Background on LIBOR and SOFR

LIBOR is a global benchmark interest rate calculated daily. With \$200 trillion in U.S. dollar exposures linked to it, LIBOR is the most widely used benchmark and has been called "the world's most important number." Financial products based on LIBOR include loans, corporate bonds, interest rate swaps, mortgages, student loans, and deposits. They also include municipal bonds and loans.

While ubiquitous, LIBOR became less suitable as a benchmark because it is meant to represent the cost of short-term unsecured borrowing by banks, and banks have substantially reduced their use of this type of borrowing. The LIBOR panel banks typically must submit rates based on their judgment rather than actual transactions, and many are understandably reluctant to continue doing so. Regulators and market participants are concerned that this "most important number" is no longer robust. The transition away from LIBOR became urgent in July 2017 when Andrew Bailey, head of the United Kingdom Financial Conduct Authority (FCA) and regulator of LIBOR, announced they would not require panel banks to submit quotes underlying LIBOR after 2021. In light of these statements, the future existence of LIBOR is uncertain.

In 2014, the Federal Reserve formed the Alternative Reference Rates Committee (the "ARRC"), a group including private-sector market participants, to select a rate to replace USD LIBOR and guide the transition. After much analysis of many potential alternatives, the ARRC announced in June 2017 that it had selected a new rate, the Secured Overnight Financing Rate ("SOFR"), as the recommended replacement for USD LIBOR. The Federal Reserve began publishing SOFR in April 2018. The ARRC selected SOFR for the following reasons:

- SOFR is fully based on actual transactions and does not rely on judgment.
- SOFR references multiple segments of the US Treasury repurchase agreement market, the largest rates market in the world.
- SOFR's underlying market is resilient and robust.
- SOFR is a true "risk-free" rate suitable as a reflection of interest rates overall.
- SOFR is produced by the public sector using a transparent methodology.
- SOFR correlates well with other overnight money market rates and with the cost of borrowing for non-financial corporations.

To guide the transition, the ARRC was reconstituted in April 2018 with broad representation from official government entities, banks, asset managers, insurers, consumer groups, and industry trade associations. It is now tasked with (i) developing options for implementing SOFR across loans, bonds, and securities referencing U.S. dollar LIBOR ("cash products") (ii) transitioning derivatives transactions to SOFR; (iii) minimizing potential disruptions associated with either voluntary transition to SOFR or to an end of LIBOR; and (iv) communicating the rationale behind the change to SOFR and the status of implementation.

Transition to SOFR for Municipal Issuers

Taking inventories of existing products and processes that use LIBOR should be a first step for any municipal issuer. Some common uses of LIBOR among state and local government generally include:

- Issuance of floating rate notes and loans where the interest rate is reset periodically based on LIBOR such as private placements and bank loans.
- Use of derivatives linked to LIBOR:

¹ Recently, Andrew Bailey has also noted that the FCA could find that LIBOR was not representative, which would preclude supervised entities within the EU from trading new LIBOR contracts and would likely diminish LIBOR's liquidity and usefulness to many participants.

- O Use of synthetic fixed-rate structures to gain exposure to a fixed rate when issuing variable rate bonds. Examples are interest rate swaps where an issuer agrees to receive a LIBOR-based floating interest rate in exchange for paying a fixed interest rate. To the extent that the two floating rates offset each other, the issuer's net interest rate exposure is limited to the fixed swap rate.
- Similarly, use of synthetic variable rate structures to gain exposure to a variable rate when
 issuing fixed rate municipal bonds. Examples are interest rate swaps where the payments are
 reversed compared to the example above. To the extent that the fixed rates offset each other,
 the issuer's net interest rate exposure is limited to the floating swap rate.
- Use of interest rate swaps, in an effort to assume exposure to changes in tax rates, where the issuer pays the counterparty a floating rate based on the Securities Industry and Financial Markets Association (SIFMA) index, which tracks tax-exempt seven-day interest rates, and receives a percentage of LIBOR for a set period of time. These transactions provide opportunity for positive carry given differences between tax-exempt and taxable rates.
- Holding of LIBOR-based floating rate notes issued by corporations or sovereigns in the state and local government's asset portfolios.

Because many of these contracts referencing LIBOR do not (adequately) plan for the risk that LIBOR will be discontinued, such an event could have serious consequences for a wide range of market participants and investors. Strategies on how to handle LIBOR cessation in legacy contracts have not yet been worked out and municipal issuers together with their counsel and advisors should work with ARRC to seek ways to address these issues.

Developing mechanisms through which market participants can transition remaining legacy LIBOR-based products to SOFR, and launching new contracts referencing SOFR or other rates should be two core programs for municipal issuers in the coming years. In addition, addressing potential problems, like tax and accounting issues, as well as continuing education about the available resources and the transition timeline will facilitate the transition.

Legacy Contracts

The long duration of existing municipal bonds and loans implies that a considerable part of the outstanding stock will not have matured or rolled over by any likely end date for LIBOR. Securities and products with long duration need to be managed through "fallback" provisions set forth in contracts describing what happens if LIBOR is no longer produced. Open questions include who can legally change contract language to include fallback provisions (i.e. unanimous consent vs calculation agent), what the exact triggers to move to an alternative rate would be, and whether a spread should be included (or adjusted).

New Contracts

Issuers should also start thinking about and planning for new language and terms that would reference SOFR or other rates rather than LIBOR. As soon as they are comfortable with the new language they should start using it in new contracts.

Tax and Accounting Issues

There are a number of potential tax and accounting issues that will need to be addressed, including whether a move from LIBOR would cause a bond to lose its tax-exempt status. The ARRC is working on these questions.

Education and Resources

All market participants should prepare themselves for a world with SOFR, and potentially one without LIBOR. The ARRC maintains a <u>website</u> accessible to all where it will be releasing guidance and steps on transitioning as well as updates on market progress in this transition.