The final phase of USD LIBOR transition

Frequently asked questions

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How we got here

1. Why some interest rate benchmarks are being reformed and/or discontinued?

Financial markets have changed significantly since the Global Financial Crisis. One major development is that banks no longer fund themselves in the interbank market to the same extent. This is one of the major drivers of reform to some Interbank Offered Rates (IBORs) and the development of alternatives. In 2013, the International Organisation of Securities Commissions (IOSCO) introduced a set of principles underpinning the calculation of a benchmark rate. In 2014, the Financial Stability Board (FSB) published a report called 'Reforming Major Interest Rate Benchmarks' which sets out recommendations, including measures to:

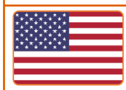
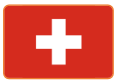
- Strengthen IBORs by anchoring them to a greater number of transactions
- Identify alternative rates designed to be nearly risk free, meaning without any credit risk component or liquidity premium (Risk Free Rates or RFRs)
- Encourage derivative market participants to transition new contracts to an appropriate RFR

The European Union (EU) followed with the introduction of the Benchmark Regulation (BMR), that requires benchmarks to be based on actual transactions, where possible.

Therefore, some existing interest benchmarks have either been reformed or will cease at specified dates and new more robust interest rate benchmarks set out as alternatives.

2. What are alternative reference rates?

Market participants and the industry bodies have put significant effort into finding ways to either improve existing benchmark rates or, alternatively, to develop replacements that meet regulatory requirements. The outcome is a set of alternative rates based on overnight transactions, which are designed to be representative of a nearly risk-free rate, so are frequently referred to as Risk Free Rates (RFR). Below is an overview by major currency.

Jurisdictions		Working Groups	Alternative Reference Rates	Description
	Euro area	Working group on euro risk-free rates	Euro short-term rate (€STR)	Unsecured rate that captures overnight wholesale deposit transactions
	United States of America	Alternative Reference Rates Committee (ARRC)	Secured Overnight Financing Rate (SOFR)	Secure rate that covers multiple overnight repo market segments
	United Kingdom	Working group on Sterling Risk-Free-Reference Rates	Sterling Overnight Index Average (SONIA)	Unsecured rate that covers overnight wholesale deposit transactions
	Switzerland	The National Working Group on Swiss Franc Reference Rates	Swiss Average Rate overnight (SARON)	Secured rate that reflects interest paid on interbank overnight repo rate

Japan	[Cross-Industry Committee on Japanese Yen Interest Rate Benchmarks]()	Tokyo Overnight Average Rate (TONA)	Unsecured rate that captures overnight call rate market

3. What are the challenges of using RFRs?

LIBOR rates are forward-looking and considered 'term' rates, meaning that they are quoted for a range of tenors (such as three months or six months). Hence, a LIBOR-linked interest rate is known at the start of the relevant interest period.

RFRs are overnight rates and therefore more difficult to directly include in many financial contracts due to its daily fixing. Therefore:

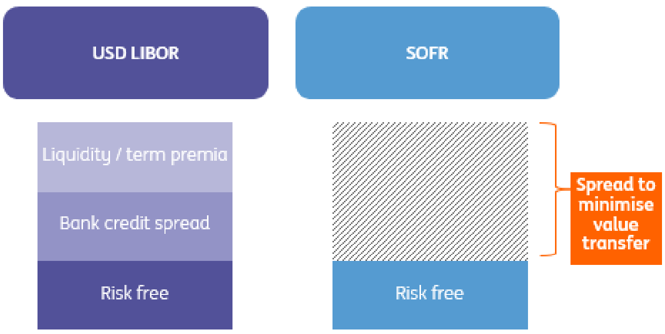
- one approach is to create a backward-looking rate using these overnight rates. The backward-looking rate for the period can be determined by calculating a simple or compounded average of the daily fixings over the given term and calculated at the end of the period. To avoid payment delays the rate observation period is often taken as 5 business days before the start of the period to 5-day prior to the end of the period
- another approach is to derive a forward-looking term rate from the interest rate derivative markets (e.g. Term SOFR), that is known at the start of the period.

In May 2021 the ARRC selected CME Group as the administrator of a term rate based on SOFR, and formally recommended CME Term SOFR on 29 July 2021. The ARRC has published best practices for the use of the term rate in loan market activity and derivatives markets.

Transitioning from IBORs to RFRs also requires the use of a **credit adjustment spread** to account for the fact that IBORs incorporate a bank credit spread and liquidity premium, while RFRs do not.

4. What is a Credit Adjustment Spread (CAS) and why is it needed?

As noted, LIBOR includes additional elements such as a premium for bank credit risk, a premium for the term structure and for holding liquidity over the interest period. Due to these missing risk premia, RFR rates are (in most cases) lower than LIBOR rates. As the transition (for an existing contract) from LIBOR to an alternative rate is intended to be **economically neutral**, a so-called credit adjustment spread (CAS) is needed to bridge the gap to minimise the economic impact/value transfer during the transition. As shown below for USD LIBOR:



For newly originated or refinanced RFR products, this CAS will, in most cases, be incorporated in the overall (commercial) margin and will not be separately identifiable.

5. What are the alternative approaches for calculating the CAS?

There are two general approaches for calculating the CAS:

i) A **historical difference approach**: Following a period of consultation it was decided to calculate this historical difference using the median spread between LIBOR and the related RFR over a five-year lookback period. The spreads calculated based on this approach are often referred to as the ISDA spreads (as they are widely used in derivative fallbacks) or as the five-year historical median spreads.

   By default, they are used in the following situations:
   a. the adjustment spread for derivatives transitioned via fallback or by the central clearing houses (see question 15).
   b. the recommended adjustment spread in hardwired loans (see question 9 & 10).
   c. the adjustment spread in the calculation of synthetic LIBOR rates (see question 7)

ii) **A forward-looking approach**: This approach uses the forward-looking basis swap spreads that are taken from publicly available market information. These spreads reflect the market's current view about implied future spreads between LIBOR and the relevant RFR.

It is important to note that while the five-year historical median approach is used in the ISDA fallback approach and ARRC hardwired fallback provisions, we are seeing the use of forward basis spreads for loans and other derivative transition/transactions.

On 5 March 2021, following the FCA's announcement on the permanent cessation / non-representativeness of all LIBOR settings, ISDA confirmed that the "credit adjustment spread fixing date" had occurred. Consequently, the CAS mentioned above was fixed for all the LIBOR settings under the terms of the Bloomberg IBOR Fallback Rate Adjustments Rulebook and can be found here.

What's next for you?

6. What timetables are in place for USD LIBOR transition?

The most used USD LIBOR tenors will continue to be published on a **representative** basis until the 30 June 2023 to support the run-off and transition of existing products.

Most contracts will finish out the last reset period that occurs prior to this date. Any required conversion to SOFR, including under the US LIBOR Act, ARRC hardwired, and amendment approaches will take effect on the first reset after this date. For example, a loan that references 3-month LIBOR, that resets on 30 June 2023, will use that rate until 30 September 2023, unless other actions are taken.

The FCA intends to ensure publication of the 1, 3 and 6-month USD LIBOR on a **non-representative** basis until 30 September 2024.

The FCA has also instructed IBA to calculate the 1, 3 and 6-month synthetic USD LIBOR settings using the relevant CME Term SOFR Reference Rate plus the respective ISDA fixed spread adjustment. Such a method does not lead to a representative rate as the spread component is fixed and thus does not consider all the market factors that LIBOR does at each publication date.

7. Limitations on the use of synthetic USD LIBOR

In line with FCA's previous Dear CEO letter, they continue to expect firms to take action and deliver demonstrable progress. Synthetic LIBOR is only a temporary bridge, as synthetic settings are not designed for the convenience of those who could have transitioned their contracts but have not done so.

ING continues to urge clients to actively transition contracts from USD LIBOR to an alternative reference rate and not to seek reliance on a USD synthetic LIBOR rate. We recognize that it could be the case that some contracts cannot be repapered in time, and then, depending on the terms and conditions of such contracts, a synthetic USD LIBOR rate might be able to be used as a temporary bridge while repapering is finalized. ***It is not ING's intention to delay or avoid repapering and seek to rely on USD synthetic LIBOR nor to actively promote its use***. However, as stated, we do recognize that in certain circumstances it could be useful as an interim solution.

Ultimately whether synthetic LIBOR can be used for a particular transaction, will depend on the terms and conditions of that individual contract.

8. Should I switch from USD LIBOR to an alternative rate as soon as possible?

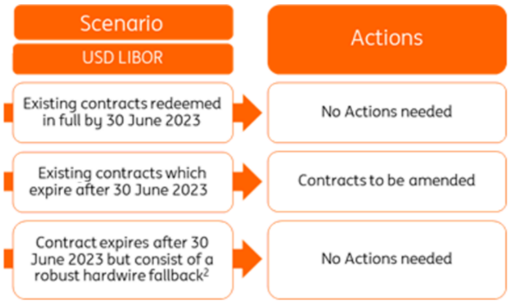
ING recommends that you review your (loan) contracts to identify how they react to an anticipated cessation of LIBOR or any other rate at risk. Removing LIBOR dependencies from contracts can be done in two ways:

1) By amending a contract to reference a suitable alternative rate prior to the actual cessation date (**'active transition'**). The ARRC and other working groups **prefer market participants to actively transition** their LIBOR contracts instead of relying on fallback language. They believe that this supports the best and smoothest transition away from LIBOR.
2) By using fallbacks to enable the contract to automatically move to a suitable alternative rate upon cessation (**'fallback transition'**).

If you have USD LIBOR contracts that mature prior to 30 June 2023, those contracts can be held until maturity.

Only limited action is needed for contracts that expire after 30 June 2023 that include a robust hardwired fallback. **If your contract includes no fallback, amendment provisions (see question 10), or includes a fallback to a pricier rate (e.g. prime or another other base rate), action will be required as soon as possible**.

USD LIBOR contracts that mature after 30 June 2023 need to have an agreed and effective transition mechanism/plan to an alternative reference rate by no later than 30 June 2023. This requires urgent attention.



Cash and Loan products

9. What needs to happen to USD LIBOR cash/loan products that mature after cessation date?

The ARRC and other RFR working groups **prefer market participants to actively transition** their LIBOR contracts instead of relying on or improving fallback language. They believe that this supports the best and smoothest transition away from LIBOR. In addition, they believe that actively transitioning is the best way for parties to ensure certainty over both the continued operation and the future economics of their contracts. As such, market participants are strongly encouraged to focus on active transition.

In 2020, the ARRC issued a proposal focusing on USD legacy contracts whose fallback language is most likely to lead to disputes or unintended economic consequences. If a contract has no fallback provision or falls back to a LIBOR-based rate (such as the last available LIBOR rate), the legislation imposes **in U.S. law governed contracts** the recommended replacement benchmark rate ('SOFR') and an adjustment spread. In 2022 this proposal was signed into law, named as the Adjustable Interest Rate (LIBOR) Act. This legislation is expected to primarily impact debt securities and to have a limited use in US loan and derivatives markets as such contracts generally include some kind of fallback that put them out of scope of the legislation. Assessing this for contracts subject to US law is an important step.

10. Fallback types and the main issues?

Fallback language, if present, typically sets out the alternatives for the replacement rate in the form of a waterfall (a set hierarchy of available alternatives) or an amendment process. Fallback language will also typically define a certain "trigger event" that initiates the process of transitioning from one benchmark rate to another.

Hardwired fallback provisions allow a switch of the current interest rate to an alternative benchmark at the election of the administrative agent and borrower (early opt-in) or upon a trigger event, with minimal involvement from the syndicate of lenders. A conforming changes amendment, executed by the administrative agent and borrower, may be needed to adjust other provisions in the loan to allow for the new benchmark.

The "amendment approach" provides a process that parties can follow in the negotiation of a benchmark's replacement if a trigger event occurs. The approach may not define the replacement benchmark but may set out some parameters for its selection. An amendment, executed by the administrative agent, borrower, and typically, majority of lenders, is required for this approach.

Many existing cash-market contracts do not contain appropriate fallbacks. For example, some traditional fallbacks could have the unintended effect of converting many debt securities to a fixed rate (last published rate) when LIBOR ceases. In the United States, in the event that USD LIBOR is unavailable, many loan agreements fallback to a "base rate" (typically the higher of the administrative agent's prime rate and the Federal Funds Effective Rate plus 50 bps). Historically, the base rate has been higher than LIBOR, hence more costly for the borrowers. Some legacy USD contracts may reference a "cost of funds" rate which is not considered a robust rate for IOSCO purposes.

To maintain a consistent approach to address the cessation of USD LIBOR, **ING encourages the use of the recommended approaches and fallback language developed by the various working groups** to ensure impacted contracts are smoothly transitioned to a suitable alternative reference rate.

The ARRC recommends using the five-year lookback approach set out by ISDA as the basis for the CAS applied to the fallback rate for cash products. For example, this approach helps to align the spread component in the cash product with any related hedging derivatives. More information on the Hardwired Fallback Language of ARRC is available here.

Derivative products

11. How has ISDA approached LIBOR's demise?

The main components considered are 1) what is the replacement rate, 2) which credit adjustment spread (CAS) to use and 3) when such fallbacks are to be applied.

1) To create a replacement rate, ISDA has selected a "compounded setting in arrears rate", where the relevant RFR is observed over the relevant term (with a 2-day lag) and compounded daily.
2) The CAS is based on a five-year historical lookback (5YHLB) for the purposes of transitioning LIBOR derivatives to RFRs.
3) For the most used USD LIBOR tenors the fallback rates will apply from 30 June 2023. For the other LIBOR rates this was 31 December 2021.

ISDA has selected Bloomberg Index Services Limited (BISL) to calculate and publish fallback rates. For IBOR fallback rates, go to Bloomberg LIBOR-transition page[1]. For more information, go to ISDA's website: Benchmark Reforms and Transition from LIBOR.

12. What is ISDA's approach to defining a trigger event?

For derivatives that reference LIBOR, a trigger is included, such that the use of the adjusted RFR and CAS will be activated as a replacement rate if the FCA determines that LIBOR (in that currency and tenor) is no longer representative of its underlying market, even if the rate continues to be published on a non-representative i.e. synthetic basis. **For remaining USD LIBOR tenors this will occur on 30 June 2023.**

13. How will the ISDA IBOR fallbacks be implemented?

ISDA has implemented revised LIBOR fallbacks via an IBOR Supplement to its standard definitions. The IBOR Supplement works by amending the 2006 ISDA definitions to incorporate these robust fallbacks for all derivatives referencing USD LIBOR and entered after the effective date of 25 January 2021.

Participants that wish to incorporate the update into legacy contracts are required to complete an adherence process with ISDA. If both parties adhere to the "IBOR Protocol", the IBOR fallback triggers and replacement rates will apply to all relevant trades between them referencing the 2006 ISDA Definitions and executed under a covered Master Agreement. Please refer to the register on the ISDA site.

ING Bank N.V. and several subsidiaries have registered adherence to the IBOR (2020) Protocol in line with the recommendations of various industry bodies and working groups. If you have further questions about the ISDA approach see the ISDA IBOR FAQ on www.isda.org.

14. Should an active transition be pursued and what are the options for non-linear trades?

The inclusion of robust fallbacks reduces legal risks but still requires derivative counterparties to update systems and processes. Therefore, regulators urge market participants to transition away from LIBOR by actively switching to market conforming alternatives.

In certain cases, approaches such as transitioning away from LIBOR using compression of offsetting trades, early termination, or conversion to market-standard Overnight Index Swaps (OIS) derivatives, could be operationally and economically advantageous. Key considerations:

- The effective date of conversion will be on a mutually agreed date before the discontinuation of the LIBOR rates. For a smooth transition, it is recommended to start the conversion on the first day of a new calculation period.
- A CAS will be required to accommodate the difference between LIBOR and the chosen alternative risk-free rate and may be based on the forward-looking basis swap market close to the effective date of conversion.
- Each party needs to be ready to process the amended trade(s) that reference an alternative risk-free rate which is to be compounded in arrears and works with different conventions.

15. What actions are central clearing parties (CCP) taking in response to IBOR Reforms?

The plan for **USD LIBOR cleared derivatives** is consistent with actions already undertaken for the other LIBORs. Namely, over 2 weekends in April/May 2023 the major clearing houses will convert any outstanding USD LIBOR trades to SOFR plus the relevant five-year historical median spread. Any economic difference before and after the conversion will be cash settled.

16. What will happen to a hedge relationship/accounting upon the cessation of USD LIBOR?

The cessation of USD LIBOR may have an impact on the hedging structure of your portfolios and could potentially result in a mismatch between the cash instrument (such as a bond or loan) and other instruments such as a derivatives contract that are in hedge relationship. The need for alignment between the hedging and hedged item should be considered on a case-by-case basis.

When applying hedge accounting, it is important to note that the International Accounting Standards Board (IASB) has provided accounting relief if certain conditions are met. Failure to meet these conditions may result in a discontinuation of your hedging accounting.

ING is working on providing solutions to clients to minimise the impact to your hedging structures. However, we encourage you to seek independent advice on the potential implications of USD LIBOR transition. Please contact your ING relationship manager to further discuss alignment options.