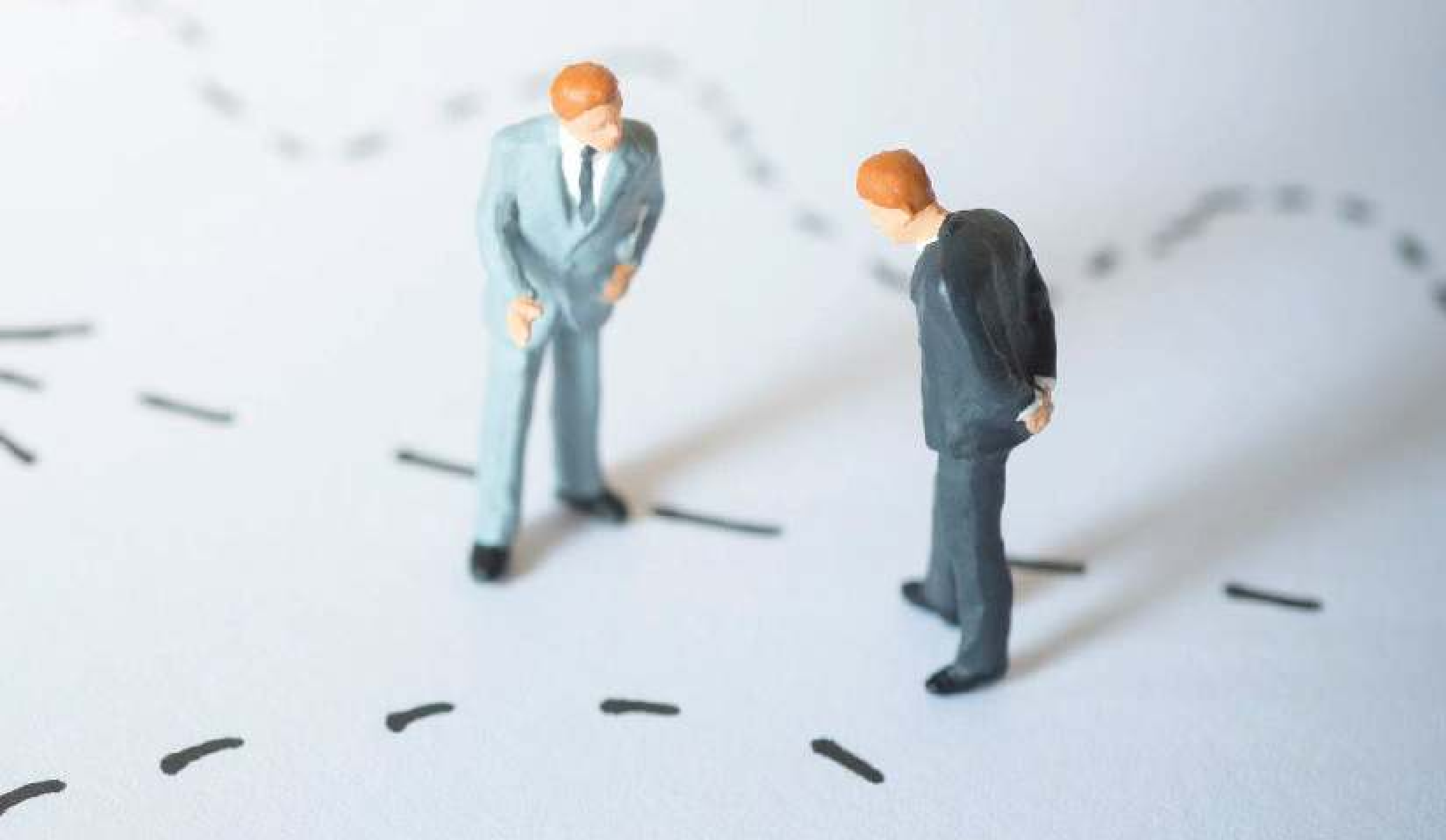
LIBOR-SOFR TRANSITION



An Educational Cheat Sheet

Derivative Logic

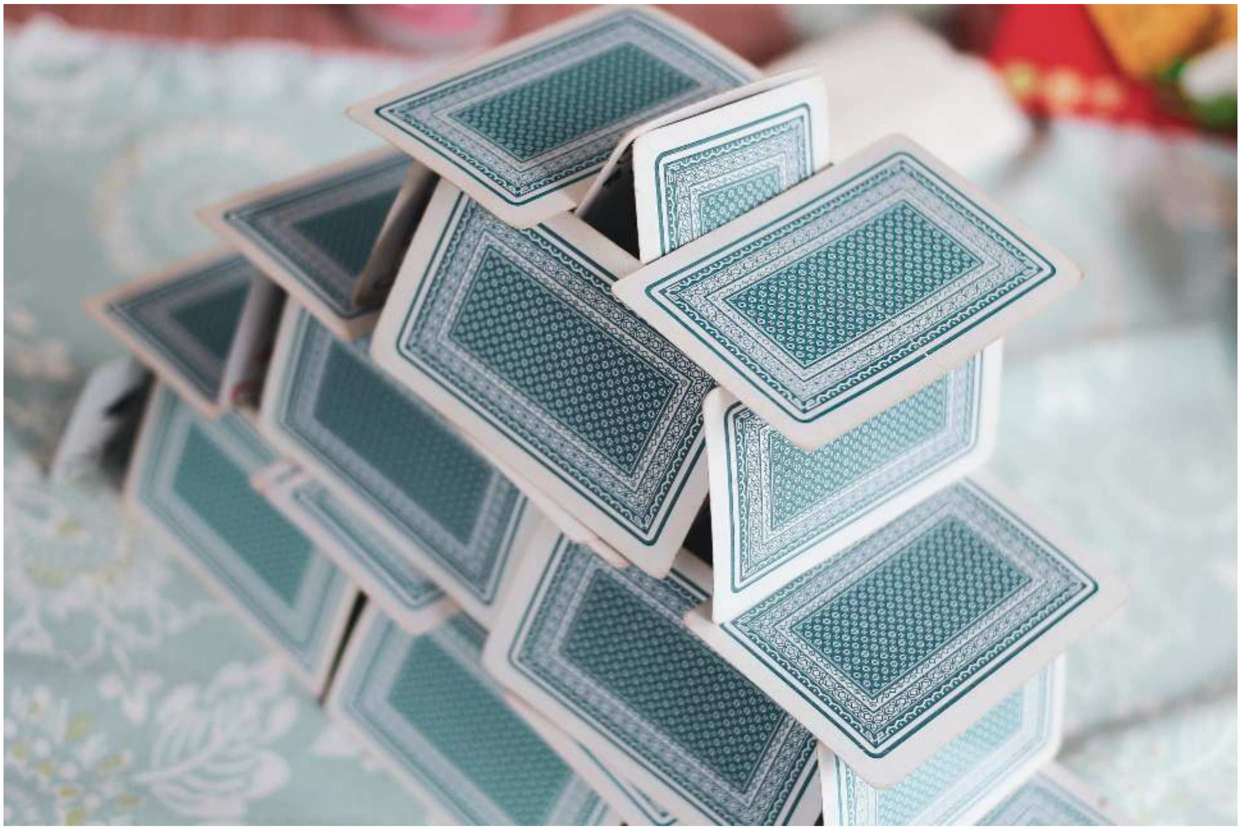
What's happening with LIBOR?

Since the mid-1980's, the London Interbank Offered Rate, better known as LIBOR, has been used to price trillions of dollars' worth of financial products: everything from securities, student loans, interest rate hedges, credit cards and mortgages.

The following is a quick summary of the questions we're asked every day about the looming LIBOR transition. It's an overview of what's happening, what it means for borrowers, lenders and legal counselors, and a summary of what each should be doing now to prepare. Does Freddie's recent announcement on SOFR have you scrambled? Read on for a guide on what to do next.

LIBOR became untrustworthy

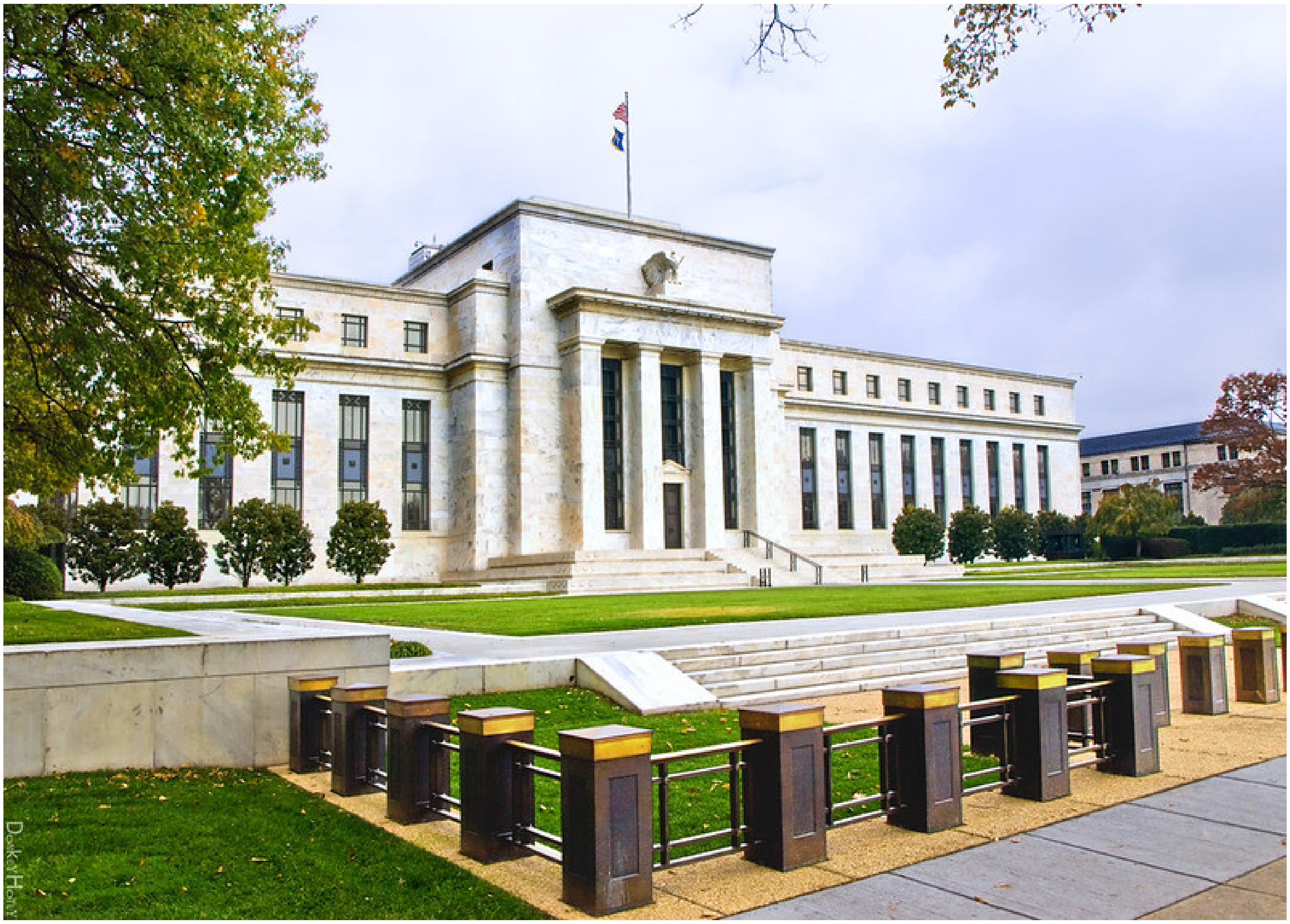
For real estate specifically, LIBOR is a key component of interest rate calculations in floating and interest-only loans as well as fixed-rate loans locked via a swap rate (e.g. CMBS). After the 2008 financial crises, a world-wide LIBOR manipulation scheme by large banks was discovered, and a litany of scandals and billion-dollar fines ensued, prompting regulators to ask: Is LIBOR serving the true purpose for which it was intended? Is it the best we can do? In short, the answer was an unequivocal NO. As such, regulatory officials have been slowly but surely planning for LIBOR to be replaced and are steadily implementing a plan for a transition to “alternative benchmarks” by the end of 2021.



Who's running the LIBOR transition show?

The Alternative Reference Rates Committee, aka "ARRC". It's a group of bankers, attorneys and regulators, organized by the Federal Reserve Board and the New York Fed, to help ensure a successful transition from LIBOR to a more robust reference rate. The ARRC has recommended that the Secured Overnight Financing Rate ("SOFR") replace LIBOR, but isn't forcing anyone, legally, to use SOFR. Using SOFR in place of LIBOR is strictly **voluntary**.

You can learn more about ARRC via their website.



What is SOFR? Why is it the preferred replacement for LIBOR?

Unlike LIBOR, SOFR is a broad measure of the cost of borrowing cash overnight, *collateralized* by U.S. Treasury securities. It's based on actual overnight loans between parties, which take place in the repurchase agreement ("repo") market. It's published by the New York Fed each business day at approximately 8:00 a.m. Eastern Time.

LIBOR, in contrast, was originally designed to represent the interest rate banks charge each other for loans on an *uncollateralized* basis. LIBOR is an "estimated" rate in that it isn't based on actual loan activity between banks, but rather something like, "If Bank X were to loan money to Bank Y, then this is the interest rate that would be charged. By the way, Bank X hasn't actually loaned money to Bank Y, and it may never do so in the future, but if it did, LIBOR is the interest rate that would be charged." In essence, LIBOR is a guess, an opinion. And since banks haven't really lent to one another via LIBOR in years, LIBOR doesn't represent what it's supposed to. Given the trillions of dollars of financial transactions based upon LIBOR, that's a big problem.

Conversely, SOFR, since it's derived from actual transactions between parties, is deemed to be a better representation of the cost of money overnight, again, *collateralized* by U.S. Treasury securities. Since SOFR is derived from overnight loans that are collateralized whereas LIBOR is not, SOFR should generally be a *LOWER* rate than LIBOR.

Will LIBOR suddenly become unavailable after 2021?

No.

Since its standardization in 1984, LIBOR has been published daily by 18 large international banks, who are asked every day, "At what interest rate would you lend funds, were you to do so by accepting requests from other banks?" There is a total of 35 IBOR rates posted each day; interest rates are compiled for loans with seven different maturities for each of 5 major currencies: the Swiss franc, the Euro, the British pound, the Japanese yen, and the U.S. dollar. For the major currencies, with the exception of the U.S. Dollar, the new index will be based on unsecured lending rates.

After year-end 2021, most of these 35 IBOR rates will still be published, including LIBOR, it's just that the banks publishing them won't be legally required to do so. However, LIBOR will slowly but surely become unreliable as a representative benchmark, hence it's best to begin establishing a game plan now for LIBOR to ultimately become unavailable.

Is SOFR the only replacement for LIBOR?

No.

While SOFR is gradually gaining market share, recent economic events have exposed serious weaknesses in its construction (repo market turmoil anyone?), allowing other alternative benchmarks, which many believe are more suitable for specific loan products or markets, to gain traction.

As an example, some regional banks and specialty lenders (like in commercial real estate) have said they would prefer a LIBOR replacement rate that incorporates a credit risk element. Remember, SOFR is an interest rate for an overnight loan *collateralized* by U.S. Treasury securities, hence it's nearly risk-free, whereas LIBOR is *uncollateralized* and hence reflects the credit risk inherent in the LIBOR -based loan. SOFR doesn't represent any credit risk whatsoever, whereas LIBOR does. Other, non-SOFR replacements to LIBOR that are gaining traction include:

- The AMERIBOR unsecured overnight rate, which is based on unsecured loan markets (kinda like LIBOR). AMERIBOR reflects the actual unsecured borrowing costs of more than one thousand US banks and other financial institutions, largely community and regional banks that lend to smaller institutions.
- The , which measures yields on one, three and six months. The index is a forward looking and credit sensitive, and operates similar to LIBOR, but better.
- Commercial Paper Rates, which are the interest rates charged to corporations for uncollateralized short-term loans. Published daily by the Fed's Board of Governors, the rates are derived from data supplied by The Depository Trust & Clearing Corporation (DTCC), a national clearinghouse for the settlement of securities trades and a custodian for securities, that taps nearly all aspects of the Commercial Paper markets.

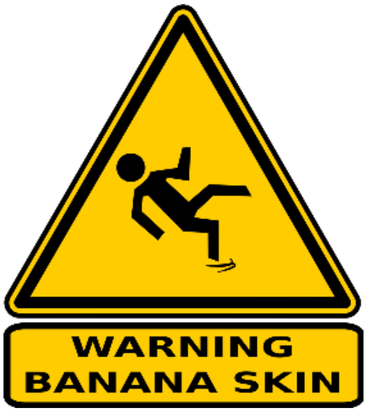
While we won't go into detail on why these SOFR alternatives may be better for you here, feel free to give us a call for a breakdown of the pros and cons of each. In the meantime, just know that *SOFR is not the end all, be all of LIBOR replacements; we'll likely end up with multiple replacements for LIBOR, with each designed to best serve different segments of the lending and hedging landscape.*

Fannie Mae and Freddie Mac recently announced they're moving to SOFR this year. Should I just plan on moving to SOFR too?

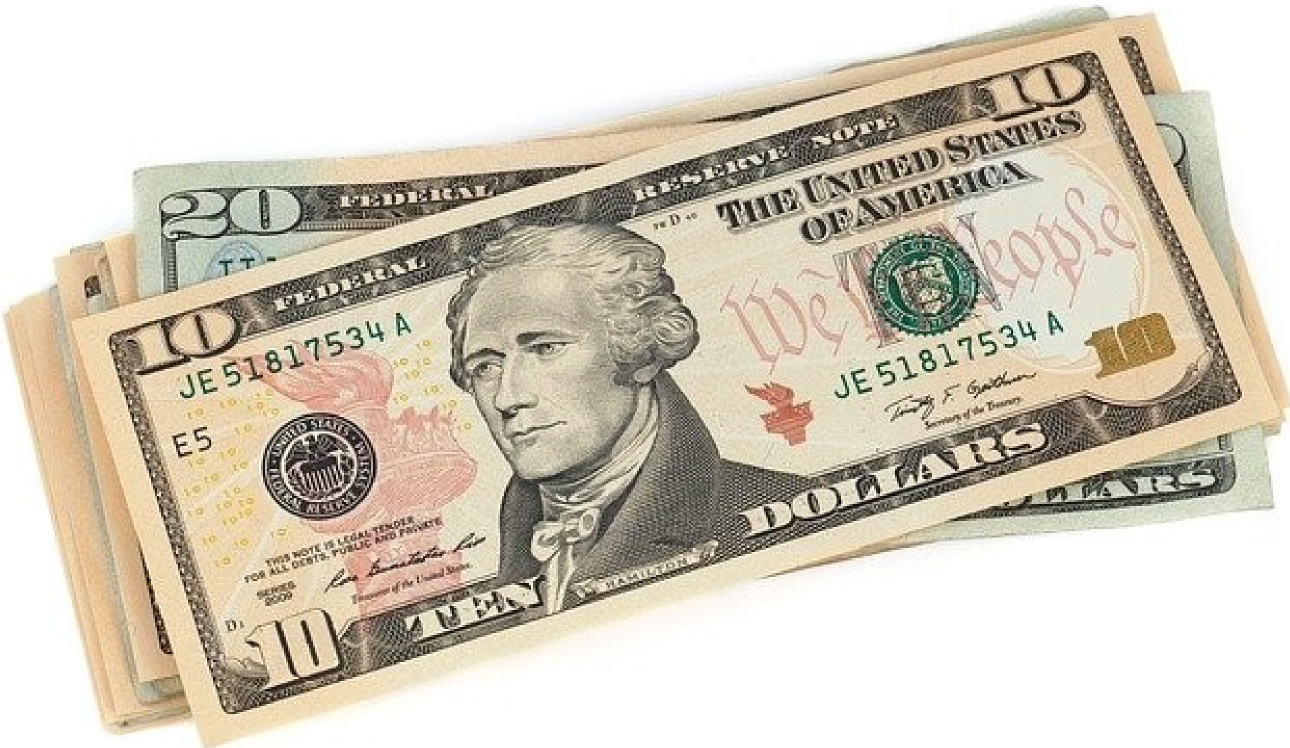
Perhaps.

Despite all the hoopla surrounding SOFR, it's got some major flaws, prompting some to look for other LIBOR replacements that better suit their business. What flaws you ask? Well…

- **Unexpected Spikes**. Because SOFR is based upon the repurchase "repo" markets, it's at the repo markets mercy. A spike in repo rates in September of last year resulted in SOFR soaring from 2.14% to an all-time high of 5.25% in a single day. Even though it quickly subsided to normal levels (with a little Fed manipulation), it left many in markets a little queasy. Wait, isn't SOFR supposed to be immune to manipulation? Shhh – don't ask the Fed – it's intervened in repo markets nearly everyday since September, to the tune of tens of billions of dollars, to help smooth out the spikes.
- **No forward curve.** In contrast to SOFR, LIBOR offers a full forward curve which gives markets the ability to borrow at "term" rates in various time increments – like 1,3 or 6 months – looking forward. SOFR is an overnight rate, offering no term rates of any kind. The ARRC has proposed a backward-looking, 30-day compound averaging methodology to help plug the hole, but markets aren't buying it as being a viable alternative to LIBOR's term offerings.
- **Lackluster liquidity.** Thus far, usage of SOFR by lenders and banks used for hedging interest rate risk has been light at best. Even with Fannie, Freddie and a handful of banks recently offering SOFR indexed bonds, we've yet to see a SOFR indexed loan in any industry, let alone an interest rate swap or cap indexed to SOFR. The slow adoption of SOFR is telling.



While it’s a certainty that SOFR will continue to gain steam and some of the issues above will be ultimately resolved, we doubt it will work itself out by the official December 2021 transition deadline. Fannie and Freddie’s recent announcements (you can read them here and here) that they’ll no longer be accepting LIBOR-based loans are their way of forcing markets to begin coming to terms with the transition, but frankly, we feel that that they are doing a disservice of sorts by forcing the issue so soon.



Do I also have to change the reference rate in my swap or rate cap if the reference rate in my loan changes?

Probably.

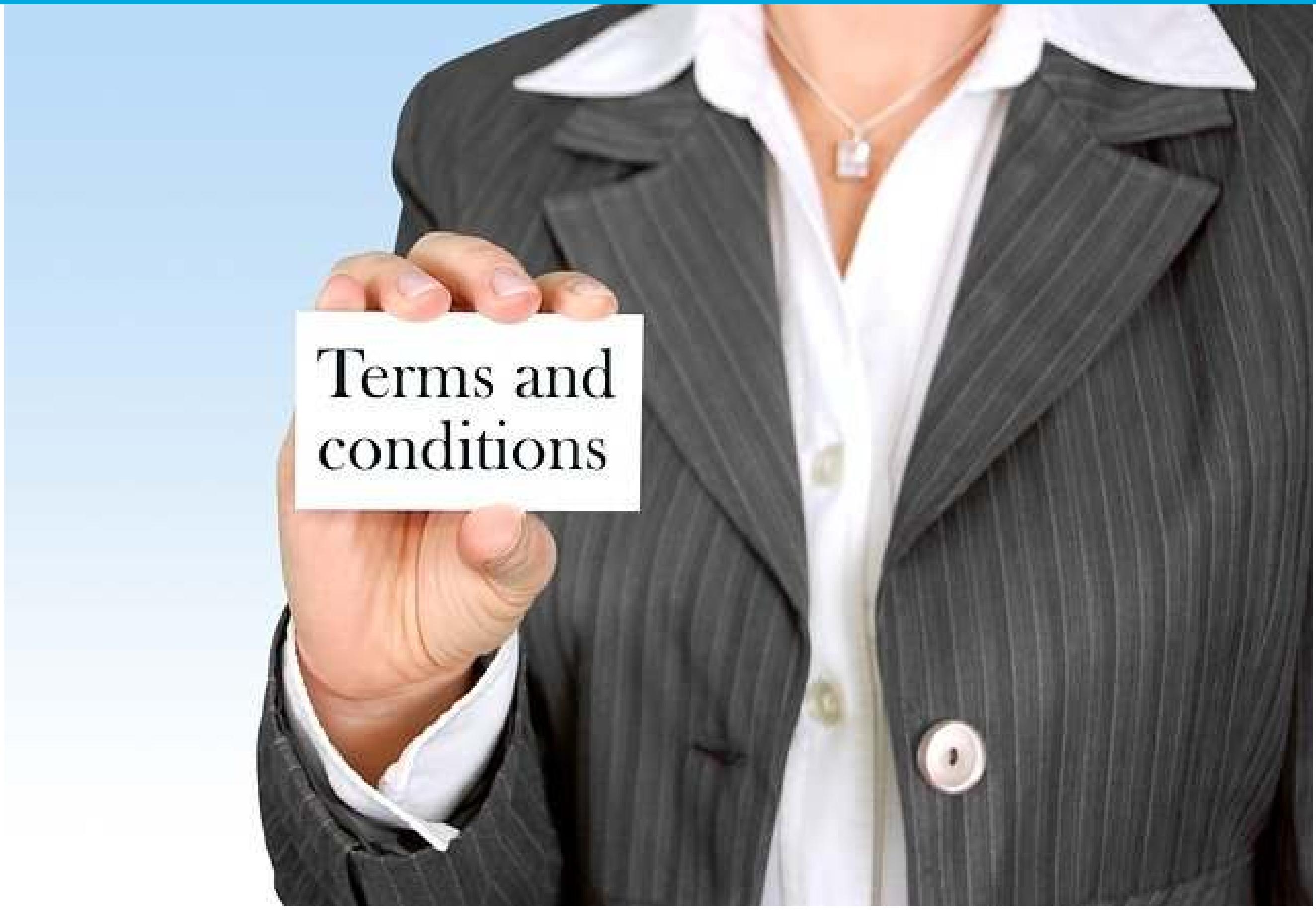
Given the potential numerical difference between LIBOR and its replacement, your interest rate swap or cap may become less effective when the LIBOR transition takes place, resulting in something markets call “basis risk” (the loan references one rate, SOFR, but your interest rate hedge references something else, like LIBOR). In such a case, you have a choice, leave the reference rate as is and suffer the consequences or change it so that it’s consistent with the index used in the loan. If you elect to change it, your hedging bank will likely charge you a fee to do so. How much? It depends and is tough to determine at this point given all the uncertainties. If you were to ask the hedging banks out there, none of them really know, and need time to figure it out on a case by case basis.

Over the longer term, the International Swaps and Derivatives Association (aka “ISDA”), the organization that creates the legal language that governs rate cap and swap agreements, will issue a declaration of sorts changing all LIBOR references in hedge agreements to SOFR (or whatever the chosen index ends up being) and the basis risk issue will become moot, assuming your loan is using the same new reference rate. When will ISDA issue this declaration? At this point, only ISDA knows. They’re waiting for the dust to settle like everyone else.

What should I being doing now to prepare?

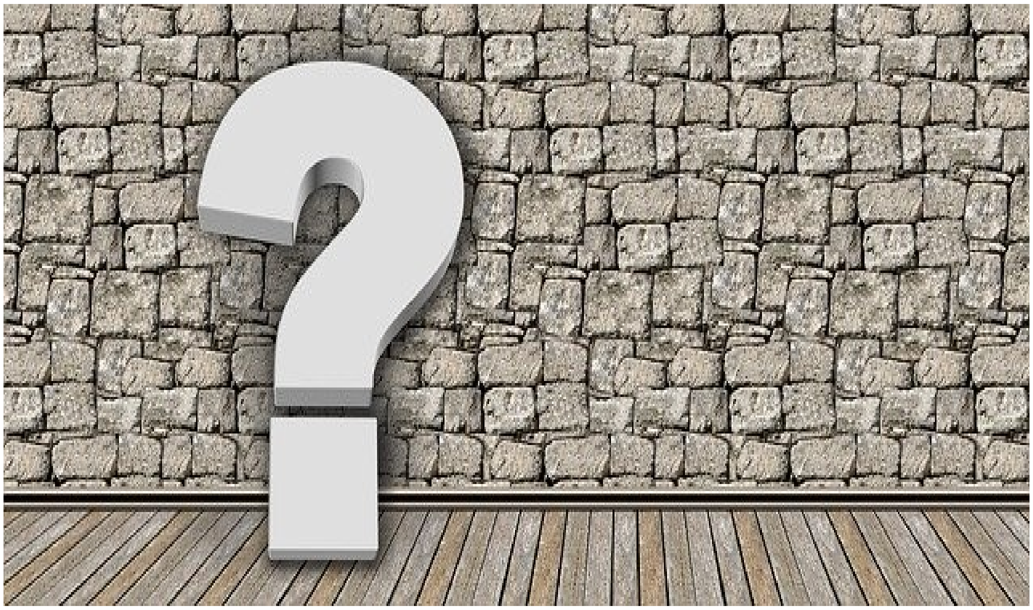
1. **Take an inventory.**

Regardless of the role you play in LIBOR -based financial transactions, be it as a borrower, lender or investor, the first step is to take an inventory of your financial instruments that utilize LIBOR as a benchmark, then segregate those that mature beyond the December 31, 2021 LIBOR transition deadline. This includes both existing financial contracts and those that are currently being considered.



2. **Determine the impact of the alternate benchmark.**

On loans: when reviewing your existing financial contracts that involve LIBOR, consider whether the adoption of a replacement to LIBOR will affect interest expense, and where there is an effect, whether to seek modifications of those agreements – including an adjustment to the credit spread – to better reflect your original intent as borrower, lender, investor, or legal representative. Further, consider whether it is necessary to include the transition away from LIBOR as a risk factor in public filings or other disclosure documents.



What is your Fall Back?

Ask yourself: If the publishing of LIBOR were to cease tomorrow, to what interest rate would the loan "fall back" to? How does this change impact me?

In reviewing loan agreements on a daily basis, trust us when we tell you that most loans would fall back to the Prime Rate. Big problem. Since Prime is currently 4.75% – well above LIBOR's 1.63% – defaulting to Prime creates a financial hardship for borrowers, and a commensurate risk of default to lenders. If borrowers suffer a financial hardship, the lenders will also suffer one as their borrowers leave. As an alternative to falling back to Prime, we often see loan agreements structured such that the floating index falls back to the last published LIBOR, that the loan would then use for its remaining term.

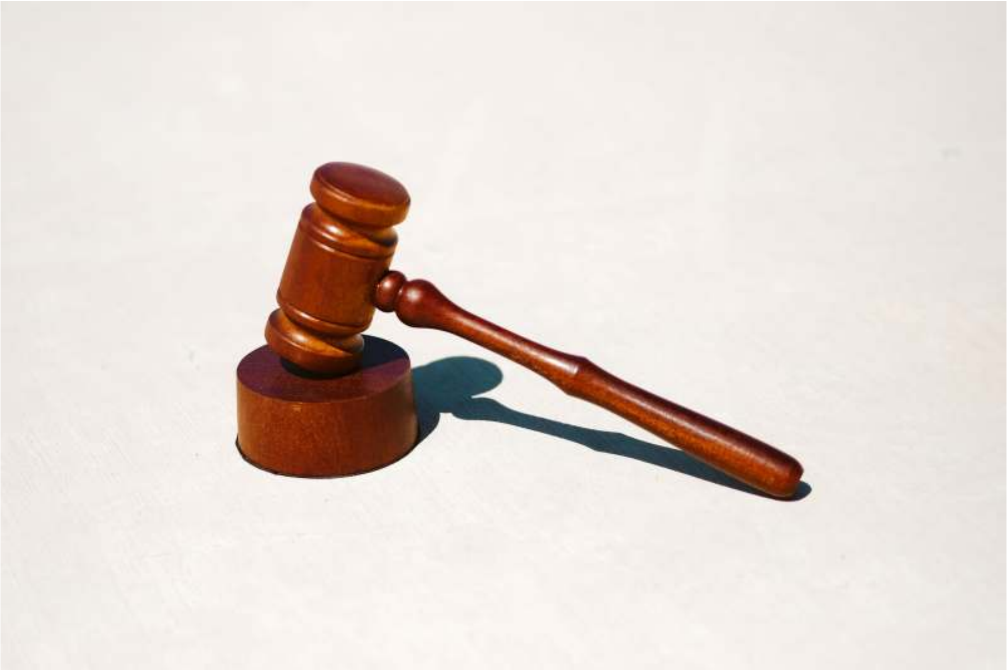
Potential big problem again, as this fallback creates a fixed rate loan – probably far from what was originally envisioned by both borrower and lender. Lastly, many loan agreements we see don't say anything at all about the possibility of LIBOR being unavailable or replaced by something else. A great situation for attorneys, not so much for lenders or borrowers. What does your loan agreement say about LIBOR being unavailable or replaced with something else? Don't know? You should.

On interest rate hedges, namely rate caps and swaps: ISDA is working to develop similar "fallback provisions" that should function in a similar way as loans do when addressing LIBOR's replacement.

Note that loan agreements are negotiated between borrower and lender and don't necessarily follow any national or global legal language standard, but contracts for interest rate derivatives do – via the ISDA master agreement. Should your legal counsel operate in a vacuum when deciding on how to address the looming change, the risk is high for inconsistencies to develop between what your loan agreement says versus what the derivative contract says regarding LIBOR's sunset. The threat of this inconsistency, and what it could mean for the effectiveness of your interest rate hedge, should be high on your LIBOR to-do list.

3. **Choice of the alternative benchmark to LIBOR – who decides?**

Remember that the official replacement to LIBOR hasn't been officially chosen yet with 100% certainty, and the use of SOFR as a LIBOR replacement is voluntary. In addition, given SOFR's structural issues, there will be several benchmarks that could serve LIBOR's purpose in loan agreements or for hedges at the end of the day. As such, if the LIBOR replacement isn't named in your contract, who decides which new, replacement benchmark to use once LIBOR disappears? The question becomes even more important if the replacement benchmark is numerically different than LIBOR (e.g. LIBOR at 1.60% and SOFR at 1.50%). Further, if the numerical difference between LIBOR and its replacement is significant, does it warrant a credit spread adjustment? If so, by how much? Who decides, lender or borrower?

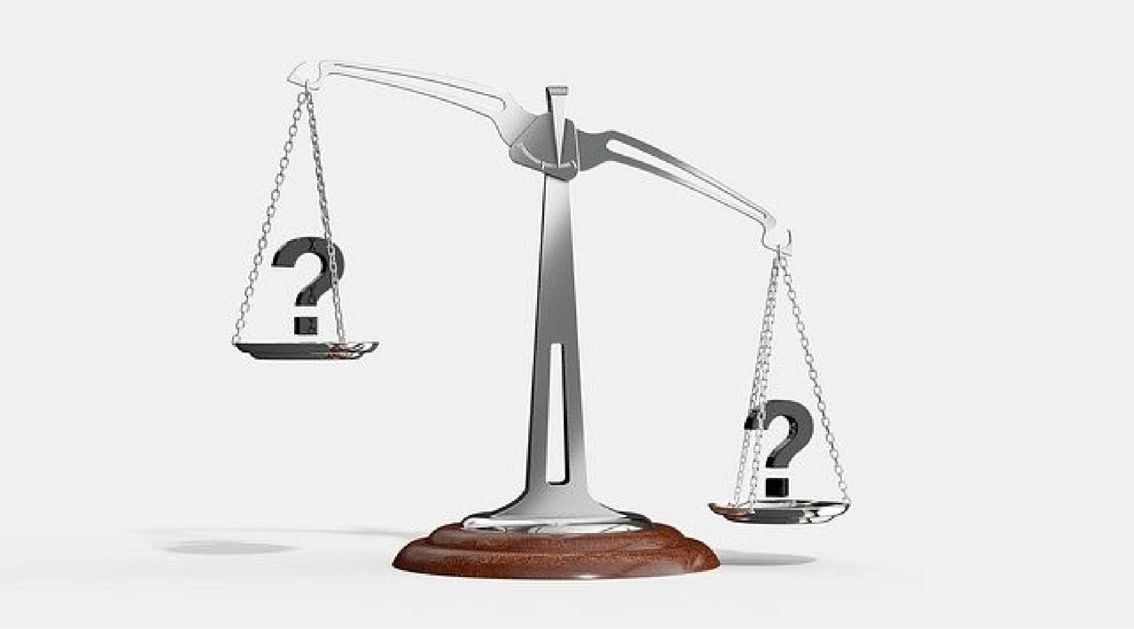


What happens next in the transition?

Here's what we mean: if your floating interest rate today is LIBOR + a 200 basis point credit spread (1.66% + 2.00% = a 3.66% all in interest rate), and LIBOR is replaced with SOFR (currently at 1.57%, + 2.00% credit spread = a 3.57% all in interest rate), who shoulders the 0.11% difference? The lender? The borrower? This is the core issue surrounding LIBOR's sunset and one which invites the possibility of dispute if not clearly defined or negotiated ahead of time.

Bottom Line: The possibility of dispute between lender and borrower will be dependent on whether the parties believe that a LIBOR-based, all-in interest rate would be higher or lower than the replacement benchmark-based all-in interest rate.

Note: You can find ARRC's detailed timeline for the transition here.

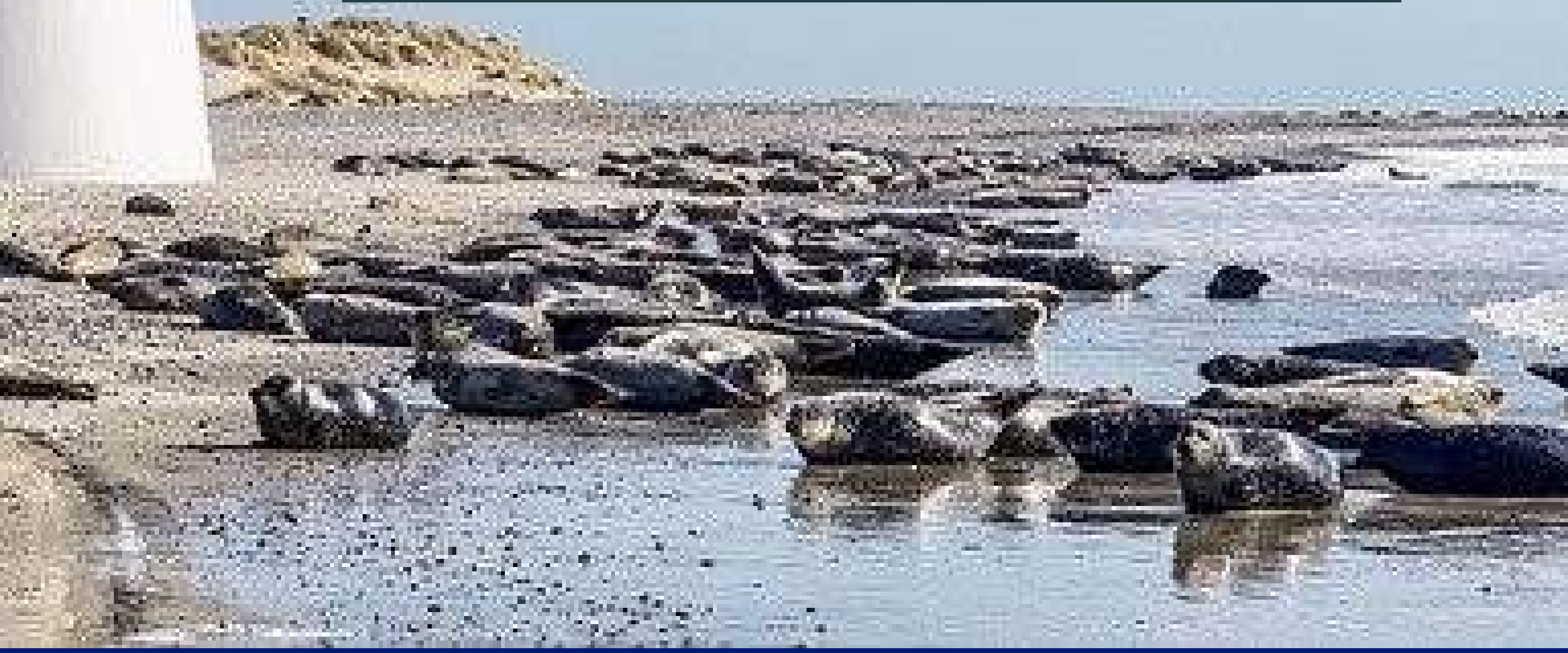


Call Us to Discuss Your Unique Situation

Confused? Don't know where to start? Need more information? Get a jump on negotiations and get the edge you need by contacting us.
We review loan agreements and perform pre- and post-LIBOR sensitivity analyses routinely to gauge the affects to the underlying cash flows.
Put our expertise to work for you.

Of course your situation is unique to you and your business deals. Let's schedule a free 12 minute Strategy Session over the phone to discuss your goals. There's never any obligation. You'll gain clear insight into your savviest next steps.

Click here for our LIBOR Transition Webinar



About Derivative Logic, Inc.

Derivative Logic is an independent hedge advisory firm combining financial derivative market expertise with proven hedge structuring and execution capabilities in interest rate and currency derivatives and Defeasance Services. Our company provides a full range of independent, unbiased hedge advisory services to corporations, real estate, tax-exempt, Native American, not-for-profit and municipal borrowers.The firm prides itself on its independence, having no affiliations with any other firm providing legal, accounting, underwriting, investment advice or derivative products.

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