30 November 2021

Notice of the Adoption of the Replacement Rate(s) with respect to the Reform of LIBOR Interest Rate Benchmarks

According to the announcement made by the UK Financial Conduct Authority (FCA) on 5 March 2021,all LIBOR settings will either cease to be provided by any administrator or no longer be representative as of the following dates:

- immediately after 31 December 2021, in the case of all sterling, euro, Swiss franc and Japanese yen settings, and the 1-week and 2-month US dollar settings; and
- immediately after 30 June 2023, in the case of the remaining US dollar settings.

Pursuant to the **General Terms and Conditions for General Banking Facilities and Loan Facility(ies)** between the Bank and its clients, the above-mentioned announcement made by FCA constitutes the occurrence of a Replacement Event under the said terms. Please be informed that the corresponding applicable Replacement Rate(s) to be adopted by the Bank are set forth below:

I. Trade Finance Facilities

In respect of USD/GBP/JPY/EUR/CHF LIBOR for the purpose of Trade Finance Facilities, the applicable Replacement Rates as determined and/or practicably applied/used by the Bank upon the occurrence of the said Replacement Event is set out as below:

Currency	Replacement Rates (the sum of (a) and (b))
USD	(a) SOFR Simple Average in advance (b) Spread Adjustment (as selected or recommended by the Relevant Authority or, adopted by and in the opinion of the Bank that it is consistent with market practice)
GBP	(a) Term SONIA or SONIA Simple Average in advance (b) Spread Adjustment (as selected or recommended by the Relevant Authority or, adopted by and in the opinion of the Bank that it is consistent with market

	practice)
JPY	(a) TONAR Simple Average in advance (b) Spread Adjustment (as selected or recommended by the Relevant Authority or, adopted by and in the opinion of the Bank that it is consistent with market practice)
EUR	(a) ESTR Simple Average in advance (b) Spread Adjustment (as selected or recommended by the Relevant Authority or, adopted by and in the opinion of the Bank that it is consistent with market practice)
CHF	(a) SARON Simple Average in advance (b) Spread Adjustment (as selected or recommended by the Relevant Authority or, adopted by and in the opinion of the Bank that it is consistent with market practice)

II. USD O/D

In respect of USD LIBOR for the purpose of USD O/D, the applicable Replacement Rate as determined and/or practicably be applied/used by the Bank upon the occurrence of the said Replacement Event is the sum of: (a) Daily Simple SOFR and (b) Spread Adjustment (as selected or recommended by the Relevant Authority or, adopted by and in the opinion of the Bank that it is consistent with market practice).

III. Facilities (other than Trade Finance Facilities and USD O/D)

In respect of USD/GBP/JPY/EUR/CHF LIBOR for the purpose of Facilities (other than Trade Finance Facilities and USD O/D), the applicable Replacement Rates as determined and/or practicably be applied/used by the Bank upon the occurrence of the said Replacement Event is set out as below:

Currency	Replacement Rates
USD	The sum of (a) and (b) below: (a) Daily Simple SOFR (b) Spread Adjustment (as selected or recommended by the Relevant Authority or, adopted by and in the opinion of the Bank that it is consistent with market practice)

GBP	The sum of (a) and (b) below: (a) SONIA compounded in arrears (b) Spread Adjustment (as selected or recommended by the Relevant Authority or, adopted by and in the opinion of the Bank that it is consistent with market practice)
JPY	The sum of (a) and (b) below: (a) overnight TONAR compounded in arrears (b) Spread Adjustment (as selected or recommended by the Relevant Authority or, adopted by and in the opinion of the Bank that it is consistent with market practice)
EUR	The Bank's cost of funds as quoted by the Bank from time to time;
CHF	The Bank's cost of funds as quoted by the Bank from time to time.

Please be informed that the aforesaid Spread Adjustment to be adopted may be made reference to the following fixed spread adjustment as published by Bloomberg on 5 March 2021 (the spread adjustment fixing date):

Spread Adjustment published by Bloomberg on 5th March 2021		
LIBOR	**Tenor**	**Spread Adjustment (%)**
USD	Overnight	0.00644
USD	1 Week	0.03839
USD	1 Month	0.11448
USD	2 Months	0.18456
USD	3 Months	0.26161
USD	6 Months	0.42826
USD	12 Months	0.71513
GBP	Overnight	-0.00240
GBP	1 Week	0.01680
GBP	1 Month	0.03260
GBP	2 Months	0.06330
GBP	3 Months	0.11930
GBP	6 Months	0.27660

Spread Adjustment published by Bloomberg on 5th March 2021		
LIBOR	**Tenor**	**Spread Adjustment (%)**
GBP	12 Months	0.46440
EUR	Overnight	0.00170
EUR	1 Week	0.02430
EUR	1 Month	0.04560
EUR	2 Months	0.07530
EUR	3 Months	0.09620
EUR	6 Months	0.15370
EUR	12 Months	0.29930
JPY	Spot/ Next	-0.01839
JPY	1 Week	-0.01981
JPY	1 Month	-0.02923
JPY	2 Months	-0.00449
JPY	3 Months	0.00835
JPY	6 Months	0.05809
JPY	12 Months	0.16600
CHF	Spot/ Next	-0.05510
CHF	1 Week	-0.07050
CHF	1 Month	-0.05710
CHF	2 Months	-0.02310
CHF	3 Months	0.00310
CHF	6 Months	0.07410
CHF	12 Months	0.20480

Please contact your relationship manager, or call our Customer Service Hotline at 2852 0562 for details.

Should there be any discrepancy between the Chinese and English versions of this material, the Chinese version shall prevail.

Important Notice: To borrow or not to borrow? Borrow only if you can repay!

Nanyang Commercial Bank, Limited

THE END OF LIBOR

A note prepared by the **APLMA** and the **TMA** describing various options available
in the loan market to replace
US dollar LIBOR.

14 September 2021

THE END OF LIBOR

The Hong Kong Monetary Authority (HKMA) has issued regulatory guidance to Authorized Institutions in Hong Kong requiring them to cease entering into new LIBOR contracts after 31 December 2021[1]. This is consistent with guidance issued by the Federal Reserve Bank of New York (NY Fed) and the Bank of England. Market participants will therefore need to reference alternative interest rate benchmarks in new loan contracts from 1 January 2022[2].

The Alternative Reference Rate Committee (the "ARRC") and the NY Fed have also strongly recommended that market participants should incorporate hardwired SOFR fallbacks into existing US dollar LIBOR contracts and adopt the Secured Overnight Financing Rate (SOFR) in all new US dollar-denominated floating rate transactions. SOFR however is an overnight reference rate and the adoption of SOFR in the loan markets creates a number of issues and challenges. In consequence, several different calculation methodologies based on SOFR have emerged.

This note sets out various options available to market participants for replacing US dollar LIBOR in loan contracts and briefly describes the characteristics and considerations of each. These options have been reviewed by the HKMA, which supports the distribution of this note to market participants in Hong Kong.

Both borrowers and lenders should assess the options available to them and select the replacement rate which best suits their transactions to successfully transition away from LIBOR, and all market participants are encouraged to make suitable preparations for the transition away from LIBOR in a timely manner if they have not already done so.

SUMMARY OF OPTIONS AVAILABLE IN THE SOFR MARKET

Term SOFR
Forward looking rate set in advance and accruing during the current period

Daily SOFR Compounded in Arrears
Compounded average of Daily SOFR rates calculated in arrears

Daily Simple SOFR
Daily SOFR rates calculated in arrears

SOFR in Advance
Historical averages of SOFR calculated on either a simple or compounded basis

Credit Sensitive Rates
Forward looking rate set in advance and accruing during the current period

[1] The relevant LIBOR currencies are US Dollars, Sterling, Euros, Swiss Francs and Japanese Yen

[2] In Hong Kong, the Hong Kong Interbank Offered Rate (HIBOR) has been in place for many years. It is compliant with IOSCO principles and is widely recognised by market participants as a credible and reliable benchmark. While the Hong Kong Dollar Overnight Index Average (HONIA) has been identified as the alternative reference rate (ARR) to HIBOR, the HKMA has elected to adopt a multi-rate approach so that both HONIA and HIBOR will co-exist after 31 December 2021.

TERM SOFR

The ‘CME Term SOFR Reference Rates’ benchmark is a daily set of forward-looking interest rate estimates, calculated and published for tenors of 1, 3 and 6 months, by the Chicago Mercantile Exchange (the Fed-appointed Administrator). The rates are based on market expectations implied by the SOFR derivatives market and, as such, they facilitate the interest rate for a loan to be set at the beginning of an interest period and for the calculation of daily interest accruals. In terms of practical application, Term SOFR is very much like US dollar LIBOR and provides for a consistent operational approach. Currently, the CME Term SOFR Reference Rates are the **only** forward-looking term rates endorsed by the NY Fed and the ARRC.

The respective advantages and disadvantages of Term SOFR may be summarized as follows:

Pros:

- Endorsed by the NY Fed, the ARRC and the Loan Syndication and Trading Association[3]
- Available on financial platforms such as Bloomberg and Refinitiv
- The relevant benchmark rate is known at the beginning of each new interest period (i.e., forward looking term structure)
- Applicable market conventions are similar to LIBOR (rate setting, day count, accruals)
- Recommended by ARRC as suitable for business loan markets such as multi-lender (syndicated) facilities, middle market loans and trade finance loans where transitioning from LIBOR to an overnight rate could be difficult or not practical

Cons:

- As Term SOFR is based on market expectations implied from the derivatives markets and does not use actual overnight SOFR rates in its calculation, some borrowers / lenders / other market participants may still prefer to use actual SOFR overnight rates
- Many banks, borrowers and other market participants have already invested heavily in compounded methodologies and some may therefore not be incentivized to adopt Term SOFR
- Unless loan hedging transactions utilize Term SOFR methodology (per the ARRC recommendation), such transactions may not provide a perfect hedge (N.B. ISDA Definitions and protocols recommend compounded in arrears methodology, which may result in some degree of basis risk)
- Requires a credit adjustment spread to be added to the benchmark rate (in particular for legacy loans switching to this methodology) because SOFR is a ‘risk free’ rate, as compared with LIBOR which inherently includes the credit risk of the lender and duration risk

DAILY SOFR COMPOUNDED IN ARREARS

Daily SOFR Rates are used to calculate in arrears an average compounded rate during the current interest period. The relevant advantages and disadvantages may be summarised as follows:

Pros:

- Reflects the current interest rate environment for the relevant period rather than an historic period or a projected rate (subject to a lagged look-back period)
- Reflective of time value of money and mathematically correct
- Robust rate based on ~$1Tn daily repo transactions
- Facilitates daily accruals, prepayment and secondary market transactions
- Compatible with corresponding hedging that parties may decide to put in place
- Methodology has been endorsed for the Sterling market by the Bank of England Working Group, the Financial Conduct Authority and the Loan Market Association

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[3] According to Chicago Mercantile Exchange, the approved provider of SOFR Term Rates, Term SOFR is BMR compliant and aligned to IOSCO principles (robust, resilient and coherent)

Cons:

- The relevant rate for any interest period is not known at the beginning of the period
- Requires lagged observation periods and non-cumulative calculation methodology (mathematically complex)
- Requires very sophisticated systems (lenders, borrowers and agents)
- Difficult for borrowers, lenders and other market participants to understand and 'operationalize'
- Requires a credit adjustment spread to be added to the rate (in particular for legacy loans switching to this methodology) because SOFR is a 'risk free' rate, as compared with LIBOR which inherently includes the credit risk of the lender and duration risk

DAILY SIMPLE SOFR

Daily SOFR rates published by the NY Fed are used during the current interest period (subject to a lagged look-back period) and applied on a daily basis to the outstanding principal loan amount. The relevant daily amount of interest is then aggregated at the end of the interest period to provide the total amount of interest due for that interest period.

Pros:

- Reflective of the current interest rate environment
- Utilizes a robust daily SOFR rate based on ~$1Tn daily repo transactions
- Facilitates daily accruals, prepayment and secondary market transactions
- This methodology is preferred by US fund managers (a very large part of the US dollar loan market) who have a daily mark-to-market requirement

Cons:

- The relevant interest rate is not known at the beginning of the interest period
- Potentially creates basis risk (albeit limited) against derivative hedges which use compounded methodology
- Does not reflect the time value of money
- Requires a 'credit adjustment spread' to be added to the daily rate (in particular for legacy loans switching to this methodology) because SOFR is a 'risk free' rate, as compared with LIBOR which inherently includes the credit risk of the lender and duration risk

SOFR IN ADVANCE

This methodology involves using the average of daily SOFR rates from the immediately preceding interest period and applying that rate to the current interest period

Pros:

- SOFR averages for 30, 60 and 90 days are published daily by the Fed
- Rate known at beginning of the new interest period (i.e., forward looking)

Cons:

- Rates are "stale" and may not reflect the current interest rate environment
- May not be helpful where an interest rate floor has been built into the loan contract or during periods of negative interest rates
- Requires a 'credit adjustment spread' to be added to the daily rate (in particular for legacy loans switching to this methodology) because SOFR is a 'risk free' rate, as compared with LIBOR which inherently includes the credit risk of the lender and duration risk
- Not supported by the Bank of England Working Group or by professional trade associations for the syndicated loan markets (principally because of issues around interest rate floors and the potential for arbitrage)

CREDIT SENSITIVE RATES
Examples: Bloomberg Short Term Bank Yield Index (BSBY), Ameribor, ICE Bank Yield Index

Pros:
- Provide a forward term structure, i.e., the rate is known at the beginning of the new interest period
- Based on various instruments which banks use to fund themselves

Cons:
- May not be robust during periods of market disruption, illiquidity, etc
- Not endorsed by the main regulators driving LIBOR transition
- The IOSCO Statement dated 8 September 2021 sheds considerable doubt on the credibility of credit sensitive rates per the IOSCO Principles

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Transitioning away from LIBOR

Important Points to Note for Corporate Treasurers

- The UK Financial Conduct Authority has confirmed that most of the LIBOR settings will be discontinued starting from **1 January 2022**.

- To ensure a smooth transition away from LIBOR, bank regulators around the world, including the Hong Kong Monetary Authority, have required their banks to cease entering into new LIBOR contracts after 2021. Bank customers will therefore have to reference alternative interest rates in any new contracts with banks from 1 January 2022 onwards.

- You are reminded to make suitable preparations for the transition away from LIBOR if you have not done so.

- For more information about LIBOR transition and what corporates need to do, please visit https://www.hkma.gov.hk/LIBOR.pdf or contact your bankers.

July 2021

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Treasury Markets Association

HONG KONG MONETARY AUTHORITY
香港金融管理局

Transitioning Away from LIBOR:
Points to Note for Corporate Treasurers

Key Takeaways:

- The London Interbank Offered Rate (LIBOR) will likely be discontinued after 2021. This is a significant development as LIBOR is the most widely used benchmark for a variety of financial contracts.
- Contracts that reference LIBOR could be subject to legal disputes if corporates do not reach an agreement with their banks or counterparts on a replacement rate before LIBOR becomes unavailable.
- Corporates are suggested to take prompt action to assess the implications of LIBOR discontinuation, seek professional advice as appropriate, and engage their bankers and counterparts to make early preparations for the transition.

Overview

- According to the UK Financial Conduct Authority (FCA), which regulates LIBOR, LIBOR will likely be discontinued after end-2021, as there is a very high chance that LIBOR panel banks will stop making submissions for LIBOR determination after that date. The FCA has already warned that market participants should prepare for a transition away from LIBOR.

- LIBOR discontinuation will have implications not only for financial institutions but also corporates which have outstanding contracts referencing LIBOR with a maturity beyond 2021. This note explains how the benchmark transition will impact the corporate sector through a series of Q&As.

Q&As

1. Why should I (as a corporate treasurer) be concerned?

- LIBOR, especially USD LIBOR, is the most widely used benchmark rate for a variety of financial contracts, including loans and derivatives. As most existing LIBOR contracts do not stipulate how contract terms would be managed should LIBOR become permanently unavailable, these contracts could be subject to disputes or litigation if the parties to the contract fail to agree on a replacement rate or other fallback arrangements in advance.

2. Are there alternatives to LIBOR?

- In the five LIBOR currency areas (i.e. the US, Euro Area, Japan, the UK and Switzerland), relevant authorities have identified transaction-based overnight interest rates as the alternative reference rates for LIBOR (**Table 1**).

Alternative Reference Rates

IBOR	Alternative reference rate
USD LIBOR	Secured Overnight Financing Rate (SOFR)
EUR LIBOR/EURIBOR	Euro Short Term Rate (ESTR)
JPY LIBOR/TIBOR	Tokyo Overnight Average (TONA)
GBP LIBOR	Sterling Overnight Index Average (SONIA)

CHF LIBOR	Swiss Average Rate Overnight (SARON)

3. How can these alternative reference rates be used in financial transactions, given they are overnight rates without a term structure like LIBOR?

- Interest payments based on overnight rates are generally calculated using the method of simple or compounded averaging. Currently, the most popular calculation method is compounding in arrears. Certain overseas authorities are also exploring the possibility of deriving a term structure for these overnight rates. However, a firm timetable for doing this has yet to be established. As such, corporates are advised to rely on calculation methods that have already been developed (such as those aforementioned) and promptly consult their banks on how these can be used, and also look into necessary changes that may be required, including to IT systems.

4. What steps should I take to prepare for the transition away from LIBOR?

- First, corporates should take steps to identify and review all their existing contracts that use LIBOR as the reference rate (e.g. loans, derivatives, floating rate notes, etc.). If the contracts do not contain provisions setting out how LIBOR will be replaced when it becomes unavailable, you should talk to your banks and counterparties to build in the alternative reference rates as a fallback.

- Furthermore, corporates should avoid entering into new contracts with a maturity beyond 2021 using LIBOR as reference rates. Instead, they should consider using the alternative reference rates set out above for new contracts.

5. Will HIBOR be discontinued?

- In Hong Kong, there is no plan to discontinue HIBOR as it remains a credible financial benchmark. Nevertheless, we have identified an alternative reference rate for HIBOR following the international trend, which is the HKD Overnight Index Average (HONIA). Market participants are free to choose between HIBOR and HONIA.

6. Who can I contact if I have more questions?

- For more background information about the cessation of LIBOR and relevant transition work being undertaken, please refer to the following website:
https://www.tma.org.hk/en_market_LIBOR.aspx

- For specific questions about your existing LIBOR contracts and how these should be handled, please contact your banker, and seek advice from your lawyers or financial advisors as appropriate.

Treasury Markets Association
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