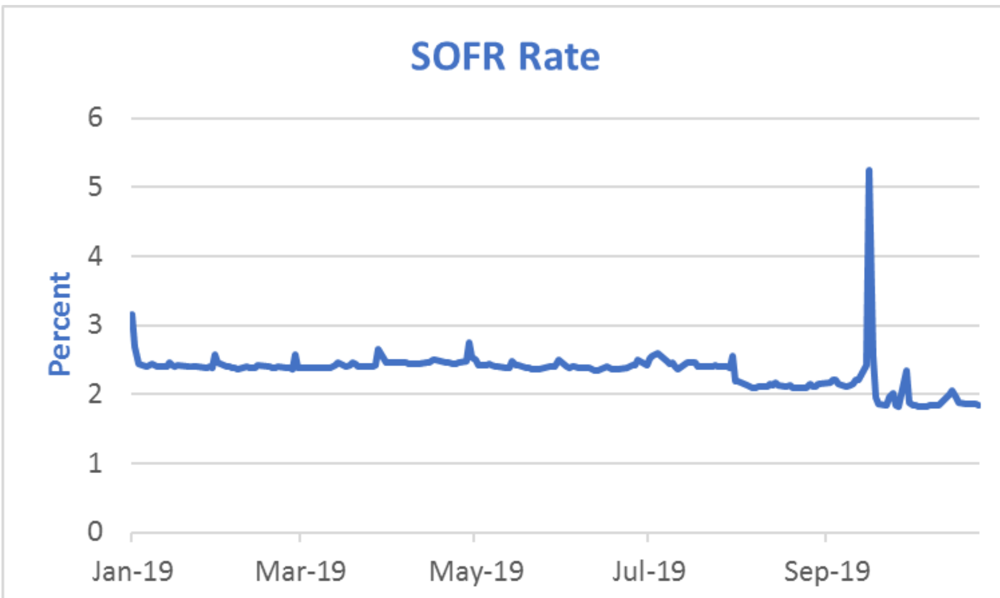
SOFR–Linked Advance

What is SOFR and Why is it Used as a Basis for an Advance Product?

A committee of regulatory agencies and financial institutions in the United States known as the Alternative Reference Rates Committee (ARRC) selected the Secured Overnight Financing Rate (SOFR), as the alternative reference rate for U.S. dollar derivatives and other financial contracts to replace the London Interbank Offered Rate (LIBOR), which is being phased out by December 31, 2021. The ARRC cited the depth and robustness of the Treasury repo market where around $1 trillion is traded daily, and noted that SOFR's market is resilient, having operated smoothly during the financial crisis.



SOFR is a broad measure of the cost of borrowing cash overnight collateralized by U.S. Treasury securities. It is considered an overnight, risk-free reference rate that correlates closely with other money market rates and is based on actual transactions. Unlike LIBOR, SOFR is a backward-looking overnight rate based on transactions in the Treasury repurchase market, while LIBOR is mainly used with a 3-month or 1-month forward-looking term structure and largely based on expert judgment.

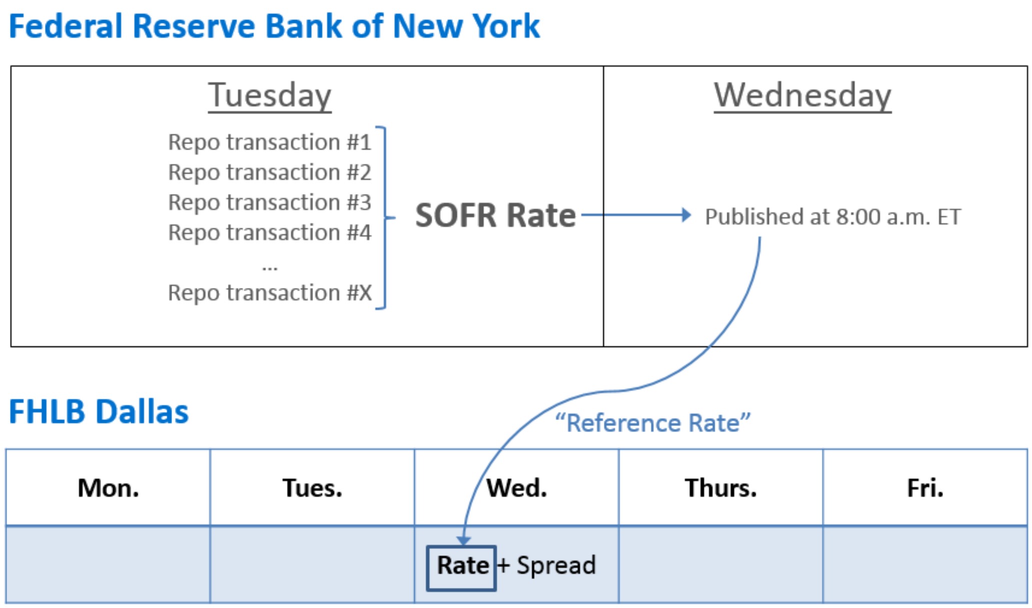
The Federal Home Loan Bank system, as a member of the ARRC, is committed to ensuring a smooth transition for members from LIBOR to SOFR. The new SOFR–Linked advance is one of the tools that can assist members as they transition from a LIBOR basis to a SOFR basis.

What is a SOFR–Linked Advance?

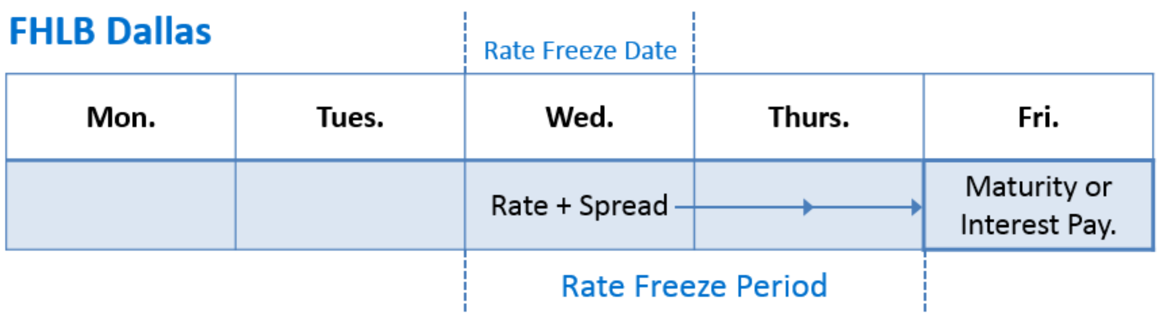
The SOFR–Linked advance is a fixed-term, floating rate, non-amortizing advance that is indexed to SOFR. This advance is available with terms of 3 months, 6 months, 9 months, 12 months, 15 months or 18 months and there are no transaction size minimums. It can be used as a source of short-term liquidity and is an alternative to the LIBOR Floating-Rate advance.

The SOFR–Linked advance's interest rate resets daily and is based on the SOFR, published each business day at 8:00 a.m. Eastern Time by the Federal Reserve Bank of New York (New York Fed). The New York Fed calculates the SOFR based on the previous business day's repo transactions.

FHLB Dallas takes the published rate, referred to as the "Reference Rate" and adds a spread to it to determine the SOFR–Linked advance's interest rate for that day. This process repeats each business day.



The SOFR–Linked advance's interest rate resets as shown in the chart above. One exception occurs as the advance nears an interest payment date or the advance maturity date. Two business days before a payment date, referred to as the "Rate Freeze Date," the interest rate will freeze at that day's rate until the payment date. This freeze period is referred to as the "Rate Freeze Period."



Interest is paid at quarterly intervals based on the settlement date of the advance. Principal and remaining accrued interest are collected at maturity. Please consult the Member Products and Credit Policy for prepayment fee calculations.

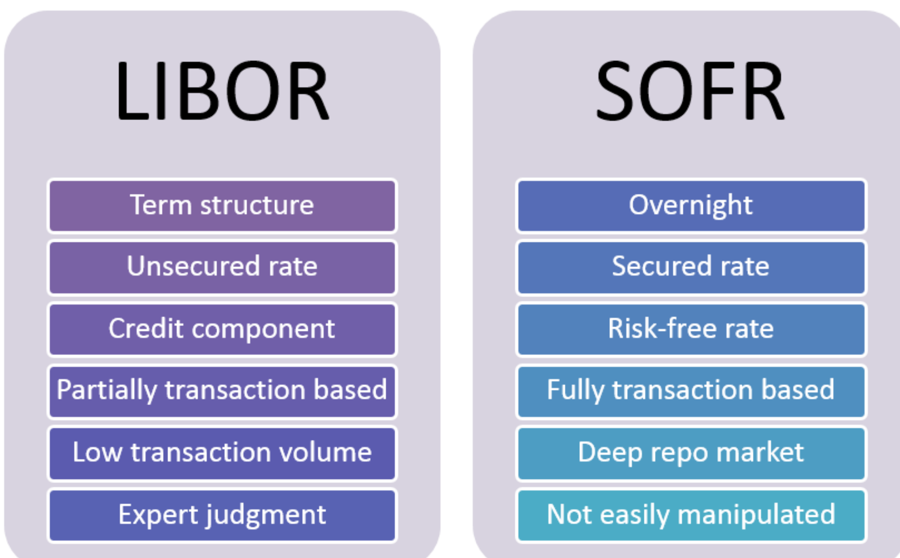
SOFR-Linked Advance Terms

Type	Fixed-Term, Floating-Rate, Non-Amortizing
Maturity Terms	3-month, 6-month, 9-month, 12-month, 15-month and 18-month
Minimum Initial Transaction Size	No Minimum
Reset Frequency	Daily
Interest Rate	Reference Rate* + spread
Rate Freeze Period	Two business days prior to a quarterly interest payment date or final maturity the interest rate is frozen until the payment date
Principal and Interest Payments	Interest payments are due at quarterly intervals based on the settlement date of the advance. Principal and remaining accrued interest are collected at maturity. New York Banking Days are used.
Availability and Pricing	Contact Member Services at 1 844.FHL.BANK

*The New York Fed publishes a rate based on the previous day's repo transactions each business day at approximately 8:00 a.m. This published rate is used as the Reference Rate for the current day, except during a Rate Freeze Period.

Why use a SOFR–Linked Advance?

With the ARRC recommending SOFR as the replacement risk-free rate for LIBOR, it follows that the SOFR–Linked advance is the natural successor to the LIBOR Floating–Rate advance. However, these two advances have some significant differences due to the differences between LIBOR and SOFR.



London Interbank Offered Rate **Secured Overnight Financing Rate**

The comparison chart above highlights that LIBOR and SOFR are fundamentally different. It also shows challenges with this transition. The biggest difference between LIBOR and SOFR is LIBOR's term structure, with 3-month LIBOR being the most commonly used structure for a variety of financial instruments around the world. SOFR, as of the publication date of this white paper, only has an overnight rate and therefore cannot provide the same type of term structure as LIBOR.

The term structure difference between LIBOR and SOFR is also the main difference between the LIBOR Floating-Rate advance and the SOFR–Linked advance. While the SOFR–Linked advance resets daily, the LIBOR Floating Rate advance resets once every 1 or 3 months depending on which index is used. The SOFR–Linked advance also has a Rate Freeze Period before every interest and principal payment date due to the daily reset nature of the advance. The LIBOR Floating-Rate advance does not. The difference in rate reset periods means that FHLB Dallas cannot calculate the total payment due each payment period for a SOFR–Linked advance until the Rate Freeze Date, compared to the LIBOR Floating Rate advance, where FHLB Dallas knows the exact interest due for the following accrual period after each reset.

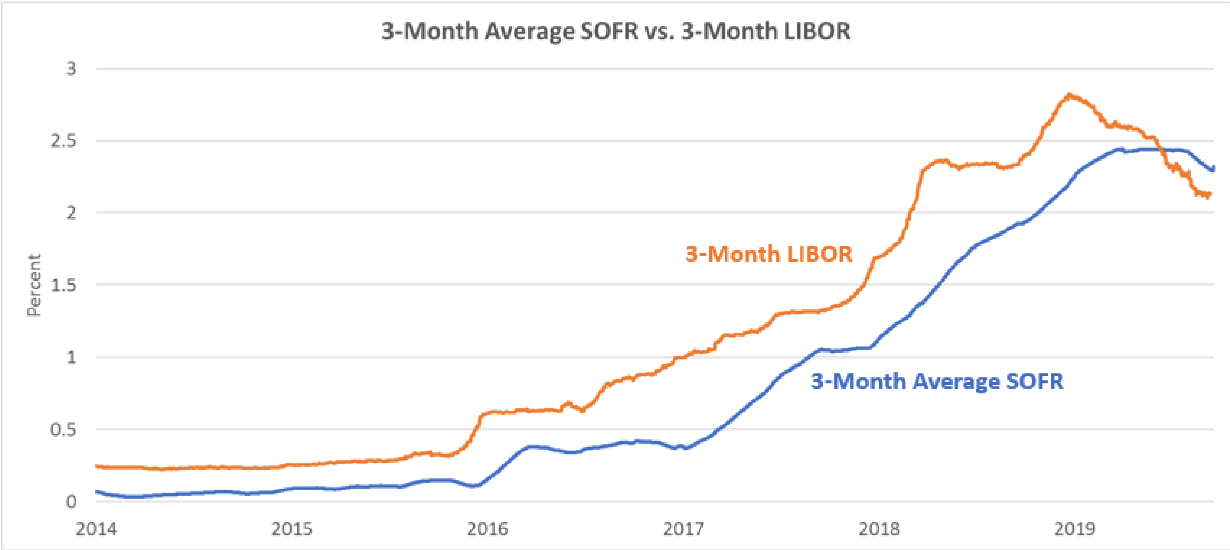
This chart summarizes the key differences between the LIBOR Floating Rate advance and SOFR–Linked advance.

	SOFR-Linked Advance	LIBOR Floating-Rate Advance
Index	SOFR	1-month LIBOR or 3-month LIBOR
Maturity Terms	3-month, 6-month, 9-month, 12-month, 15-month and 18-month	Maturity date on or before December 31, 2021
Rate Resets	Daily	Every month or 3 months depending on Index
Interest Rate	Reference Rate + Spread Rate Freeze Period – Two business days before an Interest Payment Date or Maturity Date	Index Yield + Spread. Rate determination dates are two business days prior to the reset date, using the modified following business day convention
Principal and Interest Payments	Quarterly, based on advance settlement date	Monthly on the first business day of the month. Principal and remaining accrued interest are collected at maturity.

The daily volatility of SOFR has received substantial press coverage. That volatility is seen in the chart below. In particular, you see a large spike on September 17, 2019. However, SOFR compares favorably to LIBOR using an average of daily rates and the 3-month average of SOFR is less volatile than 3-month LIBOR.

The SOFR–Linked advance resets daily and pays quarterly, and therefore, will have an effective rate on each payment date that is roughly equal to the 3-month average of SOFR. Compared to a LIBOR–Linked advance, the SOFR–Linked advance historically would have been less volatile based on the comparison of historical 3-month LIBOR and the 3-month average of SOFR.

Note that although the SOFR has only been published since April 2018, the New York Fed has published estimates of the SOFR based on the same underlying transaction data that underlies the current SOFR back to August 2014. The New York Fed has also published a much longer estimate of SOFR going back to 1998 using primary dealer survey data. In the chart below, FHLB Dallas has used this data set to extrapolate 3-month SOFR as far back as 2014.



As the market for SOFR develops, additional uses for the SOFR–Linked advance will develop.

Contacts

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