PUBLICATION

SOFR: The Secured Overnight Financing Rate

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Changes are coming for the interest rate benchmark lenders use to finance long term care facilities. The long-standard benchmark, the London Interbank Offered Rate (LIBOR), is being replaced by the Secured Overnight Financing Rate (SOFR) for many lenders. Understanding how SOFR is different from LIBOR will assist you as you navigate the opportunities involved in financing transactions for long term care and other health care facilities.

LIBOR Background

Until recently, LIBOR was one of the most widely used benchmarks in the world for commercial loans. LIBOR is calculated using the estimated cost of interbank lending submitted by LIBOR panel banks. During the financial crisis, panelists manipulated LIBOR by submitting rates to benefit banks and traders instead of submitting rates banks would actually pay to borrow money from one another. More than 15 banks were involved in the scandal and were collectively fined over $9 billion. Criminal charges were brought against more than 20 individuals in connection with LIBOR manipulation.

The Phase-Out of LIBOR

As a result, on March 5, 2021, the Financial Conduct Authority announced a timeline for the phase-out of LIBOR. The Federal Reserve, the Federal Deposit Insurance Corporation, and the Office of the Comptroller of the Currency subsequently issued a joint statement saying that banks should stop entering into new contracts with LIBOR as soon as possible but at least by December 31, 2021, and failure to do so would be considered a safety and soundness issue. As of January 1, 2022, LIBOR can only be used for legacy LIBOR obligations entered into prior to December 31, 2021. Even for legacy obligations, LIBOR will cease to be available after June 30, 2023. The phase-out of LIBOR created the need for alternative reference rates. The Federal Reserve formed the Alternative Reference Rates Committee (ARRC) to look at new benchmark rates and assist with the transition away from LIBOR. The ARRC is an advisory board made up of market participants and includes banks and non-banks. The ARRC identified SOFR as the recommended benchmark rate to replace LIBOR in the United States. Given SOFR's role as a prominent replacement for LIBOR in new loan transactions, lenders and borrowers should have a working understanding of the new index and some of the differences between it and LIBOR.

What is SOFR?

SOFR is a broad measure of the cost of borrowing cash overnight collateralized by U.S. Treasury securities in the repurchase market. SOFR is based on transaction-level data collected under the supervisory authority of the Federal Reserve and transaction-level data obtained from DTCC Solutions LLC, an affiliate of the Depository Trust & Clearing Corporation. Transaction volumes in the overnight U.S. Treasury repurchase market are usually about $1 trillion per day. It is considered to be the deepest financial market in the world.

Publication

The Federal Reserve Bank of New York (New York Fed) publishes the SOFR rate it has calculated for transactions on the previous U.S. Government Securities Business Day (a day on which treasury securities are traded). The New York Fed publishes the overnight SOFR rate at 8:00 a.m. ET, but it is subject to revision at 2:30 p.m. ET if there is a mistake or missing data. Rates are available on the New York Fed's website. Rate

revisions will only occur if the change in the rate exceeds one basis point and only on the same day as initial publication. Any time a rate is revised, a footnote would indicate the revision. Updated SOFR summary statistics are published on a lagged basis shortly after the end of each quarter. There are other types of SOFR rates published by the New York Fed as well. SOFR Averages and the SOFR Index are published at the same time shortly after publication of overnight SOFR. These two types of SOFR are not typically used in bilateral and syndicated loans.

Term SOFR is a forward-looking SOFR rate and has a different administrator – CME Group Benchmark Administration Limited. Term SOFR is not published on the New York Fed's website.

Benefits of SOFR

1. SOFR is thought to be more robust and more resilient than LIBOR because of how it is produced. SOFR is based on a very deep underlying market of actual repurchase transactions. There are about $1 trillion in daily transactions underlying the SOFR rate compared to an estimated $500 million in transactional volume for three-month USD LIBOR (as of late 2021).

2. SOFR is seen as more representative of the market. According to the ARRC, Compounded SOFR approximates the cost of carrying deposit accounts. SOFR also more accurately reflects the cost to carry risk-free assets. LIBOR is thought to be less representative of the market because it is calculated using the estimated cost for banks to lend to other banks. LIBOR panel banks submit estimated rates for LIBOR in advance, and those estimates are not based on actual transactions.

3. SOFR is less susceptible to manipulation, which was one of the pitfalls of LIBOR. SOFR is based on observable transactions rather than estimated borrowing rates. SOFR is not at risk of cessation due to a lack of a robust underlying market and complies with international best practices for interest rates.

Disadvantages of SOFR

4. SOFR displays more volatility than LIBOR. Daily SOFR can be volatile at quarter-end and year-end, but Compounded and Term SOFR are more stable. The ARRC has noted that some financial products generally will not use a single day's reading of SOFR and will instead rely on an average of daily rates, which decreases volatility.

5. SOFR is not credit sensitive like LIBOR. LIBOR reflects the estimated cost of lending between banks. SOFR is a secured rate, and the credit risk is related to the credit risk of U.S. treasuries.

6. Many of the available SOFR rates are backward-looking so they are not prospective rates, but Term SOFR is now available and is forward-looking.

Types of SOFR

There are several different types of SOFR: (1) Daily Simple SOFR, (2) Daily Compounded SOFR, (3) Term SOFR, (4) SOFR Averages, and (5) SOFR Index. The three types most often used in syndicated and bilateral credit agreements are Daily Simple SOFR, Daily Compounded SOFR, and Term SOFR.

7. **Daily Simple SOFR** is calculated using simple interest over the current interest period. For Daily Simple SOFR, the overnight SOFR rate is sourced daily and multiplied by the outstanding principal of the loan. The overnight SOFR rate is published by the Federal Reserve.

8. **Daily Compounded SOFR** also uses the overnight SOFR rate, which is then compounded daily during the interest period to determine the loan's interest rate.

9. **Term SOFR** is calculated differently than the other types of SOFR. It is not possible to calculate Term SOFR from the term treasury repurchase market. It is produced from the SOFR derivatives markets. Term SOFR looks most like LIBOR since it has a term curve. It is a forward-looking SOFR rate and is developed based on actual SOFR future transactions. It has one-month, three-month, six-month, and 12-month tenors. Term SOFR is known in advance of the start of the interest period and is the easiest to operationalize because it functions like LIBOR. The ARRC considers Term SOFR to be the preferred SOFR variant to replace LIBOR, and Term SOFR is the index we are most often seeing in the current market.

The other types are SOFR Averages and SOFR Index.

10. **The SOFR Averages** are compounded averages of the SOFR over rolling 30, 90, and 180 calendar day periods. For example, many consumer loans and intercompany loans will use SOFR compounded in advance, which is calculated by compounding interest over a previous set number of days. The rate is known before the start of the interest period and can be calculated using the compounded average of SOFR that is published on each business day by the New York Fed.

11. **The SOFR Index** measures the cumulative impact of compounding SOFR on a unit of investment over time, with the initial value set on the first value date of SOFR, which was in April 2018. The SOFR Index value reflects the effect of compounding the SOFR each business day and allows the calculation of compounded SOFR averages over custom time periods. SOFR index is useful for certain cash products like floating rate notes.

SOFR can be compounded in arrears (during the interest period) or in advance (before the start of the interest period). Additionally, some types of SOFR use simple interest while others use compounded interest. Each variation has its advantages and disadvantages. Simple interest conventions are currently easier to use because most systems can accommodate them; however, compounded interest better reflects the time value of money. The difference between using simple and compounded interest is small in practice, especially at lower rates and over short time periods.

Conventions for using SOFR in arrears

The ARRC has published several term sheets to provide guidance on implementing SOFR (ARRC Guiding Principles). Most of the SOFR rates are backward-looking so the ARRC had to create methods to make sure there was sufficient time at the end of the interest period to invoice a borrower and permit the borrower to pay interest by the last day of the interest period.

For bilateral and syndicated loans that use Daily Simple SOFR and Daily Compounded SOFR, the ARRC recommends business day lookback with no observation shift. Without a lookback, in the case of either compounded or simple interest in arrears, the rate for the entire interest period would not be known at the beginning of the interest period. Instead, overnight SOFR would be pulled daily (and compounded based on a previous day's rate in the case of daily compounded SOFR). A lookback gives the parties more notice by applying the SOFR rate from some fixed number of business days prior to the given interest date.

Example of five-day lookback for a 30-day interest period: A loan starts on June 1, 2020. In order to apply a five-business day lookback, the lender will "look back" to May 25, 2020, and apply that day's SOFR rate to the June 1 balance. On June 2, the lender will "look back" to May 26 and apply that day's SOFR rate to the June 2

balance. By June 23, the lender will know the daily rates through the end of the 30-day interest period. The lender will be able to invoice the borrower, and the borrower will be able to pay the interest by June 30.

The ARRC also recommends using a "modified following business day convention," meaning that payments that should be paid on a day that is a non-business day will be adjusted to the next succeeding business day unless that day falls in the next calendar month, in which case the interest payment will be the preceding business day. For holidays and weekends, the ARRC recommends interest be calculated on the preceding business day's rate. The ARRC also recommends that interest-rate calculations based on SOFR be rounded (not truncated) to five decimal points.

Alternatives to SOFR: Ameribor and BSBY

There is still a desire in the marketplace for a credit-sensitive rate (similar to LIBOR) that reflects the unsecured cost of funding for banks, particularly a rate applied in inter-bank lending that reflects the credit risk of inter-bank loans. SOFR is a secured, risk-free rate. It is not an unsecured cost of funds rate. LIBOR is derived from unsecured banking financings, which contain a credit risk component. Some regional banks have complained SOFR is not suitable because, as a secured overnight rate, it would behave differently than a term unsecured rate in distressed markets and it is a poor proxy for their cost of funds since such regional banks do not have material treasury portfolios and do not fund in overnight repurchase markets.

Various groups have proposed alternative, credit-sensitive rates. American Financial Exchange proposed the use of Ameribor. Ameribor is calculated as the transaction volume weighted average interest rate of the daily transactions in the Ameribor overnight unsecured loan market on the American Financial Exchange. While SOFR is based on secured loans, Ameribor contains a credit spread component based on unsecured loans, which is why it is more representative of the cost of funding for certain banks. According to Ameribor's website, the rate reflects the actual borrowing costs of thousands of small, medium, and regional banks across America.

Bloomberg proposed the use of the Bloomberg Short-Term Bank Yield Index (BSBY). BSBY is calculated from consolidated, anonymized transaction data and executable quotes from primary markets in commercial paper, certificates of deposit, bank deposits, and short-term corporate bonds. According to Bloomberg, BSYB provides a series of credit-sensitive reference rates that incorporate bank credit spreads and defines a forward term structure. BSBY also seeks to measure the average yields at which large global banks access U.S. dollar senior unsecured marginal wholesale funding. In December 2021, the Loan Syndications and Trading Association (LSTA) prepared BSBY fallback language designed for voluntary use in syndicated credit agreements. The BSBY fallback language uses the hardwired approach to replace BSBY with a SOFR-based rate (plus an adjustment) upon the occurrence of certain objective, readily identifiable trigger events.

Criticism of Ameribor and BSBY

U.S. regulators spoke out against the use of credit-sensitive benchmarks such as BSBY and Ameribor in derivatives contracts at the June 2021 meeting of the Financial Stability Oversight Council. U.S. Securities and Exchange Commission chair Gary Gensler said BSBY suffered from many of the same flaws as LIBOR. The new LSTA syndicated BSBY fallback language aims to address this concern. There is still a concern among regulators that proposed credit-sensitive rates are not supported by deep markets in actual transactions and a concern that extensive use of proposed alternative rates will simply recreate many of the vulnerabilities of LIBOR. For these reasons, it is still important to include robust fallback language in the event that the initial benchmark rate used in a loan agreement can be replaced if needed based on identifiable trigger events.

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