Transition from U.S. Dollar LIBOR – Timeline

The Alternative Reference Rates Committee (ARRC) was originally convened in November 2014. Significant progress has been made to date.

Key ARRC and Other Developments

- **May –** CME launched SOFR futures
- **Apr. –** New York Fed/OFR began publishing SOFR
- **Oct. –** ARRC Paced Transition Plan adopted
- **Jun. –** ARRC selected SOFR as its recommended alternative to USD LIBOR
- **Mar. –** ARRC’s second report published
- **ARRC reconstituted with expanded membership**
- **July –** ARRC issued guiding principles for fallback contract language
- **Sept. –** ARRC issued consultations on fallback language for FRNs and syndicated loans, comments due Nov 8
- **May –** FCA Bailey said panel banks will not be compelled to submit to LIBOR past 2021
- **Jul. –** LCH began clearing SOFR swaps
- **Fannie Mae issued first SOFR-based FRN**
- **Oct. –** CME began clearing SOFR swaps using SOFR PAI/discounting
- **EOY 2018/Q1 2019 –** ARRC expects to issue consultations on fallback language for bilateral loans and securitizations*
- **EOY 2018/Q1 2019 –** ARRC expects to issue consultations on fallback language for other cash products
- **2019 –** Continue to build SOFR-linked cash and derivatives instruments
- **Q1 –** CCPs to begin allowing a choice between clearing new or modified swap contracts in current PAI/discounting environment or SOFR for PAI/discounting
- **EOY –** Create a forward-looking SOFR term reference rate
- **Q2 –** CCPs to no longer accept new swap contracts for clearing with EFFR as PAI and discounting
- **2019 –** Continue to build SOFR-linked cash and derivatives instruments
- **2020 –** ARRC is seeking to produce an indicative SOFR-based term reference rate based on futures data to help promote market familiarity with the term rate
- **2020 –** ARRC expects to produce final recommendations for safer contract language in FRNs, business loans, and securitizations

*ARRC expects to consult on fallback language for other cash products

As of 10/30/18
The ARRC’s Paced Transition Plan for Developing SOFR Markets is Ahead of Schedule

<table>
<thead>
<tr>
<th>Step</th>
<th>Anticipated Date of Completion</th>
<th>Actual Date</th>
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<tbody>
<tr>
<td>1.</td>
<td>Infrastructure for futures and/or OIS trading in the new rate is put in place by ARRC members</td>
<td>2018 H2</td>
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<tr>
<td>2.</td>
<td>Trading begins in futures and/or bilateral, uncleared, OIS that reference SOFR.</td>
<td>by end 2018</td>
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<tr>
<td>3.</td>
<td>Trading begins in cleared OIS that reference SOFR in the current (EFFR) PAI and discounting environment</td>
<td>2019 Q1</td>
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<td>4.</td>
<td>CCPs begin allowing market participants a choice between clearing new or modified swap contracts (swaps paying floating legs benchmarked to EFFR, LIBOR, and SOFR) into the current PAI/discounting environment or one that uses SOFR for PAI and discounting.</td>
<td>2020 Q1</td>
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<td>5.</td>
<td>CCPs no longer accept new swap contracts for clearing with EFFR as PAI and discounting except for the purpose of closing out or reducing outstanding risk in legacy contracts that use EFFR as PAI and discount rate. Existing contracts using EFFR as PAI and the discount rate continue to exist in the same pool, but would roll off over time as they mature or are closed out.</td>
<td>2021 Q2</td>
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<td>6.</td>
<td>Creation of a term reference rate based on SOFR-derivatives markets once liquidity has developed sufficiently to produce a robust rate.</td>
<td>by end of 2021</td>
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