Special Topic: The Impending End of LIBOR

Twelve years after the publication of the article "Is LIBOR Broken"[1], the final chapter of the LIBOR saga may soon be upon us. Global regulators seem intent on pushing ahead with their plan to phase out LIBOR by the end of 2021. This comes in spite of significant opposition from large and small US banks [2] [3] to SOFR as the benchmark replacement for LIBOR and a decided lack of user sponsorship (Only 0.3% of all USD interest rate swaps traded in 2019 were indexed to SOFR). We will briefly discuss the new reference floating rate (RFR) benchmarks, the latest LIBOR replacement methodology, calculate the replacement rate if the transition were to happen today, and share some thoughts on how asset and liability managers may begin to transition their portfolios as December 2021 approaches.

Regulators' Preferred RFR Benchmarks: SONIA, ESTR and SOFR

Regulators could have selected pre-existing rates as the regulator-preferred RFR benchmarks (RPRFR) – indeed the Bank of England did exactly that by selecting SONIA. However, US and European regulators elected to go with new rates. The ECB did not like the low transactional volumes in EONIA (€3Bn/day), while the Fed skipped over Fed Funds because they felt that the Federal Home Loan Banks (FHLB) were too dominant in the Fed Funds market. The ECB went with ESTR which has almost 10-times EONIA's volume because it included overnight financing by both financial and non-financial entities. The Fed put its weight behind SOFR, pleased with its $1Tn daily transactions but chose to overlook the important fact that LIBOR (an unsecured term bank rate) is fundamentally different in nature than SOFR (a secured overnight borrowing rate collateralized by Treasury bonds).

FIGURE 1. POSSIBLE EXISTING LIBOR REPLACEMENT RATES VERSUS REGULATOR-PREFERRED RFR BENCHMARKS FOR USD, EUR AND GBP

Currency	Existing Rate	Existing Daily Volume	New Rate	New Rate Daily Volume
USD	Fed Funds	$70Bn	SOFR	$1Tn
EUR	EONIA	€3Bn	ESTR	€30Bn
GBP	SONIA	£40Bn	SONIA	£40Bn

Sources: Federal Reserve, Bank of England, ECB, various derivative counterparties

Replacement Methodology

After various user surveys, the LIBOR replacement methodology has converged to the following: A term LIBOR (e.g. 3m LIBOR) would be replaced by the overnight rate (SOFR) via a compounded daily setting in arrears plus a spread. The spread would be based on the lookback of the median difference between the term-equivalent of the two rates (3mL vs SOFR) over the last 5 years.

[1] "Special Topic: Is LIBOR Broken" by Scott Peng, Monty Gandhi and Alex Tyo, April 2008, Citi Research
[2] Letter from CEOs of ten community banks to Federal Reserve, FDIC and OCC, Feb 26, 2020
[3] Letter from Treasurers of 10 largest non-money-center US banks to Federal Reserve, FDIC and OCC, Sep 23, 2019

Replacing a term rate such as 3m LIBOR with an overnight rate such as SOFR is far from a simple direct substitution. The "compounded daily setting in arrears" LIBOR fallback methodology means that the applicable rate over a 3-month period would not be known until the end of that period. This uncertainty is highly undesirable from a corporate cashflow planning perspective. Corporate asset-liability managers would have to use many SOFR-fixed swaps and SOFR-FRA (forward rate agreements) transactions to replicate the certainty they currently have with 3m LIBOR. The one outcome we are sure of is that using SOFR would lead to a lot more derivative business for money-center banks.

We believe the ECB should not adopt the same LIBOR replacement methodology as the US and UK as the last 5-year lookback period would only capture an easing cycle in Europe. Calculating an EURIBOR-to-ESTR fallback adjustment spread with that methodology would therefore have an implicit easing bias built in. This cyclical bias is clearly not desirable if the intent is to create a robust spread adjustment. By comparison, both US and UK experienced both rate cut and rate hike cycles in the last 5 years. To achieve a robust spread, the ECB should use historical spread data from earlier interest rate tightening-cycles to complement the more recent easing-cycle spread data.

Regulators Permit Use of Alternative Non-LIBOR Floating Rates

While US and European regulators have placed their stamps of approval behind SOFR and ESTR, they are not prohibiting the use of other non-LIBOR RFRs in assets, liabilities and hedges. This choice will be helpful in navigating a path away from LIBOR as the end-of-2021 transition approaches. US hedgers and investors who don't wish to use SOFR are thus free to deploy alternative RFRs including Fed Funds, Prime, Treasury-Bill, Ameribor, COFI, CMT and many others. The RFR choice will depend on the risk profile and objectives of each entity – there is no one-size fits all solution. All parties should undertake a detailed analysis before deciding on the appropriate RFR to use.

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FIGURE 2. SOME ALTERNATIVE US RFRS

Alternative RFRs	Available Maturities	Liquidity of Basis Swap vs LIBOR	Comment
Fed Funds	O/N	Excellent	Highest liquidity basis swap instrument in the market today.
Prime	O/N	OK	Primarily used by middle-market corporations. Historically FF+300bps, now 300-325bps given FF range.
OBFR (Overnight Bank Funding Rate)	O/N	Low	Not much basis swap activity currently. High daily transactions ($100-200Bn)
T-Bill	4-, 8-, 13- and 26-wk, 1yr	Low	Infrequently traded since the end of SLMA T-Bill FRNs.
Ameribor	O/N, 30-day, 90-day	Low	Not much basis swap activity currently.
COFI (Cost of Funds Index, Various Districts)	1m (in arrears)	Low	Not much basis swap activity currently.
CMT (Constant Maturity Treasury)	2y, 3y, 5y, 7y, 10y, 20y, 30y	OK	Historically very high liquidity when used by mortgage servicers and pipeline hedgers in late 90s/early 00s

Levels as of 29 Jun 2020. Sources: Bloomberg, Federal Reserve, Advocate

While the liquidity of basis swaps for most of these instruments is currently low, it reflects the low activity to date. Increased end-user adoption and usage of these RFRs will naturally increase the liquidity of the basis swaps linked to these RFRs.

LIBOR Could Go Away Before or After December 31, 2021, or Not

The stated deadline for LIBOR transition is December 31, 2021, at which time global regulators would stop forcing banks to publish LIBOR. But that does not mean LIBOR would disappear after 2021 – the LIBOR transition deadline could be delayed or LIBOR may continue to exist after 2021. The Covid pandemic has pushed LIBOR transition to the back of the line in terms of corporate priorities, so regulators could decide to extend the deadline. Alternatively, LIBOR could continue to exist after 2021 as there are over $100 Trillion notional derivatives linked to LIBOR and it may well be in global banks' interest to continue publishing LIBOR even after regulators stop mandating LIBOR publication.

The end of LIBOR may also be moved forward in time if regulators determine that LIBOR is "no longer representative of the underlying market". That rationale seems rather bizarre since it is the entire reason for moving away from LIBOR. If such a determination is made, regulators could trigger a "pre-cessation" clause prior to the end of 2021 and force the fallback methodology to take effect immediately. Market participants should therefore be fully prepared today for the possibility that

LIBORs could disappear at any time and be permanently replaced by the appropriate RPRFR benchmark plus a spread.

The Fallback Calculation – What If LIBOR Disappears Today

The LIBOR fallback methodology is close to finalized for USD and STG LIBOR. The ECB has not promulgated the methodology for EURIBOR fallback calculation at the present time. Based on the latest USD and GBP LIBOR fallback methodologies and assuming the same methodology for EURIBOR (despite our stated misgiving about the implicit cyclical bias of EURIBOR using the same fallback methodology as US/GBP LIBOR), we can calculate what various LIBORs and EURIBORs would become if a pre-cessation clause is triggered *today*. The adjustment spread to the RFRs can be calculated and applied to an average RFR over the future period. At the present time, we can safely assume the replacement RFRs would be constant over the ensuing period.

FIGURE 3. WHAT LIBOR WOULD LOOK LIKE IF THE "PRE-CESSATION" CLAUSE WERE TRIGGERED TODAY

Interest Rate	Fallback RFR	Fallback Spread Adjustment to RFR	Current LIBOR Level	New LIBOR Calculated with RFR	Change (bp)
USD 1m LIBOR	SOFR	0.13%	0.178%	0.213%	+3bp
USD 3m LIBOR	SOFR	0.27%	0.308%	0.346%	+4
USD 6m LIBOR	SOFR	0.38%	0.361%	0.457%	+10
GBP 1m LIBOR	SONIA	0.04%	0.092%	0.104%	+1
GBP 3m LIBOR	SONIA	0.12%	0.143%	0.184%	+4
GBP 6m LIBOR	SONIA	0.26%	0.290%	0.321%	+3
1m EURIBOR	ESTR	0.08%*	-0.507%	-0.468%	+4
3m EURIBOR	ESTR	0.13%*	-0.413%	-0.415%	-0
6m EURIBOR	ESTR	0.22%*	-0.287%	-0.331%	-4

Levels as of 29 Jun 2020.
**Assuming USD and GBP LIBOR fallback methodology is adopted as-is for EURIBOR fallback spread calculation.*
Sources: ICE, ECB, Federal Reserve, BOE, Advocate

A positive change (last column) means that the LIBOR setting under the replacement methodology would be higher than the current LIBOR level. If LIBOR were to go away tomorrow, US corporations that pay floating LIBOR could see a 3-to-10bp rise in their rate set (assuming SOFR doesn't change through the period). This is a useful table to keep handy and we would be happy to send it to any reader who would like periodic updates. We will also post periodic updates to Advocate's website (www.advocatecapmgt.com).

To Switch or Not To Switch, That is the Question

Hedgers and investors have to decide when and how to switch away from LIBOR to either a regulator-preferred RFRs or one of the other RFRs. There are some considerations that may deter switching 100% of one's LIBOR exposure over to one of the RPRFRs:

1. Liquidity of hedging instruments.
    a. SONIA. As it has existed for many years, derivatives based on SONIA offer excellent liquidity.
    b. ESTR. While ESTR is a new index, the ECB has mandated that it be hard-wired to EURIBOR at an 8.5bp spread (EURIBOR = ESTR + 8.5bps). ESTR should therefore command ample liquidity given that EONIA-based swaps trade with high liquidity.
    c. SOFR. Much as US regulators like to tout SOFR as the next greatest RFR, its liquidity in swaps is inferior to fixed-LIBOR or LIBOR-Fed Funds basis swaps, especially beyond the 2-3yr point. As we noted in the opening paragraph of this article, the trading volume of SOFR-based swaps is less than 1% of LIBOR-based swaps. SOFR liquidity is likely to remain poor until this flow imbalance changes.
2. Availability of other (more liquid) RFRs rather than the regulator-preferred RFRs.
3. Let it convert naturally.

Who should NOT Immediately Convert Liabilities & Swaps to Regulator-Preferred RFR Benchmarks (Especially SOFR)

There are two issues to consider before converting assets, liabilities or hedges over to one of the new regulator-favored RFR benchmarks: the underlying maturity of the asset, liability or swap to be converted, and the entity's ability to issue non-LIBOR RFR-linked liabilities.

US hedgers with predominantly long-maturity assets, liabilities or swaps should refrain from immediately converting LIBOR-based cashflows due to the limited liquidity of long-dated RPRFR-swaps, while those with shorter-maturity exposure (≤3yr) should be able to convert sooner. The already poor liquidity of long-dated SOFR swaps could be exacerbated if a significant portion of entities with long-dated receive-fixed-vs-LIBOR swaps decides en-masse to convert their swaps into fixed-vs-SOFR.

While there has been significant SOFR-based FRN issuance in 2020, investor reception has been almost exclusively limited to investment-grade financial institutions. Of the 100 or so SOFR-based FRNs issued in the second quarter, **all** were issued by banks or financial institutions. There has been little or no issuance of securitized products or high yield bonds linked to SOFR. Issuers that do not (or cannot, due to lack of market acceptance) issue SOFR-linked FRNs should NOT alter their swap hedges from fixed-LIBOR to fixed-SOFR as that would result in a mismatch between their hedge and the FRNs they issue.

Opting to wait until there is better liquidity (or alternatives) in long-dated basis swaps is prudent. But if a decision is made to switch, one should do so sooner rather than later due to the highly limited liquidity of long-dated SOFR-swaps and the anticipated dash as December 2021 approaches.

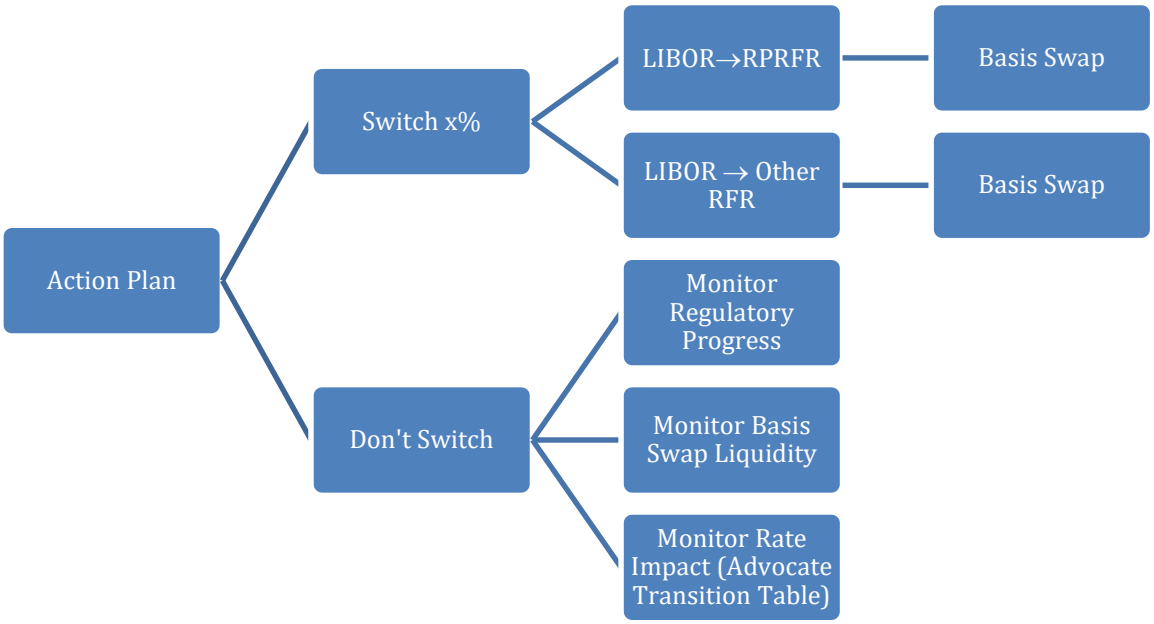
We believe the following entities should refrain from immediately converting the LIBOR component of their liabilities or hedges into RPRFRs (mainly SOFR) :

1. Defined benefit (DB) pension plans: Low liquidity for long-dated SOFR swaps
2. Insurance companies hedging fixed rate annuities
3. Mortgage hedgers (for 10+yr swaps)
4. Corporations with existing swaps of ≥ 10yr tenors
5. Non-financial and high-yield corporations: Low investor acceptance of SOFR-based FRNs issued by non-financial and HY companies.

Have A Plan?

Investors, hedgers and liability managers should develop actionable plans to meet the challenges posed by the end of LIBOR. While there is still 18 months to go before the end of LIBOR, waiting until the last minute to implement changes can only bring grief. A sample action plan is provided in the following chart.

FIGURE 4. SAMPLE ACTION PLAN TO ADDRESS THE END-OF-LIBOR



Source: Advocate

Any end-of-LIBOR action plan should include the following considerations:

1. Don't switch. A common market-convention fallback methodology means that any LIBOR-based cashflows would automatically be converted to a regulator RFR plus a spread if LIBOR were to cease to exist. Those who choose not to switch should actively monitor ongoing regulatory progress, liquidity of basis swaps and our LIBOR transition impact table to get real-time insight into the impact of LIBOR cessation. Asset and liability managers should ensure that the LIBOR fallback language and methodology in floating rate notes evolve consistently with those of swaps.
2. Some switching before Dec 2021. There are reasons to actively switch out of LIBOR into another RFR rather than passively rely on LIBOR fallback:
    a. Gain some familiarity with the RPRFR or another non-LIBOR RFR.
    b. Prepare back/middle office to handle the new RFR cashflow calculation methodology
    c. Be one of the "early birds". There is usually a mad dash prior to any deadline and we expect the LIBOR transition deadline to be no different. A concerted flow by hedgers in a short time will likely make hedging more expensive and illiquid.
3. A roadmap to guide the transition to the end of LIBOR. Every entity should have a plan detailing the decision to shift out of LIBOR, the percentage shift from 100% LIBOR-based floating rate exposure to an end-of-2021 target, the path to get there, and issues to monitor along the way.
4. Flexibility to change the game plan if circumstances change.
    a. Improved acceptance of SOFR-FRNs for other issuers
    b. Improved SOFR swap liquidity
    c. Regulatory timeline change

Advocate Capital Management provides risk mitigation strategies and solutions for institutional investors and corporations. We stand ready to help you with the design and implementation of a customized LIBOR transition plan as the end of LIBOR approaches.

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