Houlihan Lokey

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LIBOR Transition
Lender/Borrower Perspective

Executive Summary

The LIBOR[1] transition is an alphabet soup of regulators and industry groups. But for borrowers and lenders, the LSTA[2] has been a highly visible thought leader on lending-related issues. Together with the ARRC[3] and its working groups, the lending industry can now see the roadmap from LIBOR to its replacement and lenders/borrowers can plan for the cascade of events that will begin in early 2020.

Each of the three largest categories of LIBOR users—derivatives, loans, and securities—have become aware of the idiosyncratic effects of this transition on their asset class instruments. LIBOR was first developed in 1969 as a rate for syndicated loans, and thus lending remains fundamentally tied to that rate. Both bank and non-bank lenders are likely to see both the largest cost of transition and the largest potential for post-transition litigation. ISDA serves the derivatives industry, which benefits from a high degree of standardization in documentation and amendment processes. Although the derivatives market informs the loan market, the loan market faces unique transition challenges.

The loans affected by this transition can be divided into either existing or new transactions. New loans will require changes in documentation, payment structures, funding versus lending mismatch, and other changes that will be prototyped in LSTA templates. Legacy loans will need these changes as well, but will be governed by existing documents that may not contemplate the events around the end of LIBOR where every loan will require a negotiated solution and an amendment.

Although some issues are generally applicable to these three large LIBOR user groups, this paper addresses the unique impacts related to loans that will affect borrowers and lenders, such as the lack of multiday rates, payments not known in advance, and cost of funds risk shifting to lenders. So, lenders and borrowers must become fully conversant with triggers and fallbacks[4] and familiar with ISDA supplement and protocol.[5] We will cover in detail below some of the issues being currently debated among loan market participants and explain the associated risks, costs, and potential benefits.

Notes:

1. London Interbank Offered Rate (LIBOR) is a rate administered by ICE and collected from expert submissions by 16 of the largest banks in the eurodollar markets across five currencies and four tenors. It embodies a set of characteristics and conventions and contains credit risk and term premium components.
2. Loan Sales and Trading Association (LSTA): https://www.lsta.org/.
3. Alternative Reference Rate Committee (ARRC) refers to 17 banks operating in the U.S. market tasked with creating and selecting an alternative rate and advancing a plan to develop a broad implementation of that alternative rate. Not originally a committee to replace and discontinue LIBOR.
4. Trigger and fallback indicates documentation concepts that provide clarity in the event that LIBOR discontinues. Triggers are the methodology to determine cessation, and fallback is the method that determines the replacement rate.
5. Supplement and protocol is ISDA terminology for the documentation of derivatives. Supplement is the document which amends the Master Agreement definitions (which currently do not contemplate the terminal nature of LIBOR). Once amended by ISDA, all participants reference this standard. Protocol is a bilateral agreement to apply the supplement to existing (legacy) trades. This must be adopted by each counterparty before it becomes effective.

SOFR Is Not the Same as LIBOR

The designated replacement to the U.S. dollar LIBOR is SOFR; however, SOFR is not the same thing as LIBOR. One base rate cannot simply be changed to the other without causing a value transfer and potentially creating a wave of litigation by the adversely impacted party. SOFR is the secured overnight financing rate observed in the $1 trillion trending securities repo market.

Fundamental Differences

LIBOR is a term rate (e.g., one-month, three-month, six-month, 12-month) known at the beginning of a period and paid at the end. As LIBOR is intended to reflect the rate that banks would lend to each other, it contains a credit spread and a premium for the multiday nature of the rate. SOFR is an overnight rate that is secured by Treasury securities in a repurchase contract and thus is virtually risk-free—no credit spread and no term premium.

No More Tenors

At present, there are no term SOFR benchmark rates because there are almost no observable transactions which qualify under principles of the International Organization of Securities Commissions (IOSCO). This means that unless there is a spread adjustment,[6] a borrower will not pay a rate that includes credit spread and term premiums, but rather, a string of overnight rates, which do not contain credit spread or term premium, averaged or compounded over the relevant period.

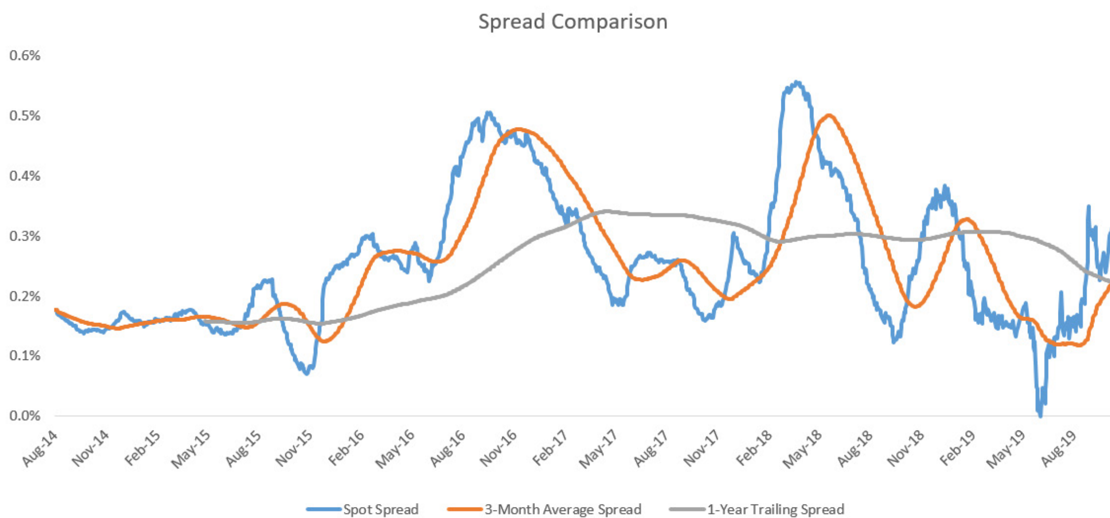
Rate Known at the End of a Period, Not the Beginning

SOFR is observed each day, averaged or compounded, and paid on the final day of the period when it has become fully observed. This is one of the most disruptive characteristics for borrowers who will not know their borrowing costs until the end of a period.

Value Transfers and Risks

SOFR (compounded for the period) has been generally 15-30 bps below LIBOR, but this differential has varied significantly as market expectations of the course of the EFFR (effective federal funds rate) vary.

This chart shows the historical spread between LIBOR three-month and SOFR for spot, trailing 90 days (contemporaneous average), and trailing one year (contemporaneous average).



Source: Federal Reserve Economic Data

[6] Spread adjustment is an ISDA methodology for determining the number of basis points that will be permanently added to SOFR in each tenor of LIBOR (one-month, three-month, six-month, 12-month) for all LIBOR-referencing trades governed by the supplement and fallback. This adjustment is not relevant for new SOFR trades. This adjustment will be third-party calculated daily and published widely so that the market has an observable price for cessation event valuation.

ISDA will provide a single value for each tenor of LIBOR to add to SOFR to create a standard spread adjustment that the derivatives market will use for virtually all conversions to SOFR. Early in 2020, Bloomberg will begin to publish the spread adjustment each day that would be effective if LIBOR ceased that day. The calculated adjustment is the mean of the difference between LIBOR and SOFR observed daily for the trailing five years. Since the ISDA conversion is based on a five-year trailing period, the spread adjustment should be highly certain and well-known for quite some time in advance of cessation.

The spread adjustment for each LIBOR tenor will be published on Bloomberg daily so that anyone will be able to value an instrument at the post-cessation price. However, some risks remain since the long-term average may vary significantly from the current spot spread at cessation, or if the SOFR versus LIBOR basis curve is not flat across all maturities. Again, the technical features of the derivative market conversion are a subject for another paper, but the practice in that market directly informs the lending market approach to conversion, particularly in the fallback waterfall.

Triggers and Fallbacks for Hardwired Approach

The ARRC recommended language for new transactions or amendments of existing syndicated loans are written in a sequential form (waterfall) to address several possible scenarios. The trigger is the threshold event that must take place, and the action that is triggered is the fallback—the sequence of events that a borrower and lender agree to in a written document. The LSTA waterfall for loans is in the table below and, in practice, gives the parties a series of steps to walk through until an available rate can be implemented. The waterfall below is read as the following: If a trigger event has occurred, then we agree to convert to Term SOFR provided it exists; otherwise, we will convert to Compounded SOFR. If this does not exist, we will use another rate agreeable to the borrower and the administrative agent.

Trigger	Pre-Cessation	Cessation	Early Opt-In
	FCA issues a public statement saying that “LIBOR is no longer representative”	Either the benchmark administrator (ICE) or the administrator’s regulator (FCA) pronounces that ICE will no longer and permanently not publish LIBOR	Once Term SOFR has been accepted in the loan market, an admin agent can hold a vote to move to the replacement rate

Fallback Waterfall	Primary	Alternative	Adjustment
Step 1 (ARRC)	Term SOFR + Adjustment	Next Available Term SOFR + Adjustment	ARRC recommended spread or methodology
Step 2 (ISDA)	Compounded SOFR + Adjustment	Simple Average SOFR + Adjustment	Bloomberg will calculate and publish a daily adjustment value for each LIBOR tenor. This is a five-year lookback of data which will create a highly predictable adjustment value
Step 3 (Agent)	Borrower and Admin Agent Select Rate + Adjustment		

The purpose of trigger and fallback language is to provide existing transactions a transition to a replacement rate when cessation occurs. The global official sector ecosystem is advocating that the new transaction market begin

using the replacement rates at inception, eliminating the need for trigger and fallback. Their public statements are increasingly forceful and risk managers across all the affected assets are recognizing that a market of $400 trillion in contracts of all types cannot rely on a fallback on a single day without enormous risk, even if every contract contains identical recommended replacement language. LSTA and others use the analogy of a seatbelt: including fallback language is driving while wearing a seatbelt, and drafting a new loan agreement using SOFR is avoiding the collision.

Term SOFR Alternatives and Calculation Conventions

At present, SOFR is only published as a single daily rate. In the interest of operational continuity, many borrowers would like SOFR to be available in tenors (as with LIBOR) of 30, 90, or more days. However, there are insufficient repurchase market transactions to produce meaningful tenors for SOFR, so alternative constructs have been suggested at ARRC and LSTA. The FRN market has already issued floating rate securities paying based on a SOFR rate, with various payment conventions to accommodate buyer needs and preferences. Some of the terms used to describe these term constructs are explained below.

Forward-Looking: Currently, a three-month LIBOR rate set today is payable in 90 days (with lags for observation and payment). The only way to make something similar for SOFR is to derive that rate from another market, such as SOFR futures. Using the market observable prices on one-month and three-month futures contracts, a single rate can be derived, which reflects the market expectation of the next 90 settings of SOFR. ARRC has proposed such a methodology, but acknowledges that market liquidity is insufficient at this time and the forecast methodology does have some tracking error against the actual 90-day experience.

Backward-Looking: For a given payment period (e.g., three months) SOFR is observed daily and compounded or averaged to determine the payment at the end of period. This is referred as backward-looking, because while it pays on the same day that a LIBOR three month would have paid, it looks back to the 90 days of observed SOFR.

Lockouts, Lookbacks, and Lags: The floating rate notes (FRN) market has used some conventions coupled with a backward-looking rate determination to improve the operational character of the notes. A lockout means that the last few days in the period are not used (e.g., final five days), which gives accelerated notice of the actual payment amount. A lookback arrangement can provide a similar result, for example, 90 days of observations beginning five days before the period and ending five days before the end of period results in a full 90 days of daily rates but five days of advance notice for the payment. Lag periods after the final day of the payment period could accomplish this as well. The LSTA is evaluating some of these conventions.

Interoperability

No market stands alone in the interconnected financial world. Loans are traded and packaged into CLO or ABS securities (funded with their own liabilities), borrowers hedge floating rate debt, foreign buyers hedge currency risk with basis swaps, and everyone relies on payment system harmony and accounting simplicity to reduce credit risk and financial statement impact. The ecosystem is made complex by, and is informed by, all of the alternative markets which the instruments touch. There are similar trigger and fallback provisions for derivatives and structured finance transactions which carry their own idiosyncratic market needs and preferences—but the fallback provisions have not fully aligned between all asset classes.

Transfer of Systemic Funding Risk

LIBOR provided an advantage to lenders who rely on earning a consistent spread from a loan. When the lender's cost of funding rose, it did so for all lenders and was paid for by borrowers—that cost of funds was the core of every LIBOR setting and reflected funding market conditions as well as general interest rate conditions. However, the most likely result of bank funding stress is to see a decline in SOFR versus LIBOR as "flight to quality" will lower the secured overnight rate while the unsecured interbank lending market rates increase.

Borrowers and lenders will need to develop a pricing mechanism, which recognizes the increased systemic risk for the lender or simply passes the increased risk to the borrower in the form of additional spread. The idiosyncratic risk of a single lender's increase in cost of funds versus the general funding market remains a risk for each lender.

APPENDIX: Houlihan Lokey's LIBOR Transition Advisory Engagement Framework

Action	Expression	Manifestation
Activate	**Discipline and Clarity** Activate or establish your transition program by extracting your key issues from the complexity and uncertainty around the topic	▪ Workshops for teams and leaders to inform and set knowledge levels ▪ Risk and issue identification meetings ▪ Gap analysis versus expected market events ▪ Program design—outright or advisory ▪ Information and analysis sessions for senior management
Accelerate	**Direct Engagement** Accelerate your program with authentic rates, market experience, and expertise	▪ Pricing and structuring considerations for new products ▪ Buy, sell, and amend strategies on legacy products ▪ Mechanics and impacts of moving to backward-looking overnight versus forward-looking term rates ▪ Evaluate fallback changes across all asset types and jurisdictions ▪ Identify springing basis risk from nonsimultaneous conversion ▪ Transfer pricing policies
Ascertain	**Quantitative Discovery** Ascertain and calculate risk and potential outcomes	▪ Portfolio and business level risk quantification relative to defined scenarios ▪ Model review and remediation ▪ Transition heuristics for nonsimultaneous conversion among risk categories ▪ Valuation impact analysis
Augment	**Skilled Execution** Augment your teams to accelerate program components	▪ Contract review ▪ Contract negotiation and amendment ▪ Advise on document handling process/technology
Anticipate	**Governance Support** Anticipate the needs of customers, management, shareholders, boards, and regulators	▪ Write or advise on communications to all parties; forecast results of policy ▪ Prepare reports to boards or senior management on preparedness or achievements ▪ Prepare regulatory response documents
Avert	**Forestall Adverse Outcomes** Avert negative selection, unintended consequences, and litigation	▪ Program outcomes validation and benchmarking ▪ Monitor and analyze industry and market developments relative to program milestones ▪ Advise on litigation prevention strategy (safe harbors/benchmarking) particularly relative to bilateral or consumer debt ▪ Generate audit materials

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