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.

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Treasury Markets Association

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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