



LIBOR Transition

One of The World's Most
Important Numbers is Changing

What is LIBOR?



LIBOR – London Interbank Offered Rate

The various currency LIBORs are interest rate benchmarks based on the rate at which banks will lend to each other on an unsecured basis.

LIBOR is often said to be one of the world's most important numbers, it impacts many areas of financial life:

- Mortgages
- Corporate loans
- Companies protecting themselves against interest and currency rate changes
- Pension funds planning for the future

LIBOR is the basis of around \$400 trillion of loans and derivatives.

And that's about to change...

Why is LIBOR changing?



Since the 2008 global financial crisis there have been heightened concerns that Interbank Offered Rates pose a systemic risk.

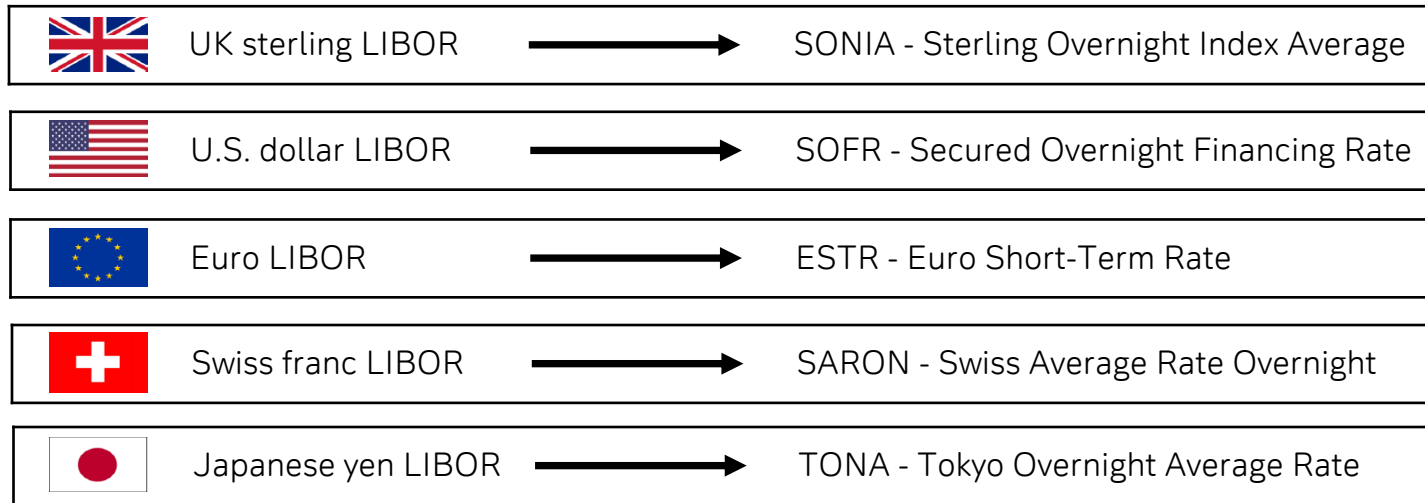
Banks have increased the stability of their funding and the interbank market has shrunk substantially.

“Since the financial crisis, LIBOR really has become the rate at which banks don’t lend to each other,”
Mark Carney, former Governor of the Bank of England

Alternatives to LIBOR – Risk Free Rates



LIBOR rates will be replaced by Risk Free Rates (RFRs):



- LIBOR for sterling, euro, yen, Swiss franc, and some U.S. dollar tenors to cease at the end of 2021.
- More heavily-used tenors for U.S. dollar LIBOR continue until end of June 2023.
 - New use of these rates to stop no later than end of 2021 (with exceptions under specific circumstances).

Comparing LIBOR and RFRs



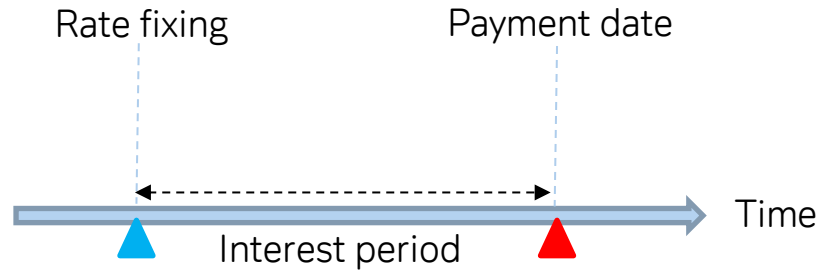
LIBOR	RFRs
<p>Forward looking</p> <p>Set in advance, pay in arrears.</p>	<p>Backward looking</p> <p>Set in arrears, pay in arrears. (Interest amount known only at the end of the interest period.)</p>
<p>Increasingly judgement-based</p> <p>Calculated on a diminishing number of underlying transactions due to reduced interbank lending.</p>	<p>Transaction-based</p> <p>Based on actual transactions that have already happened in the overnight market.</p>
<p>Unsecured</p> <p>Based on rate at which banks will lend to each other on an unsecured basis.</p>	<p>Secured or unsecured</p> <p>SOFR is a broad measure of the cost of borrowing cash overnight, collateralised by U.S. Treasury securities.</p> <p>Other indices, such as SONIA in the sterling money-market, are based on rates paid on overnight unsecured deposits.</p>

Comparing LIBOR and RFRs



LIBOR

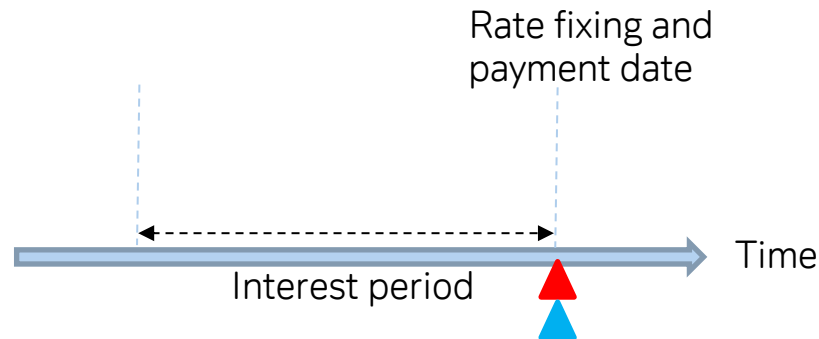
Forward looking –
set in advance,
pay in arrears



Interest amount
known at the start of
the interest period

Risk Free Rates

Backward looking –
set in arrears,
pay in arrears



Interest amount
known at the end of
the interest period

Transition Timeline



The Financial Stability Board has set out a high-level timetable for the impacted LIBORs.

By end of 2020

As a minimum, lenders should be in a position to offer non-LIBOR-linked loan products to their clients. This is either in terms of giving borrowers a choice of the reference rate underlying their loans, or through working with borrowers to include conversion language in new or refinanced LIBOR-referencing loans.

By mid-2021

Plans should be in place to transition existing contracts, systems and processes to Risk Free Rates. New contracts should use RFRs wherever possible.

By end of 2021

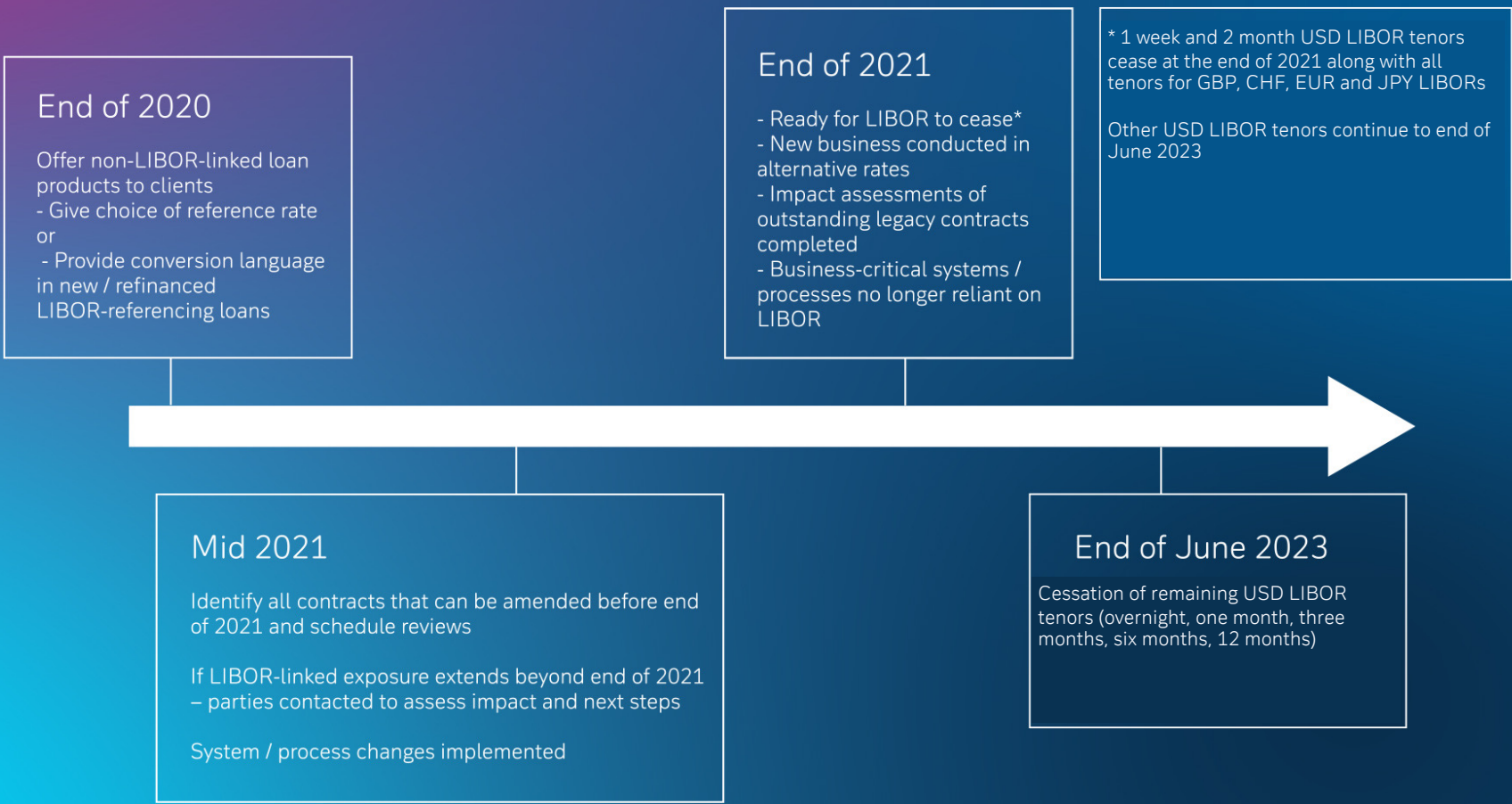
Firms must be prepared for LIBOR to cease. For any legacy contracts where it isn't possible to meet the deadline, the impact must be assessed and steps taken to prepare for possible negative outcomes.

More detailed industry transition roadmaps have been published by the individual currency RFR working groups.

The ICE Benchmark Administration has proposed that one-week and two-month U.S. dollar LIBORs will cease at the end of 2021, along with all tenors of sterling, euro, yen and Swiss franc LIBORS. All remaining U.S. dollar LIBOR tenors are expected to cease at the end of June 2023.

No new use of U.S. dollar LIBOR is expected beyond the end of 2021, with only a small number of exceptions, such as risk management of existing positions.

Transition timeline



Transition challenges



Impact on clients – they need to:

- Conduct a business-wide risk assessment.
- Review and renegotiate contracts.
- Model potential impacts on accounting, hedge accounting and corporate earnings.
- Modify systems to support multiple benchmark rates.

Pricing

IBORs tend to be priced higher than RFRs as they contain both credit risk and term premiums. Impact on valuation of trades must be considered when amending trading terms.

Conduct Risks

- **Conflicts of Interest** - Transition decisions will likely have commercial impacts, including timing of transition, selection of successor rates, spread adjustments and fallback language.
- **Mis-selling and market disruption** - There is a risk of regulatory scrutiny or client disputes, particularly if fallback provisions are not adequate.
- **Fair pricing and choice of replacement rate** - Successor rates, spread adjustments and margins must remain fair.
- **Anti-trust and market abuse** - Risk of perceived or actual collusion among peer firms to gain from transition.

Transition challenges



Variations between RFRs

- Some RFRs are secured vs some unsecured. This may pose a challenge for multi-currency deals and cross-currency swaps.
- Different publication times for each RFR could also add to the complexity.

Liquidity

- There may be insufficient liquidity in the market for RFRs. (SONIA is leading the way, other currencies need greater liquidity.)

Term rates

- Risk Free Rates are overnight maturity and calculated in arrears. Whereas LIBOR has a forward-looking term structure. Corporates often want to know their borrowing costs in advance, and consumer protection laws in some jurisdictions require customers to know their borrowing costs in advance.
- Work to design forward-looking term rates based on Risk Free Rates is well advanced in some jurisdictions. Forward-looking term versions of SONIA are now available, with other RFRs, except SARON, expected to follow.

Legacy contracts

- These must reviewed. The preferred outcome from the official sector, and the bank's preferred strategy, is to proactively amend transactions before the expected LIBOR cessation dates.
- Alternatively, the pre-existing language in the contract explaining what happens if LIBOR becomes unavailable - what's known as 'fallback provisions' - will need to be updated.

Deutsche Bank's approach to transition



Deutsche Bank is committed to helping clients and the industry adapt to the new Risk Free Rates.

Group-level transition strategy underway

The bank's Group-level strategy is underway to address all aspects of the transition, such as developing modified products, transitioning the legacy portfolio, updating fallbacks, and enabling RFR funding.

Dedicated IBOR Transition Programme

Since 2018 the bank has had a dedicated IBOR Transition Programme, focussing on updates to products and processes, understanding LIBOR exposures, and educating internal and external stakeholders.

Participation in external RFR and LIBOR working groups

Deutsche Bank actively contributes to more than 60 official sector and trade association working groups on RFRs and LIBOR transition.

Further information



- Deutsche Bank IBOR Transition website – www.db.com/IBORtransition
- Deutsche Bank IBOR Transition social media campaign - search Twitter and LinkedIn for **#DeutscheBankIBORtransition**