Improve New Contract Language
- Treat legacy contracts

Remodel Legacy LIBOR transactions with fallback definitions

Determine Value Transfer

Potentially revise hedging

Report Value Transfer in Financials

Framework for Relative Value

### SOFR Product Valuation

- Cash
- Index Market Data
- SOFR Index projection
- Implement Systems

### Derivatives

- SOFR Derivatives Valuation
- Reconciliation w CPTY

SOFR Curves as Pricing Anchor

FV SOFR spreads/OAS

Revise Risk Exposures VaR away from LIBOR framework

Hedge Accounting Benchmark

### Onboard SOFR ASC 815

- Policies & documentation
- Implement Systems

### Enable EFRR OIS ASC 815

- Policies & documentation
- Implement System

Implement Post Cessation treatment of LIBOR ASC 815 designated hedges

Implement potential Rehedging Activities

Determine ASC815 effects on P&L, Financial Reporting



# Regulatory and Standards Work offer Relief, motivate Disclosure and Action

*“Regulators and self-regulatory organizations ... need to work cooperatively with market participants to ensure that there are no inadvertent hurdles that could inappropriately impede the development of SOFR markets” – ARRC, March 2018*

Category	Body	Update
Taxation	Treasury/IRS Oct 8, 2019	Proposed regulations to avoid adverse tax and related (REMIC) consequences of changing terms of debt, derivatives, contract to accommodate LIBOR transition
Markets	CFTC Dec 18, 2019	No-action letter permits modification of uncleared legacy swaps without subjecting them to swap-clearing requirements
	FHFA Sept 27, 2019 Feb 5, 2020	<i>FHLBanks</i> : restriction of new LIBOR investments, derivatives and other transactions <i>Enterprises</i> : no LIBOR ARMs after 2020
Financial Reporting	SEC June 18, 2020	Office of Compliance Inspections and Examinations LIBOR Transition Preparedness to review entity’s LIBOR transition plans and disclosures
	FASB Mar 12, 2020	Accounting Standards Update 2020-04 (Topic 848) to provide relief from effects of modifying contracts for replacement indexes
Planning	NY DFS Dec 23, 2019	NY Dept of Financial Services “Dear CEO Letter” seeks regulated entity’s transition plans by March 23, 2020

Sources: *respective websites*



# 2020 Transition Calendar

Dates	Event(s)	Significance	How does this Affect Me?
Estimated Q3	<ul style="list-style-type: none"> <li>ISDA to publish amendments to 2006 ISDA Definitions</li> <li>ISDA Protocol available for legacy transactions</li> <li>Bloomberg to publish Spread Adjustment (running 5-yr median LIBOR-SOFR spread)</li> </ul>	<ul style="list-style-type: none"> <li>Finalized Definitions lend certainty to post-fallback derivatives valuation</li> <li>Establishes fallback precedent for other products</li> </ul>	<p>You can estimate potential Value Transfer exposure</p> <p>Legacy bilateral derivative contracts can be amended via protocol</p>
Oct 16-19	<ul style="list-style-type: none"> <li>CME &amp; LCH to adopt SOFR Price Alignment Interest and Discounting, replacing Fed Funds</li> <li>CME &amp; LCH to issue compensating cash and/or swap transactions</li> </ul>	<p>SOFR discounting of cleared derivatives will significantly expand SOFR exposure across the full range of markets participants and enhance liquidity in long-term SOFR and SOFR basis markets</p>	<ul style="list-style-type: none"> <li>Obtain SOFR valuations from FCMs and CCPs and understand your elections</li> <li>Ensure capability and quality of SOFR derivatives valuation</li> <li>Ensure operational capability to book compensating transactions</li> </ul>
Multiple products Q3-Q4	<p>Fannie and Freddie will phase out eligibility of LIBOR loans and establish criteria for SOFR loan eligibility</p>	<p>Will promote SOFR adoption and LIBOR phase-out in consumer and business loan origination</p>	<p>Mortgage originators selling to the Agencies will need to amend underwriting programs, develop training &amp; customer education</p>
Multiple products Q3-Q4	<p>Fannie and Freddie will phase out LIBOR-indexed Securities issuance and issue SOFR indexed Securities</p>	<p>Will promote SOFR adoption and LIBOR phase-out for Agency MBS investors</p>	<p>Agency MBS investors will need to verify their operational and valuation capabilities to invest in SOFR MBS</p>



Sources: ISDA, ARRC, CME, LCH, Fannie Mae and Freddie Mac

# FHLBNY SOFR Products

FHLBNY Product	Description
SOFR ARC	<p>Terms: 3 months – 3 years            Payment: Quarterly            Accrual: Daily-reset in arrears, simple averaging, 1-day lookback, 1-day lockout, ACT/360            Business Day: Following and Modified Following            Max Size: \$1B</p>
SOFR Callable ARC	<p>The Callable Adjustable Rate Credit (Callable ARC) Advance offers two distinct option structures that give members the flexibility to meet the demands of a fluctuating balance sheet. Members can use the call feature to strategically extinguish (and potentially rebook) the advance when the remaining term reaches either a 1-month-left-to-maturity or 1-year-left-to-maturity window, affording greater control in managing liquidity needs with no additional prepayment fees.</p> <p>Terms: 7mNC6m – 3yNC2y11m (1m Euro call prior maturity),            3yNC2y (1y Euro call prior to maturity)</p> <p><i>Please note: Due to limited amounts available at this time, funds will be distributed on a first-come, first-served basis.</i></p>
SOFR Member Swaps	<p>For institutions transacting derivatives with the FHLBNY, we offer SOFR-indexed swaps, subject to market pricing and availability</p>

***For additional information please contact a Relationship Manager at (212) 441-6700 or a Member Services Desk Representative at 1-800-546-5101, option 1.***



# Education and Resources to Keep Apprised of Transition Developments

- **Federal Reserve Bank of New York**

daily SOFR, TGCR, BGCR rates and volumes, historical data from 4/2/2018

<https://apps.newyorkfed.org/markets/autorates/sofr>

SOFR 30-, 90-, 180-day averages and (cumulative) Index <https://apps.newyorkfed.org/markets/autorates/sofr-avg-ind>

- **ARRC Alternative Reference Rates Committee**

News, Presentations, Consultations, Meeting Minutes since 2014 <https://www.newyorkfed.org/arrc>

- **ISDA International Swap and Derivatives Association**

Evolving derivatives fallbacks, supplements, consultations, protocols <https://www.isda.org>

- **CME Group: SOFR futures and cleared SOFR swaps exchange**

SOFR page features trade data, news, and a running summary of SOFR issuance

<https://www.cmegroup.com/trading/interest-rates/secured-overnight-financing-rate-futures.html>

- **ICE Intercontinental Exchange** LIBOR's administrator <https://www.theice.com/iba/libor>

- **FASB Financial Accounting Standards Board** LIBOR and SOFR Hedge Accounting and Transition

<http://fasb.org/referencatereform>

- **FHLBNY.com** LIBOR transition articles, podcasts, product updates <https://www.fhlbny.com/financial-intelligence/>

- **Whitepapers from Consulting Firms**

- **Networking** through industry & professional groups (ABA, MBA, CFA, GARP)

- **LinkedIn** (search #SOFR) <https://www.linkedin.com/in/reishinozuka>





Federal Home Loan Bank  
NEW YORK

## Advancing Housing and Community Growth

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