HSBC US Commercial Banking and Global Banking

Updated as of June 2022

Overview

The London Interbank Offered Rate (LIBOR) for U.S. dollars (USD), administered by the ICE Benchmark Administration, will cease publication or be deemed non-representative by June 30, 2023 (with 1 week and 2 month settings of USD LIBOR cessation at the end of last year). This is part of a global initiative by the industry to transition to replacement benchmarks. The recommended replacement rate for USD LIBOR by the Alternative Reference Rates Committee (ARRC), a group convened by the Federal Reserve Board and the Federal Reserve Bank of New York (FRBNY) to assist with a market transition from USD LIBOR, is the Secured Overnight Financing Rate (SOFR). US regulators encouraged banks to stop entering into new USD LIBOR contracts as soon as practicable and but no later than end of last year. This factsheet provides an outline of key facts about SOFR and some of the differences between SOFR and USD LIBOR; however, it is not exhaustive. You should seek your own advice on the implications of the changes and conduct your own independent research and analysis regarding SOFR in conjunction with your legal, tax, accountancy and other advisors. This factsheet is provided for your information only. HSBC is not your advisor and cannot provide advice or recommendations to you.

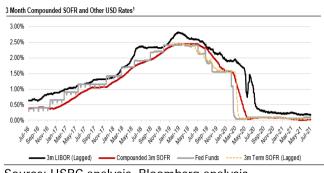
Key SOFR Facts

The ARRC identified SOFR as its recommended alternative to USD LIBOR. SOFR is a more resilient rate than LIBOR because of how it is produced and the depth and liquidity of the markets that underlie it.^{1,2,3,4} Some of the key SOFR facts include:

- SOFR is an overnight secured rate which reflects how financial institutions fund themselves today
- Due to the short term and high quality collateral SOFR is referred to as a "risk free" or "near risk free" overnight rate (RFR or "near Risk Free Rates" are not truly free of risk since the benchmark rate can rise or fall as a result of changing economic conditions and central bank policy decisions)
- The transaction volumes underlying SOFR are around \$1 trillion of daily volumes, higher than the wholesale funding transactions that underpin LIBOR submissions¹
- SOFR is a transparent rate that is representative of the market across a broad range of market participants and protects it from manipulation¹
- SOFR is IOSCO Benchmark Regulation compliant in line with international reference rate best practices²
- SOFR is derived from the U.S. Treasury repo market

| SOFR | | |
|---------------------|--|--|
| Benchmark | SOFR (Secured Overnight Financing Rate) | |
| Administrator | Federal Reserve Bank of New York | |
| Calculation | SOFR is a broad measure of the cost of borrowing cash overnight in the repo market collateralized by U.S. Treasury securities. SOFR is calculated as a volume-weighted median of transaction level data. | |
| Publication time | 8:00 US Eastern Time (can be revised until approximately 2:30 on the day it is published) | |

| Forward Looking Term SOFR | | |
|---------------------------|---|--|
| Benchmark | Forward Looking Term SOFR | |
| Administrator | CME Group | |
| Calculation | Term rates are implied from SOFR future contracts | |
| Publication time | 5:00 am US Central Time | |



Source: HSBC analysis, Bloomberg analysis

Lagged: Rate fixed 3 months earlier to show comparable view across rates

Interest Calculation

- SOFR (other than Term SOFR) is a backward-looking overnight rate and is based on transaction data from the previous business day; whereas, LIBOR is forward looking and is based on financing costs over specific periods from the present day, e.g. 1 week, 1 month, or 3 months. SOFR is published on all SIFMA government securities market business days ("business days"). CME's Term SOFR Rates will be calculated for each day the FRBNY calculates and publishes SOFR.
- There are currently the following SOFR structures for business loans:
 - Forward looking Term SOFR
 - Daily Simple SOFR in arrears
 - Compounded SOFR in arrears
- The ARRC recommended CME Group's 1 month, 3 month and 6 month forward looking Term SOFR on July 29, 2021., and the 12-month forward looking Term SOFR on May 19, 2022⁵ The ARRC supports the use of Term SOFR in addition to other forms of SOFR for business loan activity — particularly multi-lender facilities middle market loans, and trade finance loans—where transitioning from LIBOR to an overnight rate has been difficult and where use of a term rate could be helpful in addressing such difficulties.⁶
- The ARRC published recommended conventions for the SOFR in arrears structures, forward looking Term SOFR for syndicated and bilateral business loans.^{7,8,9}
- With Term SOFR, the interest rate is known in advance of the applicable interest period and most of the loan conventions for Term SOFR loans are similar to a USD LIBOR loan.
- For Term SOFR, the recommended convention is to use the rate published two US Government Securities Business Days prior to the first day of the interest period and held for the entirety of the interest period, similar to the LIBOR convention today.⁹

- For "in arrears" methodology, a lookback permits the lender or agent to determine the interest rate for the interest period before the period ends and the interest payment is due. This provides the lender or agent, as applicable, time to notify the borrower of the amount of interest payable and for the borrower to pay the interest when due. The current emerging market standard lookback for loans is 5 business days.
- With daily SOFR "in arrears," each day's interest accrual is calculated with the relevant applicable daily SOFR and, therefore, the final accrued interest amount for a given interest period can only be calculated at the end of the interest period. For Daily Simple SOFR in arrears, SOFR is sourced daily and multiplied by the outstanding principal of the loan.
- For SOFR in arrears, the overnight SOFR rate is compounded daily during the interest period to determine the loan's interest rate. There are different methods to calculate the daily accrual of interest for Daily Compounded SOFR including Compounding the Balance and Compounding the Rate.

Spread Adjustment

- For loans that transition from USD LIBOR to SOFR, a spread adjustment will be added to SOFR to mitigate value transfer for specific transactions.
- The ARRC has recommended that legacy loans transitioning from USD LIBOR to SOFR use a spread adjustment which is consistent with the historical 5-year Historical Median Approach adopted by ISDA, as the preferred approach for calculating Spread Adjustments for fallbacks triggered by LIBOR cessation or non-representativeness. This approach is based on the median basis difference between LIBOR and the relevant SOFR compounded rate over a 5-year historical period. 7,8,9
- On March 5, 2021, the Spread Adjustments calculated using the ISDA 5-year Historical Median Approach were fixed. The Spread Adjustments for USD are set forth below.⁴

| USD LIBOR | Spread Adjustment (%) |
|--------------|-----------------------|
| Overnight | 0.00644 |
| 1 week | 0.03839 |
| 1 month | 0.11448 |
| 2 Months | 0.18456 |
| 3 Months | 0.26161 |
| 6 Months | 0.42826 |
| 12 Months | 0.71513 |

Application of spread adjustment

- HSBC currently intends to apply this 5-year Historical Median Approach to transition existing LIBOR loans to SOFR.
- The same Spread Adjustment will apply to all SOFR interest calculation conventions.
- If there are derivative hedges in place, it is important for borrowers to consider how these will transition to ensure any reduction in hedge effectiveness is minimized.

Application of Floors with Term SOFR and SOFR Averages

- For new loans, it is recommended by the ARRC that any interest rate floor apply to the SOFR Average or Term SOFR.^{8,9}
- If there are interest rate floors in an existing LIBOR credit agreement that falls back to Term SOFR or SOFR Average, the ARRC Guiding Principles should be interpreted as applying that floor to Term SOFR or SOFR Average, as applicable, plus the associated spread adjustment recommended by the ARRC.⁹

Application of Floors for SOFR In Arrears Pricing

- For either SOFR "in arrears" methodology, if there is an interest rate floor in the applicable credit agreement, per the ARRC's recommended conventions and aligned with HSBC's product offering, it is recommended that the floor be calculated daily and not at the end of an interest period because loans accrue interest daily and loan funds strike a daily net asset value based on this daily accrued interest.^{7,8}
- The floor on a newly originated SOFR "in arrears" loan will be applied to SOFR only. For legacy USD LIBOR loans transitioning to SOFR, per the ARRC's recommended conventions and aligned with HSBC's product offering, if there is an interest rate floor in the existing applicable LIBOR credit agreement that coverts to SOFR, then the floor should apply to SOFR plus the associated spread adjustment.^{7,8}
- For legacy loans falling back to Compounded SOFR in arrears, the corresponding floor would be applied to the daily SOFR rates, and would be the difference between the LIBOR Floor Rate and the SOFR spread adjustment.^{7,8}

Footnotes:

¹https://www.newyorkfed.org/arrc/sofr-transition

²https://www.newyorkfed.org/medialibrary/media/markets/IOS <u>CO-statement-of-compliance-jul2020</u>

³https://www.newyorkfed.org/medialibrary/Microsites/arrc/files/ 2021/users-guide-to-sofr2021-update.pdf

⁴<u>https://www.cmegroup.com/market-data/cme-group-benchmark-administration/term-</u>

sofr.html?gclid=CjwKCAjwo4mlBhBsEiwAKgzXOK5CZ4pl7ODES aixZJnlmLAOvFdH2X0BatXvALi6T4stBmg1t7Qc9xoC9GEQAvD_ BwE&gclsrc=aw.ds

⁵https://www.newyorkfed.org/medialibrary/Microsites/arrc/files/2 021/ARRC_Press_Release_Term_SOFR.pdf

⁶<u>https://www.newyorkfed.org/medialibrary/Microsites/arrc/files/2</u> 021/ARRC_Press_Release_Term_Rate_Scope_and_Conventions.p df

⁷https://www.newyorkfed.org/medialibrary/Microsites/arrc/files/2 020/ARRC_SOFR_Synd_Loan_Conventions.pdf

⁸https://www.newyorkfed.org/medialibrary/Microsites/arrc/files/2 020/ARRC_SOFR_Bilat_Loan_Conventions.pdf

<u>https://www.newyorkfed.org/medialibrary/Microsites/arrc/files/2</u> 021/Term_SOFR_Avgs_Conventions.pdf

ARRC Website

https://www.newyorkfed.org/arrc

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