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## FROM ONE INTO MANY: REPLACEMENT RATES FOR LIBOR

At the start of the Biblical origin story of the Tower of Babel, all the people of the earth spoke the same language. They then began to build a city and the tower. When God saw this, and how unified and powerful the people had become, He went down to "confound their language, that they may not understand one another's speech." After this happened, the people abandoned work on the tower and city, and were scattered abroad on the face of the earth.<sup>1</sup>

We are unable to discern a divine purpose in LIBOR transition. However, one result of the transition is that many different interest rates will be used where LIBOR's single language is now used. These differences will include not only the different risk-free rates (**RFRs**) that have been recommended for each LIBOR currency, but will also include differences in how such rates (or variants thereof) are used for different financial products. Corporates and financial institutions will need to keep them all straight and not be confounded.

RFRs differ from LIBOR in fundamental respects in that RFRs are overnight rates that do not include counterparty credit risk, while LIBOR is a forward term rate that accounts for such risk. There is a different RFR for each LIBOR currency. Further, ISDA and working groups in the different LIBOR jurisdictions have recommended that various rates based on RFRs (sometimes compounded in arrears) be used for different products instead of LIBOR as part of LIBOR transition. Many working groups expect that, at some point, swap and futures markets will develop sufficient liquidity to support robust forward term rates based on RFRs to develop in the various currencies. However, to date, no such forward term rate for any LIBOR currency has been determined to satisfy the new requirements for financial benchmarks that were adopted by the International Organization of Securities Organizations (**IOSCO**) following the 2009-era financial crisis.

Many of the differences that exist in the ways RFRs will be used in different financial products and in different markets stem from the fundamental differences between LIBOR and the RFRs, and differences between cash financial products and derivatives, and between different cash products. This article will explore such differences in the context of syndicated loans and floating rate notes (**FRNs**). Notably, market participants in the syndicated loan space have considered ways to deal with fluctuations in principal amounts in between interest payment dates, which are more prevalent in that space than with respect to FRNs. Lenders and borrowers should assess the degree with which consistency of approach can be achieved in multicurrency facilities.



<sup>1</sup>Genesis 11:1-9 (King James).

## RFR-derived rates

In the absence of IOSCO-compliant forward term RFRs, market participants have focused on rates derived from RFRs calculated in arrears for cash products, and have explored several options concerning such rates. In June 2019, the Financial Standards Board (FSB) published Overnight Risk-Free Rates: A User's Guide<sup>2</sup>, which considered calculating RFRs in arrears over a payment period on a simple average and a compounded basis, as well as several variations thereof.

Compounded interest more accurately reflects the time value of money than other options and should have less basis risk for with respect to many interest rate hedges of cash products.<sup>3</sup>

The difference between compounded and simple interest is typically small at lower interest rates and over short periods of time. However, compounding becomes a more important consideration at higher rates and over longer periods.

All interest rates in arrears need conventions so that the borrower can know the amount of the interest payment it will need to make in advance of the payment date. These conventions may involve a lag or payment delay (where the payment is due a few days after the end of the interest period), a lockout (where the interest rate is frozen a few days prior to the payment date), a lookback (which permits the parties to determine the rate of interest for the interest period before the period ends) or an observation shift (where the observation period for interest rate calculation starts and ends a certain number of days prior to the end of the interest period).<sup>4</sup>

Compounding may involve compounding the interest rate or compounding the balance (where the overnight RFR is multiplied by outstanding principal and unpaid accrued interest). Compounding the rate is the approach used by ISDA, and the compounded SOFR and SONIA index rates published by the Federal Reserve Bank of New York (FRBNY) and the Bank of England (BoE), respectively.<sup>5</sup> Compounding the balance yields an accurate result in situations where the principal amount changes during the interest period.

## Syndicated loans and FRNs

Market participants and working groups are making different choices for LIBOR replacements for several cash products, including syndicated loans and FRNs. It appears likely that loans will differ from FRNs, and that the replacement rates will not be in alignment between products and jurisdictions.

The table below sets forth the state of the market for RFR replacements for LIBOR for syndicated loans and FRNs in the US and UK markets. The table sets forth the recommendation of the relevant local working group where such a recommendation exists, and otherwise sets forth whether a market consensus exists.

In the US syndicated loan market, the ARRC and the LSTA have focused on Daily Simple SOFR. Daily Simple SOFR involves the daily calculation of interest on outstanding loans, and appears to be favored by many banks, in large part because it avoids possible complications involved in compounding when loan balances fluctuate between payment dates and allows for easier calculation of the interest component of payments for lender assignments.

	Syndicated Loans		FRNs	
	Fallbacks	New Originations	Fallbacks	New Originations
<b>US Dollars</b>	Alternative Reference Rates Committees (ARRC) recommendation: Daily Simple SOFR (compounded SOFR acceptable, if parties agree) <sup>6</sup>	No settled market consensus: Daily Simple SOFR (LSTA model language) <sup>7</sup> SOFR compounded in arrears (business day lookback without observation shift; <sup>8</sup> LSTA preparing drafts of model language for compound the rate and compound the balance approaches) Approach has varied between New York and English law agreements <sup>9</sup>	ARRC recommendation: Compounded SOFR (compounding method flexible in ARRC recommendation) <sup>10</sup>	Market consensus: Compounded SOFR (observation shift)
<b>Sterling</b>	LMA exposure draft of rate switch agreement <sup>11</sup> (reflects Sterling Working Group recommendation): SONIA compounded in arrears (five business day lookback without observation shift)	Working Group on Sterling Risk-Free Reference Rates (Sterling Working Group) recommendation: SONIA compounded in arrears (five business day lookback without observation shift; leaves question whether to use compound the rate or compound the balance approach to market participants) <sup>12</sup>	No working group recommendation <sup>13</sup>	Market consensus: Compounded SONIA (observation shift) <sup>14</sup>

<sup>2</sup> FSB, Overnight Risk-Free Rates: A User's Guide.

<sup>3</sup> See generally ARRC, SOFR "In Arrears" Conventions for Syndicated Business Loans, which discusses generally several approaches to compounding, including compounding the rate, compounding the balance, lookbacks, lockouts, observation shifts and payment delays. See also ARRC, Technical Appendices for SOFR Loan Conventions, and LSTA, Big Tech(nical).

<sup>4</sup> In a lag, the day weighting against the interest period remains the same ("rate shift not weight shift"). In an observation shift, the shift includes both the rate and the weighting of the rate. See, e.g., ARRC, SOFR Floating Rate Notes Conventions Matrix.

<sup>5</sup> See Federal Reserve Bank of New York, SOFR Averages and Index Data, and Bank of England, Supporting Risk-Free Rate transition through the provision of compounded SONIA.

<sup>6</sup> ARRC Recommendations regarding More Robust Fallback Language for New Originations of LIBOR Syndicated Loans.

<sup>7</sup> LSTA, SOFR Concept Credit Agreement. The LSTA's concept credit agreement contains options for Daily Simple SOFR and Daily Compounded SOFR (using the "compound the balance" approach). The LSTA indicated that a "compound the rate" approach would be addressed in another document.

<sup>8</sup> ARRC, SOFR "In Arrears" Conventions for Syndicated Business Loans: "It was determined that a lookback with an observation shift (i.e., when compounding SOFR, weighting the rate by the daycount weight of the 'lookback' day in the compounding formula) could result in a borrower paying too much or too little interest if the loan is prepaid in a period when there is a mismatch in the number of days in the observation period vs the number of days in the interest period. A similar mismatch could occur between the buyer and seller in loan trading. Although there are technical solutions to address these issues, those solutions would introduce some added complexities and did not materially reduce the hedging basis relative to a standard SOFR OIS contract."

<sup>9</sup> The LMA has produced an exposure draft of a compounded SOFR based US dollar term and revolving facilities agreement, which is available here.

The ARRC has expressed the view that the minimal differences between Daily Simple SOFR and compounded SOFR renders Daily Simple SOFR effectively hedgeable.<sup>15</sup>

In January 2020, the Sterling Working Group indicated that it viewed the use case for term SONIA as limited, and recommended that syndicated loans use SONIA compounded in arrears, even if an IOSCO-compliant term SONIA were developed.<sup>16</sup> In order to deal with the complications of intra-period prepayments and secondary trading, the Sterling Working Group suggested that a daily non-cumulative compounded rate (**NCCR**) may be an option, and this is reflected in the LMA's recent exposure draft multicurrency rate switch agreement.<sup>17</sup>

The conventions for using compounded RFRs in arrears in syndicated loans are not settled at this point. Although the preference of many US banks seems to be for Daily Simple SOFR, the ARRC and the LSTA have examined compounded SOFR alternatives as well. The Sterling Working Group noted that market participants have shown a preference for compounding the rate rather than compounding the balance, but its recommendation left the choice of method to individual market participants.

To date, syndicated facility agreements that use RFRs remain rare.<sup>18</sup>

New FRN originations in both US Dollars and Sterling has been largely denominated in SOFR and SONIA compounded in arrears for well over a year.

## Compounded SOFR and SONIA indexes

The compounded SOFR and SONIA indexes published by the FRBNY and the BoE appear to have great utility for FRN transactions, and significantly less utility for syndicated loans.

The SOFR and SONIA indexes cannot be used for transactions that use a lookback without an observation shift.<sup>19</sup> This means that syndicated loans cannot use such indexes unless priced at a compounded rate in arrears with an observation shift. Of course, the SOFR index could not be used in connection with Daily Simple SOFR and neither index could be used with any other non-compounded rate.

There are other reasons why the compounded indexes could be difficult to use in connection with syndicated loans. One reason is intra-period prepayments. The ARRC stated that index-based calculations could work with such prepayments, but only if interest is repaid with principal and if the principal is split into multiple components to account for the prepayments. Another reason is that

transaction-specific interest rate floors will not be reflected in the indexes and would need to be calculated separately.<sup>20</sup>

## Forward term RFRs and other rates

In the UK, several versions of indicative forward term SONIA rates are available, and FTSE Russell, ICE Benchmark Administration and Refinitiv have produced beta versions of such a rate. In the US, several versions of indicative forward term SOFR rates are also available, and the ARRC has submitted a request for proposals for vendors to publish a forward term SOFR. The Federal Reserve expressed the view in late 2019 that a robust IOSCO-compliant SOFR forward term rate could not then be produced because volume in SOFR trades was concentrated in near-term contracts and there was a lack of depth in the order book for SOFR futures.<sup>21</sup> Although a forward term SONIA rate may be achievable before a corresponding rate for any other LIBOR currency, UK regulators have stated that the use of such a rate for syndicated loans should be limited. The timing of any IOSCO-compliant forward RFR term rate is uncertain.

Some market participants have looked at other rates as potential replacements for LIBOR. In the US, many smaller and regional banks have considered Ameribor, which is an overnight rate based off data from the American Financial Exchange and includes



<sup>15</sup> ARRC, Recommendations regarding More Robust Fallback Language for New Issuances of LIBOR Floating Rate Notes.

<sup>16</sup> Available here.

<sup>17</sup> Sterling Working Group, Statement on behalf of the Working Group on Sterling Risk-Free Reference Rates – Recommendations for SONIA Loan Market Conventions; LMA, Exposure draft of multicurrency term and revolving facilities agreement incorporating rate switch provisions (lookback without observation shift).

<sup>18</sup> New issuance in the Sterling FRN market has moved decidedly towards SONIA. For legacy Sterling LIBOR FRNs, the trend has been towards amendment of the interest rate governing such FRNs to SONIA, rather than amendment to include a LIBOR fallback. Amendment of English law-governed FRNs is relatively easier than amendment of US law-governed FRNs. However, the US Federal Farm Credit Banks recently made an exchange offer that allows holders to exchange their existing USD LIBOR FRNs, which have ineffective language in the event of LIBOR cessation, for new USD LIBOR FRNs that have a LIBOR fallback similar to that proposed by the ARRC.

<sup>19</sup> Sterling Working Group, Bond market conventions: Use of the SONIA Index and weighting approaches for observation periods. This paper did not make a recommendation on whether to include a lag approach or a shift approach.

<sup>20</sup> ARRC, Recommendations regarding More Robust Fallback Language for New Originations of LIBOR Syndicated Loans.

<sup>21</sup> Sterling Working Group, Use Cases of Benchmark Rates: Compounded in Arrears, Term Rate and Further Alternatives.

<sup>22</sup> The Sterling Working Group defines NCCR for a given day as the cumulative compounded rate for the prior day subtracted from the cumulative compounded rate for that given day.

<sup>23</sup> See LMA, List of RFR referencing syndicated and bilateral loans (updated 16 October 2020)

<sup>24</sup> See ARRC, SOFR "In Arrears" Conventions for Syndicated Business Loans and Sterling Working Group, Bond market conventions: Use of the SONIA Index and weighting approaches for observation periods.

<sup>25</sup> See ARRC, SOFR "In Arrears" Conventions for Syndicated Business Loans and Sterling Working Group, Recommendations for SONIA Loan Market Conventions.

<sup>26</sup> Minutes of 22 October 2019 meeting of the ARRC.



a counterparty risk component.<sup>22</sup> Jerome Powell, the chair of the US Federal Reserve, has indicated that several rates, including Ameribor, might be used in place of LIBOR.<sup>23</sup> In addition, ICE is developing a bank yield index,<sup>24</sup> which would be credit-sensitive and forward-looking, but has not yet been introduced or declared IOSCO-compliant.

In the US, banking regulators have met several times with credit sensitivity workshops made up of representatives from US banks and corporate borrowers.<sup>25</sup> These workshops have explored the desirability of credit-sensitive rates. Among other things, bank participants expressed concern that SOFR might not adequately reflect bank funding costs. However, US bank regulators recently stated that the official sector in the US did not plan to convene a group to recommend a specific, credit-sensitive supplement or rate for use in commercial lending products.<sup>26</sup>

## So where do things stand?

Loans and FRNs work differently, and borrowers, banks and investors have different market expectations and needs. These differences have caused the differences in LIBOR replacement rates

that are being used (or that have been proposed) for loans and FRNs. For some, it may appear frustrating that there is no uniform LIBOR replacement and no set of agreed market conventions for all financial products and currencies. However, these differences are understandable when viewed in this context.

It may also appear frustrating that the alternatives are unsettled when viewed in light of several upcoming deadlines in LIBOR transition. In addition to the end-2021 date for the expected cessation of LIBOR, the Sterling Working Group has recommended that no new LIBOR sterling loans that mature after 2021 be issued after the end of the first quarter of 2021.<sup>27</sup> The Bank of England has announced several deadlines prior to the end of 2021 relating to the eligibility of LIBOR linked collateral for use in the Sterling Monetary Framework.<sup>28</sup> The ARRC has recommended that (i) no USD LIBOR FRNs that mature after 2021 be issued after the end of 2020, (ii) no USD LIBOR business loans that mature after 2021 be issued after 30 June 2021 and (iii) all USD LIBOR business loans that mature after 2021 include hardwired fallbacks by 30 September 2020 (for syndicated loans)

or 31 October 2020 (for bilateral loans).<sup>29</sup> In addition, the FSB's Global Transition Roadmap for LIBOR<sup>30</sup> recommends that lenders should be in a position to offer non-LIBOR linked products to their customers by the end of 2020 and take steps to convert legacy LIBOR-linked contracts to alternative reference rates before the end of 2021.

If a forward term rate based on an RFR (or one of the credit-sensitive rates being developed as alternatives) were to be declared IOSCO-compliant before the end of 2021, such a rate might simplify matters greatly. However, it is prudent for market participants to prepare as though this will not happen in this timeframe and will not happen for some indefinite period afterwards. Although the differences discussed above between the LIBOR replacements for different products may pose challenging issues for firms in implementing transition strategies, unlike the different languages in the Babel story, firms can understand the differences between the replacements and by doing so avoid the fate of the confounded and scattered people at the end of the story.

<sup>22</sup> See, e.g., IFLR, PRIMER, Ameribor and its role in the Libor transition.

<sup>23</sup> See American Banker, Fed's Powell open to more than one Libor alternative and Letter of Jerome Powell to Senator Tom Cotton, May 28, 2020.

<sup>24</sup> See ICE Benchmark Administration, U.S. Dollar ICE Bank Yield Index Update (Fourth Update).

<sup>25</sup> See Federal Reserve Bank of New York, Transition from LIBOR: Credit Sensitivity Group Workshops.

<sup>26</sup> Letter dated 21 October 2020 signed by US Treasury Secretary Steven Mnuchin, Federal Reserve Chair Jerome Powell and Vice Chair Randal Quarles, FRBNY President John Williams, Acting Comptroller of the Currency Brian Brooks, SEC Chairman Jay Clayton, FDIC Chairman Jelena McWilliams and CFTC Chair Heath Tarbert. The letter further stated that the official sector intended to conduct two additional workshops to highlight "continued innovation" in alternative reference rates and explore solutions to hurdles to transitioning commercial loans away from LIBOR. The letter also stated that "supervisors will not criticize firms solely for using a reference rate (or rates) other than SOFR."

<sup>27</sup> See, e.g., Sterling Working Group, 2020-21 Top Level Priorities (updated July 2020).

<sup>28</sup> Bank of England, The Bank's risk management approach to collateral referencing LIBOR for use in the Sterling Monetary Framework - Market Notice (7 May 2020).

<sup>29</sup> See ARRC Recommended Best Practices for Completing the Transition from LIBOR (updated 3 September 2020). The ARRC also recommended that all USD LIBOR FRNs that mature after 2021 include hardwired fallbacks by 30 June 2020, which target date is now past.

<sup>30</sup> Available here.

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