



LIBOR Transition

Central Counterparty Clearing House (CCP) Transition of LIBOR-linked Cleared Derivatives

Background

One of the reforms mandated by regulators following the 2007-2008 financial crisis was for Interbank Offered Rates (IBORs), such as the London Interbank Offered Rate (LIBOR), to be replaced by new robust overnight benchmark rates known as Risk-Free Rates (RFRs).

As part of these industry-wide benchmark reform efforts, CCPs are transitioning all cleared USD LIBOR-linked trades by end-June 2023. This follows similar transition events which took place for Japanese yen, UK sterling, Swiss franc and Euro LIBOR trades at the end of 2021.

While this document focuses mainly on USD LIBOR transition, details of Singapore dollar, Thai baht and Eurodollar transitions can be found at the end of the document.

Key CCP USD LIBOR Transition ‘Go-Live Events’ - H1 2023

Transition Events for USD LIBOR	Products to be transitioned per Central Counterparty Clearing House			
	Chicago Mercantile Exchange (CME)	London Clearing House (LCH) Limited	Eurex Exchange (Eurex)	Hong Kong Exchange (HKEx)
Weekend of 24 March 2023	Basis Swap Splits	N/A	N/A	N/A
Weekend of 14 April 2023	Listed Derivatives - Eurodollar futures & options	N/A	N/A	N/A
Weekend of 21 April 2023	All USD LIBOR products excluding Zero Coupon Swaps	USD Variable Notional Swaps and USD Zero Coupon Swaps	USD LIBOR Interest Rate and Single Currency Basis Swaps	N/A
Weekend of 20 May 2023	N/A	USD-LIBOR vs Fixed Interest Rate Swaps; USD-LIBOR vs USD-LIBOR basis swaps; USD LIBOR / FEDFUNDS Basis Swaps; USD-LIBOR vs USD-SOFR-Overnight Index Swaps (OIS) Compound basis swaps	N/A	Single Currency Interest Rate Swaps & Cross Currency Swaps
Weekend of 03 July 2023	Zero Coupon Swaps and remaining USD LIBOR swaps entered into post-21 April	N/A	N/A	N/A

What is LIBOR transition?

As part of the industry-wide move away from certain benchmarks to RFRs, and further to announcements made by ICE Benchmark Administration, the United Kingdom Financial Conduct Authority and other regulators that existing LIBOR rates would no longer be supported, CCPs announced that

- (i) from the end of 2021, the CHF/EUR/GBP/JPY LIBOR benchmarks; and
- (ii) from the middle of 2023, the USD LIBOR benchmark,

would not be available to use in cleared LIBOR interest rate swap contracts.

In 2023 CCPs are converting the benchmarks in USD LIBOR-linked trades cleared on their platforms to RFRs approved by industry regulators.

Currency/Product	New Risk Free Rate (RFR)
USD (US dollar)	SOFR (Secured Overnight Financing Rate)
SGD (Singapore dollar)	SORA (Singapore Overnight Average Rate)
THB (Thai baht)	THOR (Thai Overnight Repurchase Rate)
Eurodollar	SOFR (Secured Overnight Financing Rate)

What are the differences in approach between CCPs?

CME, LCH, Eurex and HKEx have published their methodologies for converting from USD LIBOR to the new RFR, SOFR, as part of the 2023 transition. Following successful conversion of CHF/EUR/GBP/JPY LIBOR in 2021, each CCP has elected to follow a similar approach for USD LIBOR conversion. The individual approaches are broadly similar, and are set out further below, although the key difference is in how particular CCPs approach basis swaps and overlay swaps.

Please note that the details of these changes are dictated by the CCPs and not Barclays.

What are Basis Swap Splits?

USD LIBOR basis swaps will generally be converted (split) into two vanilla fixed-floating swaps prior to the relevant conversion dates, with the intention of preventing the booking of SOFR-SOFR basis swaps.

What are Overlay Swaps?

An overlay swap is a mechanism through which coupons defined using the USD LIBOR rate before end-June 2023 are preserved. This ensures that these coupons, which need to be paid at some point beyond this depending on their tenor, retain their original LIBOR-referenced value.

Where overlay bookings, or swaps, are required, the contract in question will have on its floating leg, LIBOR as its floating rate option while such LIBOR is representative (i.e. on or prior to Friday 30 June, 2023), and the relevant RFR as the floating rate option thereafter. With trade capture systems that handle only one floating rate option per floating leg, overlay bookings will offset the early, duplicative element of the RFR leg while reinstating LIBOR for all the periods on the original trade for which LIBOR remains representative and has not been settled.

What is the LCH approach to USD LIBOR transition?

LCH has announced the following events:

- Tranche 1 USD Swap Conversion Sat 22 April, 2023
USD Variable Notional Swaps (VNS)
USD Zero Coupon Swaps (ZCS)
- Tranche 2 USD Swap Conversion Sat 20 May, 2023
USD-LIBOR vs USD-Federal Funds basis swaps (previously tranche 1)
USD-LIBOR vs Fixed Interest Rate Swaps
USD-LIBOR vs USD-LIBOR Basis Swaps
USD-LIBOR vs USD-SOFR-OIS Compound Basis Swaps

LCH will be utilising Overlay Swaps, but there will be **no Basis Swap splitting event**, as in previous LIBOR transitions. As an alternative, in late 2022 LCH introduced unilateral basis swap splitting functionality, allowing participants to decide individually (and voluntarily) to split any basis swap in their portfolio at their convenience.

To ensure continuity in market pricing ahead of conversion, the **Overlay Swap** approach will be employed by LCH as it was on previous LIBOR transitions, in order to preserve payments associated with USD LIBOR and adhere to a “one leg, one benchmark” approach.

On transition, certain trades will rely on a combination of representative and non-representative USD LIBOR settings – i.e., there will need to be a mid-trade change in benchmark. The original trade will have USD LIBOR on its floating leg, and the amended trade will have USD LIBOR as its benchmark until conversion, where this will change to compounded SOFR, to which the IBOR Fallbacks Spread Adjustment as published by Bloomberg will be added.

The overlay bookings will run only until the end of final period for the relevant contract where a representative LIBOR is applicable (usually a short period of no more than three months after cessation). The overlay bookings will then be linked to market-standard SOFR overnight index swaps (OIS) which run for the full length of the contract. LCH will reinstate the returns associated with representative LIBORs and offset the duplicative SOFR returns in the market standard SOFR OIS.

Please note that the use of overlay bookings is purely operational matter, and their legal status for USD LIBOR conversions is addressed in LCH’s Rulebook. From a legal perspective, LCH characterises the conversion as a “legal amendment to the existing USD LIBOR contract, notwithstanding its operational treatment as a closing out of the exiting contract and the registration of a new contract.”

Operationally, LCH will terminate the original USD LIBOR contract, and create a new SOFR contract with a new LCH ID (different to the original LIBOR trade). As this method worked successfully for GBP/JPY/EUR/CHF LIBOR conversion in 2021, LCH have determined that it is the most operationally reliable approach for USD LIBOR transition in 2023.

Any cash compensation arising from the above process will be delivered to participants via a new \$1USD notional swap for all USD LIBOR positions in every LCH Member and Client account.

In terms of [fees](#), LCH will apply both fallback and conversion fees. Fallback fees will be charged at \$5 USD per cleared contract, and for conversion, a fee of \$30 USD per contract will apply.

Further information can be found [here](#)

What is the CME approach to USD LIBOR transition?

CME has announced the following events:

- Basis Swap Splitting Fri 24 March, 2023
- Primary USD Swap Conversion Fri 21 April, 2023
- Secondary USD Swap Conversion Mon 03 July, 2023
 - Zero Coupon Swaps

What does CME intend to do?

USD LIBOR **Basis Swaps** will generally be converted (split) into two vanilla fixed-floating swaps prior to the main primary and secondary conversion dates, with the intention of preventing the booking of SOFR-SOFR basis swaps. This approach was used in 2021 for GBP and JPY basis swaps and will legally be considered an amendment of the original swap.

Following close of business on Friday 24 March, 2023, the following basis swaps will be split:

- USD LIBOR vs SOFR
- USD LIBOR vs USD LIBOR

PLEASE NOTE: USD LIBOR vs Fed Funds Basis Swaps will **not** be split and will later be converted as SOFR vs Fed Funds basis swaps during the Primary Conversion event on Friday 21 April, 2023.

Primary Conversion

Based on client feedback, CME is implementing an operational change to their conversion process for USD LIBOR swaps compared to the approach taken for non-USD LIBOR swaps in December 2021.

For the forthcoming conversion of USD LIBOR swaps, CME will replace the original swap with two swaps:

- A forward starting SOFR swap excluding the upfront fee (also known as the coupon fee), and
- A short-dated LIBOR swap for any representative LIBOR fixings that settle on or after the Index Cessation Effective Date of Saturday 1 July, 2023.

Please note from a cashflow and risk perspective, there is no change from the previous methodology used for conversion of non-USD LIBOR swaps in December 2021.

Secondary Conversion

Zero Coupon Swaps (ZCS)

Seasoned ZCS have representative LIBOR fixings and compounded floating legs that need to be accounted for in the replacement swap.

- CME will keep the payment at maturity for both floating and fixed leg (if applicable). A 2-day payment offset is applied to both coupon payments to stay consistent with standard SOFR OIS conventions.
- Any accrued interest from past and current periods is settled at maturity by adjusting the “known amount” on the fixed leg.
- The replacement SOFR OIS will have adjusted notional to account for the previous compounding periods.
- Forward starting ZCS will be converted in a method identical to vanilla swaps and are replaced by a single SOFR OIS with payment at maturity.
- Both seasoned and forward starting ZCS are converted on the same Secondary Conversion date.

Please note the IBOR Fallbacks Spread Adjustment as published by Bloomberg will be added to the compounded SOFR rate.

In term of fees, CME will charge the following per line-item on SOFR replacement swaps resulting from the conversion:

- House accounts \$10 USD
- Customer accounts \$25 USD

Any cash compensation will be paid via upfront fee.

Further detailed information can be found [here](#)

Please consult the CME [rulebook](#) for specific information on terms and conditions of CME services.

What is the Eurex approach to USD LIBOR transition?

Eurex will take the same approach to USD LIBOR transition as utilised for the CHF, GBP and JPY LIBOR conversions in December 2021.

Eurex Clearing plans to execute the conversion of EurexOTC Clear trades referencing USD LIBOR starting on Friday 21 April, 2023 and completing over that weekend. The conversion is mandatory and affects all cleared USD LIBOR trade references outstanding on the conversion date. Once conversion is complete, USD LIBOR floating rate references will no longer be eligible for the EurexOTC Clear service. The conversion will legally convert the Floating Rate Option of the USD LIBOR-based trade to the SOFR index underlying the respective fallback.

Operationally, the conversion will be executed as a termination of each original (USD LIBOR-based) trade and a novation of one or more replacement trades for each original (USD LIBOR-based) trade.

The amended trade will preserve USD LIBOR-based coupons that have a fixing but have not yet settled as well as USD LIBOR-based coupons that have a fixing after the conversion date Saturday 22 April, 2023 but before the Index Cessation Date of Friday 30 June, 2023.

A one-off cash compensation payment on a per-trade level will be introduced and carried out by Eurex Clearing as calculation agent to mitigate the associated residual change in net present value between the original LIBOR-based trade and the amended trade. This is similar to the mechanism used for CHF, GBP and JPY LIBOR trade conversions in December 2021.

Please refer to the [Eurex OTC Clear](#) transition plan for more information.

What is the Hong Kong Exchange approach to USD LIBOR transition?

NB: HKEx was not part of Barclays transition scope in 2021

HKEx proposes to convert Single Currency IRS and Cross Currency Swaps from USD LIBOR to USD SOFR on Friday 19 May, 2023. The IBOR Fallbacks Spread Adjustment as published by Bloomberg will be added to the compounded SOFR rate.

As with other CCPs, the trade conversion process will consist of three operational steps:

- Terminate the in-scope **USD LIBOR swap** legacy contracts
 - Replace the terminated contracts with Converted **SOFR swaps*** plus any applicable **Overlay Swaps**
 - Valuation difference resulting from the conversion will be covered by a cash compensation payment
- * ISDA fallback spread adjustment will be applied to the SOFR leg of the Converted SOFR swaps

Valuation of the USD LIBOR swaps and converted SOFR swaps in the conversion process:

(A) Pre-conversion NPV = Present value of the USD LIBOR swaps (under ISDA fallbacks)

(B) Post-conversion NPV = Present value of the converted SOFR swaps, plus any Overlay Swaps

Cash Compensation = Pre-conversion NPV (A) on T – Post-conversion NPV (B) on T

•EOD VM** on T+1 = Post-conversion NPV (B) on T+1 – Pre-conversion NPV (A) on T

T = First day of next interest period.

Transition of Thai Baht Interest Rate Fixing (THBFIX) to Thai Overnight Repurchase Rate (THOR)

The Thai Baht Interest Rate Fixing (THBFIX) will be discontinued on Saturday 1 July, 2023, with the regulatory recommendation that it is replaced by the alternative reference rate, the Thai Overnight Repurchase Rate (THOR).

THBFIX is the synthetic rate for deposits in Thai baht (THB) which represents the effective bank cost of borrowing synthetically by borrowing and swapping out USD in return for THB.

Note that Barclays ceased offering new use of THBFIX from Friday 1 July, 2022, in line with the agreement between the Steering Committee on Commercial Banks' Preparedness for LIBOR Discontinuation and the Bank of Thailand.

Please see the [Bank of Thailand website](#) for further background.

LCH intends to transition THBFIX on Friday 9 June, 2023. For further details, please see [here](#).

Transition of Singapore Swap Offer Rate (SOR) and Singapore Interbank Offered Rate (SIBOR) to Singapore Overnight Average Rate (SORA)

The Steering Committee for SOR & SIBOR Transition to SORA (SC-STTS), established by the Monetary Authority of Singapore (MAS) announced in this **report** that SOR will be discontinued immediately after Friday 30 June, 2023, and 1M and 3M SIBOR will be discontinued immediately after Tuesday 31 December, 2024.

Please see the [MAS website](#) for further information.

LCH intends to transition SGD on Friday 9 June, 2023. For further details, please see [here](#)

Transition of Eurodollar LIBOR contracts to Secured Overnight Financing Rate (SOFR)

Eurodollars are U.S. dollar-denominated deposits at foreign banks or at overseas branches of American banks.

CME plans to convert open interest (OI) held in 3-month Eurodollar Futures and Options into 3-month SOFR Index (SR3) Futures and Options on Friday 14 April, 2023.

For example, open contract positions in 3-month Eurodollar Futures will be converted to open contract positions in 3-month SOFR Index Futures.

Please note the following:

- Eligible open positions at the time of conversion will be terminated and replaced by an equal number of corresponding SOFR contracts.
- Futures are handled by adding the ISDA fallback spread of 26.161 bps to final Eurodollar futures settlement prices, creating an onset price for the new positions in 3-month SOFR contracts while the original Eurodollar position is closed out at the same settlement price. Futures will be

converted by closing the original Eurodollar position at its end-of-day closing price and opening a new 3-month SOFR contract position at a price equal to the Eurodollar Future end-of-day closing price plus the ISDA fallback spread.

- Options will follow a two-step process whereby SOFR strikes will be mapped to temporary non-standard strikes of Eurodollars at the exact spread of 26.161bps, and these instruments will then be compared to the nearest standard strike Eurodollar option to calculate the correct premium adjustment for replacement SOFR options. In all cases, the new SOFR option will be 25bps higher than the original Eurodollar option.
- Only positions in futures and options with underlying futures expiring after Friday 30 June, 2023 will be in scope and eligible for conversion.
- April 2023, May 2023 and June 2023 Eurodollar futures and associated options will be excluded from the conversion and will continue to be available for trading until expiration.

An alternative to the conversion process is to trade out of existing positions. Please see the [CME Conversion FAQ](#) for further details.

Please note that the transitions described above are driven by the CCPs and not by Barclays. This communication is for information only and is based on public information provided to the market by the CCPs.

Barclays is not able to provide advice to you in respect of these changes and for that reason you may want to seek independent legal, financial and tax advice.

Useful Links

<https://www.cmegroup.com/>

<https://www.lch.com/>

<https://www.eurex.com/ex-en/>

<https://www.hkex.com.hk/>

Glossary

Capitalised terms used in this communication but not defined herein shall bear the meaning as ascribed to them in the CCP rulebooks.

CCP	Central Clearing Counterparty
CME	Chicago Mercantile Exchange
CHF	Swiss Francs
COB	Close of Business
EUR	Euro
ETD	Exchange Traded Derivatives
Eurex	Eurex Clearing AG
FRO	Floating Rate Option
GBP	British Sterling
HKEx	Hong Kong Exchange
IBOR	Inter Bank Offered Rate
IRS	Interest Rate Swap
JPY	Japanese Yen
LCH	LCH Limited
LIBOR	London Interbank Offered Rate
OI	Open Interest
OIS	Overnight Indexed Swap
OTC	Over The Counter
SIBOR	Singapore Interbank Offered Rate
SOFR	Secured Overnight Financing Rate
SOR	Singapore Swap Offer Rate
SORA	Singapore Overnight Average Rate
THBFIX	Thai Baht Interest Rate Fixing
THOR	Thai Overnight Repurchase Rate
VNS	Variable Notional Swaps
ZCS	Zero Coupon Swaps

Disclaimer

This communication:

- Is directed at persons who are professionals and is not intended for retail.
- Has been prepared by Barclays Bank PLC and its affiliates (“Barclays”) and is provided for information purposes only and is subject to change. It is indicative only and not binding.
- Is not research nor a product of the Barclays Research department. Any views expressed in this communication may differ from those of the Barclays Research department. All opinions and estimates are given as of the date of this communication and are subject to change. Barclays is not obliged to inform recipients of this communication of any change to such opinions or estimates.
- Is general in nature and does not take into account any specific investment objectives, financial situation or particular needs of any particular person.
- Does not constitute an offer, an invitation or a recommendation to enter into any product or service and does not constitute investment advice, solicitation to buy or sell securities and/or a personal recommendation. Any entry into any product or service requires Barclays’ subsequent formal agreement which will be subject to internal approvals and execution of binding documents.
- Is for the benefit of the recipient. No part of it may be reproduced, distributed or transmitted without the prior written permission of Barclays.
- Has not been reviewed or approved by any regulatory authority. Barclays is a full service bank. In the normal course of offering products and services, Barclays may act in several capacities and simultaneously, giving rise to potential conflicts of interest which may impact the performance of the products. Where information in this communication has been obtained from third party sources, we believe those sources to be reliable but we do not guarantee the information’s accuracy and you should note that it may be incomplete or condensed. Neither Barclays nor any of its directors, officers, employees, representatives or agents, accepts any liability whatsoever for any direct, indirect or consequential losses (in contract, tort or otherwise) arising from the use of this communication or its contents or reliance on the information contained herein, except to the extent this would be prohibited by law or regulation. Law or regulation in certain countries may restrict the manner of distribution of this communication and the availability of the products and services, and persons who come into possession of this publication are required to inform themselves of and observe such restrictions. You have sole responsibility for the management of your tax and legal affairs including making any applicable filings and payments and complying with any applicable laws and regulations. We have not and will not provide you with tax or legal advice and recommend that you obtain independent tax and legal advice tailored to your individual circumstances.