

The LIBOR-SOFR Spread Adjustment: Current Approaches and Implications for Financial Institutions

The London Interbank Offered Rate (LIBOR) has historically been utilized as a benchmark for short-term lending for banks in contracts including floating rate notes, business and consumer loans, securitizations and derivatives. In 2017, the Alternative Reference Rates Committee (ARRC) recommended the Secured Overnight Financing Rate (SOFR) as its replacement for LIBOR, and LIBOR is scheduled to be phased out by the end of 2021. With estimates of contracts referencing LIBOR ranging from \$200 Trillion to \$350 Trillion worldwide¹, it is essential for financial institutions to have a plan in place to address the LIBOR-SOFR transition.

DIFFERENCES FOR LIBOR VS. SOFR

While LIBOR and SOFR are both short-term lending rates, there are a few key differences:

- SOFR relies entirely on transactional data, whereas LIBOR is a consensus of rates submitted by a panel of banks.
- SOFR is purely an overnight rate (daily rate), whereas LIBOR has a term structure from a day to a year.
- SOFR is inherently risk free, as it measures the overnight cost of borrowing cash collateralized by treasuries. LIBOR reflects the credit risk of borrowing in the unsecured markets, as it measures the average rate at which a financial institution with access to the wholesale unsecured funding markets can obtain financing. Equivalent LIBOR tenors are therefore generally greater than SOFR tenors.

For banks to make the transition from LIBOR to SOFR, especially for contracts already referencing LIBOR, they need to calculate a spread component that measures the difference in risk between the two rates. This spread calculation will have a large impact on a financial firm's risk profile, and its impact will be felt in asset liability mismatch, hedging strategies, risk modeling, valuation tools, product design and customer communication. The wide-reaching impact stresses the importance of the LIBOR-SOFR spread calculation for financial institutions.

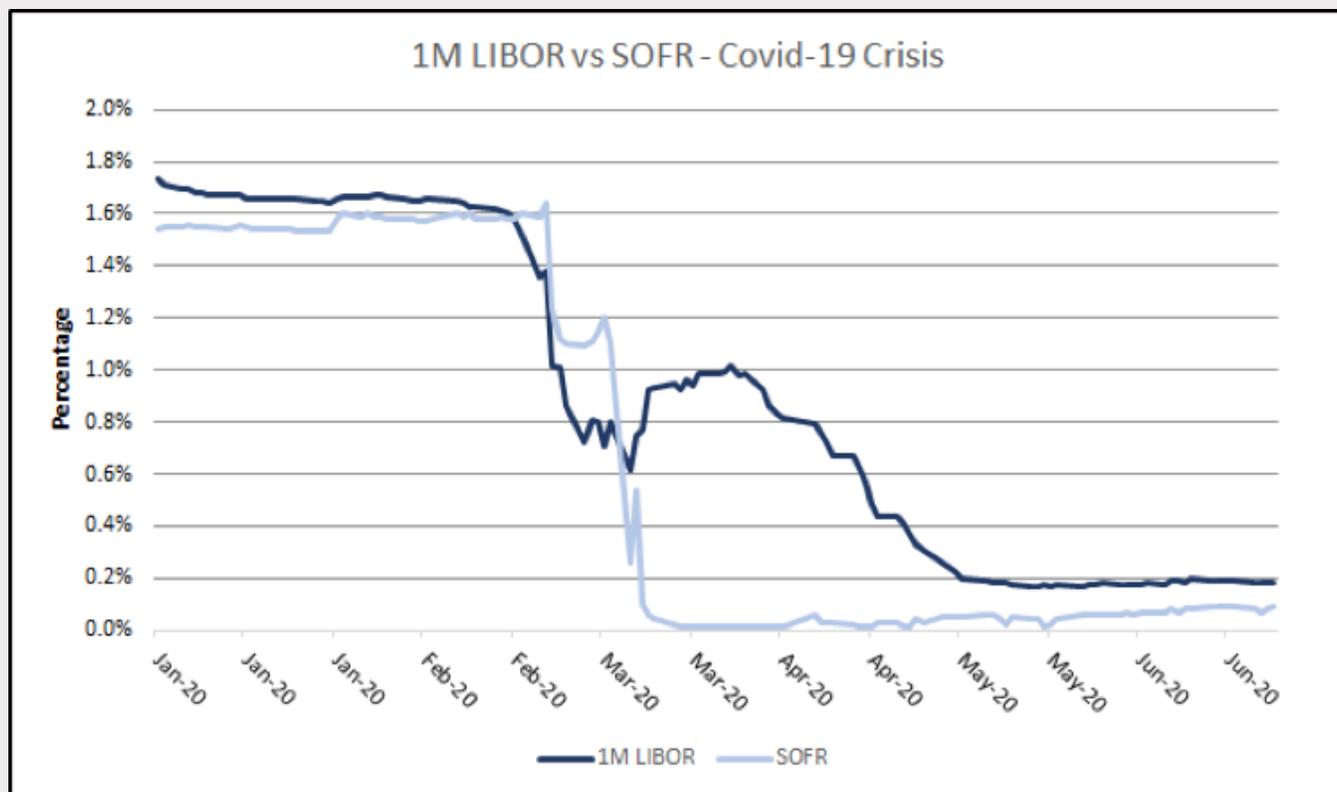
LIBOR-SOFR SPREAD ADJUSTMENTS

The most widely suggested approach for calculating the LIBOR-SOFR spread is the five-year median. It is recommended by ARRC and the International Swaps and Derivatives Association (ISDA) and appears to be the leading market preference². Utilizing a median has the advantage of avoiding market fluctuations. However, depending on the market conditions at the time of determining the spread, a median could be artificially low or high and be subject to higher variance during times of economic stress. In addition, official SOFR rates have been published since 2018, although the Federal Reserve (the Fed) has released pre-production SOFR estimates from August 2014 using the same underlying methodology and data, which results in a shorter than five-year median in the near term.

Financial firms can also consider a point-in-time spread in moving from LIBOR to SOFR. Static spreads are the easiest in terms of communication and implementation in existing contracts. In this situation, customers will have a clear understanding of how the transition affects their existing contracts. However, financial institutions that choose to utilize a static spread will not be able to accurately reflect market conditions prevailing at the time, especially during times of volatility and stress, and are at risk of not pricing instruments properly.

A dynamic spread serves as a potential alternative for financial institutions to consider outside of the five-year median approach or other static approaches. The biggest advantage is that a dynamic spread is closer to market reality, reflecting the change in spread between LIBOR and SOFR that a static spread would not reflect. The COVID-19 pandemic is a great example of how a stress event might impact the LIBOR-SOFR spread. While SOFR plunged following the Fed intervention to support financial markets, LIBOR increased given the higher uncertainty in credit markets, as seen in Figure 1 below. A historical pre-defined or static spread adjustment would have failed to adequately capture this movement, leading to potentially mispricing risk and exposing financial institutions to significant balance sheet risk.

Figure 1: 1M LIBOR vs SOFR Covid-19 Crisis



However, dynamic spreads are also more complex, as decisions must be made regarding frequency of change, calculation methodology and how to model and hedge for these products. A dynamic spread is also more challenging to explain to the counterparty involved in the transition from LIBOR to SOFR.

Benchmark providers have begun providing alternative credit sensitive indices that banks can utilize in transitioning away from LIBOR. Examples include IHS Markit, Ameribor and the ICE Bank Yield Index. For firms that do less work in securities repurchase markets, which often are smaller regional banks, credit sensitive alternatives are a better match for their funding needs. These benchmarks provide greater innovation and efficiency than the traditional approaches, which can result in lower transaction costs. However, it is unclear if the market demands this type of solution, and there has not been much support from the ARRC or international regulators since they currently lack sufficient trade volume³. They present the potential to provide banks with an unrealistic sense of security, as they could believe they are protected from a banking crisis.

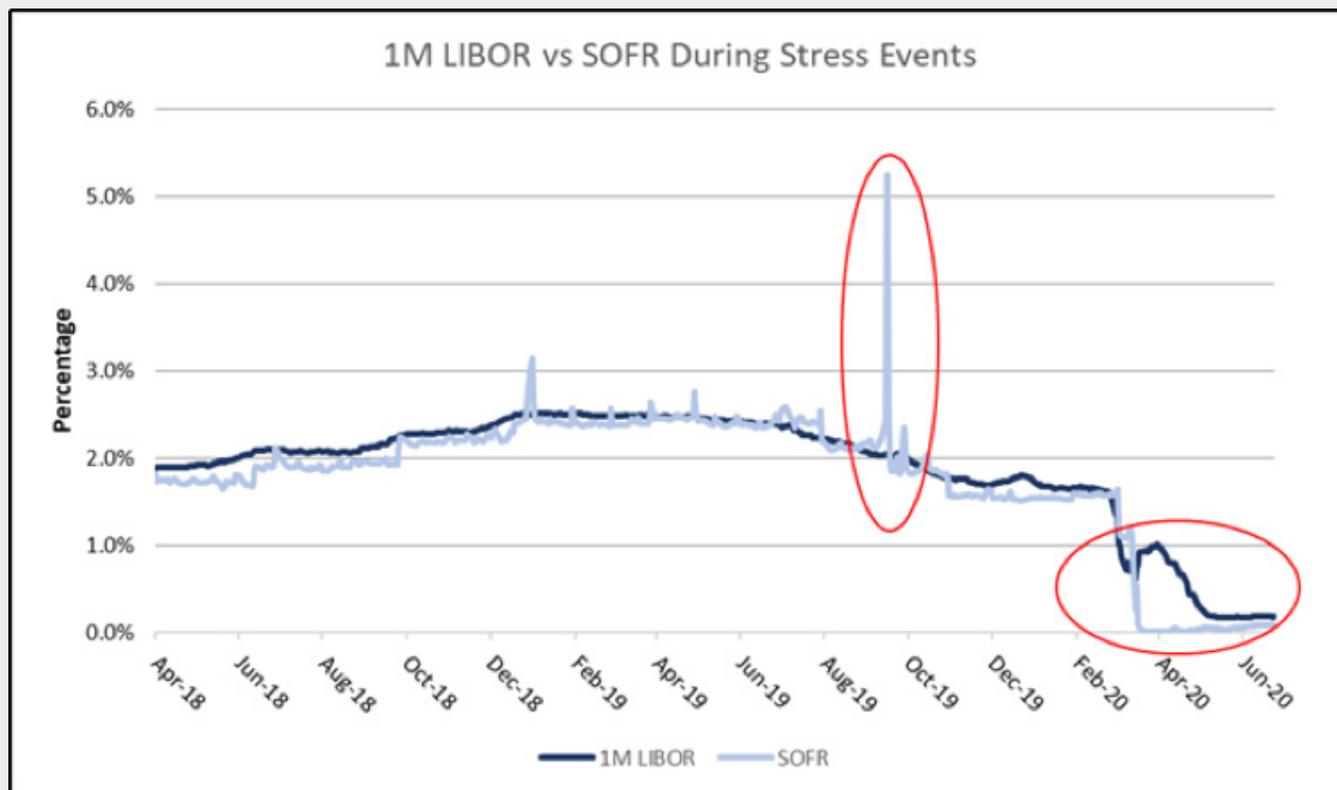
Table 1: Comparison of Static Versus Dynamic LIBOR-SOFR Spread Adjustments

		Advantages	Disadvantages
LIBOR-SOFR Spread	Static Spread	<ul style="list-style-type: none"> Recommended by ARRC (5-Year Median Approach) Suggested for derivative products and preferred in market consultations by ISDA (5-Year Median Approach) Avoids market fluctuations Ease of computation and communication in contracts 	<ul style="list-style-type: none"> Longer term median may not incorporate latest market conditions, especially during times of stress Inherent lag of static approaches potentially places firms at risk of not pricing instruments properly SOFR rates published beginning in 2018 results in less data in short term
	Dynamic Spread	<ul style="list-style-type: none"> Closer to current market realities Includes Credit Sensitive Alternative Benchmarks developed by benchmark providers with access to proprietary data including IHS Markit, Ameribor, and Ice Bank Yield Index Better potential match for funding needs of smaller banks that are less active in repo markets Better at incorporating changing credit conditions, especially during times of stress Enhanced market efficiency and greater innovation leading to potentially lower transaction costs 	<ul style="list-style-type: none"> Potential lack of standardization among different financial institutions for customized/nonmarket based approaches For customized approaches, more difficult to determine frequency of change, calculation approach, and model/hedge strategy Lack of communication from market regarding demand for this type of solution and no official guidance from ARRC and international regulators Potential risk due to lack of historical data to gauge performance during stress

LIBOR-SOFR SPREAD AND MARKET FLUCTUATIONS

Since SOFR went live, there have been a few instances that could help market participants get a better understanding of how the LIBOR-SOFR relationship might be affected during stress events. Typically, the implied credit risk component is the biggest driver of the LIBOR-SOFR spread. SOFR, which is tied to the securities repurchase markets, can be subject to significant volatility particularly at month-, quarter- and year-ends. The chart below (Figure 2) shows a large spike in SOFR rates during September 2019 when the securities repurchase market seized up. It decreased once the Fed attempted to add liquidity to the market. Such volatility can add significant uncertainty to a firm’s ability to hedge its risks.

Figure 2: 1M LIBOR vs SOFR During Stress Events



COVID-19

The COVID-19 pandemic provides another example of how the historical relationship between LIBOR and SOFR may break down during periods of stress. In early March as the number of COVID-19 cases continued to increase, markets viewed the situation more as a health crisis than a credit crisis. As the situation worsened and markets grew increasingly concerned about the future viability of companies following large parts of the economy shutting down, LIBOR started increasing to reflect the increased credit risk as would be expected (Figure 2). However, following the Fed's 100 bps cut on March 15 that set the federal fund rate target range to between 0 and 25 bps as well as other emergency measures adopted (increased liquidity support to securities repurchase markets, emergency asset purchase programs), SOFR declined sharply while LIBOR continued to fix at higher levels. This variation in the SOFR-LIBOR spread could pose significant funding vs. lending risks to financial institutions as they prepare to transition legacy LIBOR contracts to SOFR. How best to address these severe moves should be given careful consideration as financial institutions prepare for a post-LIBOR world.

WE CAN HELP

For more information about DHG's LIBOR Transition Advisory capabilities, reach out to us at dhgadvisory@dhg.com.

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