the demise of LIBOR: what to expect

by **Ira** Kawaller

Although LIBORs continue to be the most widely used benchmark interest rates in the US, their days are numbered. Largely due to concerns about manipulation, regulators and major market participants are forging ahead with plans to supplant the current reliance on LIBORs as benchmark interest rates with an alternative set of rates by the end of 2021. By all indications, the heirs apparent for benchmark interest rates are interest rates based on secured overnight financing rates (SOFRs), which reflect financing costs in the overnight repo market for government securities. Being derived from observed transactions rates, SOFRs are expected to be less susceptible to market manipulation than the survey-based LIBOR postings.

Ultimately, a transition to new benchmark interest rates would provide for widespread reliance on these substitute benchmarks across a diverse set of institutional funding sources, with comparability of designs in related derivatives. While aspects of the transition have yet to be worked out, when all is said and done, the financial landscape would be best served if hedgers can readily transact derivative contracts that allow for locking in sequences of interest rate resets over the period when LIBOR gets phased out, where the original pre-transition hedge objectives would still be realized. Unfortunately, that outcome seems quite unrealistic during the transition phase.

To orient the issue, it's important to appreciate the difference between the way LIBORs work today as benchmark interest rates and how the SOFR-based benchmarks will work in the future. In both cases (i.e., LIBOR-based debt and SOFR-based instruments) lenders and borrowers will agree to the principal amounts, accrual periods, and the reset and settlement dates; but LIBORs are determined as of reset dates (defined as the starting date of an accrual period for which a new rate would be applied), while the effective SOFRs will be determined in arrears. That is, we'll know the LIBOR that will apply in each accrual period at the start of each period, but we'll only get to know the effective interest rate in SOFR-based funding at the end of each accrual period.

Beyond that, the applicable money market rate under the SOFR regime is currently determined with either of two methodologies. For some instruments, that interest rate is calculated using the average of the overnight rates during the accrual period. For others, the calculated rate is the compounded daily overnight rate. This dichotomy makes it tricky for developers of SOFR-based derivatives. Conceivably, they could – and in fact, do -- build two distinct derivatives reflecting these two calculation designs. Practically speaking, the difference between these two respective calculations would likely be trivial – as in less than a basis point in most cases, but still…

The potential problem for entities with current hedges that extend beyond the transition date is that their initially expected hedged outcomes may not be realized. For example, if, at present, a LIBOR-based exposure has been hedged with a properly structured LIBOR-based derivative – i.e., one where the derivative's notional value is set to be equal to the principal amount being hedged and where starting and ending dates, settlement dates, and reset dates of the derivative mimic those of the exposure's accrual periods – the hedge outcome will be known with certainty from the start of the hedge, as long as the exposure and the derivative remain unchanged through their respective lives. For instance, a properly structured LIBOR-based debt hedged with a LIBOR-based swap will foster a realized interest expense equal to the swap's fixed-rate plus or minus any spread to LIBOR dictated by the original (unhedged) variable interest rate exposure.

Upon transition to an alternative benchmark interest rate, however, a different post-hedge interest rate could be realized. A difference could arise because of either of two possible developments. The first has to do with the spread applied to the new benchmark; and the second has to do with the introduction of arrears rate fixing.

With respect to this first concern, it should be understood that both parties to any benchmark-based debt instrument should be negotiating and agreeing to an all-in rate, consisting of the benchmark plus the spread. In such negotiations, the "correct" spread should represent a value consistent with the difference between the credit quality of the benchmark rate and the credit quality of the debtor. Thus, different credit qualities for different benchmark rates should justify different respective spreads. Exactly how the spread in any given transition will be determined, however, is yet to be determined, fostering at least some degree of uncertainty and hence basis risk.

A second source of uncertainty would arise as a consequence of SOFR pricing in arrears. If the hedge existed in a stable interest rate environment and if the "correct" spread were applied after the transition, the originally expected post-hedge effective interest rate would be realized before and after transition. On the other hand, if, during the accrual period, interest rates generally rise, the cost of borrowing under a SOFR-based rate would be higher than that under LIBOR pricing (had it existed); and conversely, if interest rates generally move lower during the accrual period, the SOFR-based funding costs would be cheaper.

The accompanying table shows a history of 1-month LIBOR with 1-month daily averages of SOFR. We assume accrual periods with each accrual period commencing on the first business day of the month. Critically, the appropriate LIBOR for that start date is the rate posted two London day's prior.

During this time period, one-month LIBOR averaged 11 basis points higher than the average of SOFRs over the corresponding term, but the differences were highly variable. At one extreme, LIBOR was almost 19 basis points higher than its associated SOFR, and at the other extreme, LIBOR was lower by less than a basis point. Importantly, this sample is extremely limited, and actual differences that might arise during the transition period could turn out to be much greater – or not.

In any case, whether the transition will prove to be beneficial to the debtors' side or the lenders' side remains to be seen.

This outcome will largely be determined by the magnitudes of the revised interest rate spreads and to a lesser extent by the path of overnight interest rates during the transition period. Rising overnight interest rates during any accrual period post transition would work to the detriment of the borrower and to the benefit of the lender, and vice versa with declining overnight rates.

Reset Date	Two Day's Prior	1-Mo. LIBOR	Average SOFR	Difference
5/1/18	4/27/18	1.907	1.730	0.177
6/1/18	5/30/18	1.982	1.837	0.146
7/2/18	6/28/18	2.092	1.914	0.178
8/1/18	7/30/18	2.082	1.917	0.164
9/3/18	8/30/18	2.104	1.968	0.135
10/1/18	9/27/18	2.256	2.184	0.072
11/1/18	10/30/18	2.299	2.221	0.079
12/3/18	11/29/18	2.349	2.351	-0.001
1/2/19	12/27/18	2.522	2.472	0.050
2/1/19	1/30/19	2.509	2.404	0.105
	Maximum	2.522	2.472	0.178
	Minimum	1.907	1.730	-0.001
	Range	0.615	0.742	0.180
	Average	2.210	2.100	0.110

Finally, the development of a viable SOFR derivatives market place requires a foundation in the futures market. That is, over-the-counter derivatives dealers won't offer these products unless they can lay off their risk somewhere; and that somewhere is a futures market where SOFR futures contracts are actively traded. Currently a number of SOFR futures contracts have been listed on futures exchanges. And although liquidity in these contracts is quite limited at this time, interest in these contracts will likely grow as the date for a benchmark transition becomes more imminent.

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author

Ira Kawaller

Ira Kawaller is the principal and founder of Derivatives Litigation Services. Before Derivatives Litigation Services, Kawaller was the President of Kawaller & Co., LLC, which assisted commercial enterprises with their strategic and accounting issues pertaining to derivative instruments. Kawaller holds a Ph.D. in economics from Purdue University and has held adjunct professorships at Columbia University and Polytechnic University.