中國銀行(香港)有限公司
BANK OF CHINA (HONG KONG) LIMITED

IBOR Transition

Overview

What are IBORs?

Interbank offered rates (**IBORs**) include the London Interbank Offered Rate (**LIBOR**), the Euro Interbank Offered Rate (**EURIBOR**), the Euro Overnight Index Average (**EONIA**) and certain other rates.

IBORs serve as widely accepted benchmark interest rates that represent the cost of short-term unsecured borrowing by large banks.

Over time, IBORs have grown in relevance, with some estimates suggesting they serve as interest rate benchmarks for over US$350 trillion in financial products, including bonds, derivatives, mortgages and other loans. IBORs are used by financial institutions, corporations and governmental entities, as well as by consumers. IBORs are used not only as benchmarks in financial contracts, but also as the basis for many asset valuations.

LIBOR is used in financial products denominated in USD (US Dollar), EUR (Euro), GBP (British Pound), JPY (Japanese Yen) and CHF (Swiss Franc).

Certain currencies also use specific non-LIBOR interest rate benchmarks such as EURIBOR and EONIA for EUR, the Tokyo Interbank Offered Rate (**TIBOR**) for JPY, the Bank Bill Swap Rate (**BBSW**) for Australian Dollars, the Canadian Dollar Offered Rate (**CDOR**), the Hong Kong Interbank Offered Rate (**HIBOR**) for Hong Kong Dollars and the Singapore Interbank Offered Rate (**SIBOR**) for Singapore Dollars.

Many IBORs are now calculated based on submissions of panel banks. These submissions often rely on a panel bank’s assessment of the interbank markets, which may sometimes be based on the expert judgment of such banks rather than actual transactions.

Many IBORs are now in the process of being reformed or replaced. Some IBORs are ceased to be published.

Why are IBORs being reformed or replaced?

Following the 2008 financial crisis, it became clear that due to structural changes in the ways that banks obtained funding, the interbank lending market (which historically served as the underpinning for the bank rate quotations from which benchmarks such as LIBOR are calculated) was much smaller than it had been previously. Regulators have expressed concern that this market, which IBORs are intended to reflect, is no longer sufficiently active or liquid as a basis to reliably determine rates.

This concern resulted in recommendations made by the Financial Stability Board (**FSB**) in 2014 to reform major interest rate benchmarks and to transition to more representative alternative benchmarks, such as near risk-free rates (**RFRs**), that are based on more active and liquid overnight lending markets, instead of IBORs. Some jurisdictions are retaining their local IBORs, but reforming their calculation methodology to include results of actual transactions in more active and liquid markets than the interbank lending market.

Regulators believe that the inherent weakness of LIBOR may lead market participants to conclude that it will be unreliable at some point in the future. Regulators are further concerned that panel banks may decide to stop submitting quotes due to the lack of underlying transactions or for other reasons. Any such cessation or perceived unreliability of LIBOR could cause massive disruption.

In accordance with the timeline set out by the UK Financial Conduct Authority (**FCA**), the publication of all EUR, GBP, JPY and CHF LIBOR settings, as well as the 1-week and 2-month USD LIBOR settings ceased after 31 December 2021. The remaining USD LIBOR settings will continue to be published until 30 June 2023. Regulators globally have emphasized that market participants must start transitioning away from the use of IBORs and adopt alternative benchmark rates.

Regulatory authorities and public and private sector working groups in several jurisdictions, including the International Swaps and Derivatives Association **(ISDA**), the Sterling Risk-Free Rates Working Group, the Working Group on Euro Risk-Free Rates and the Alternative Reference Rates Committee (**ARRC**), have been discussing alternative benchmark rates to replace the IBORs. These working groups also provide guidelines on transition to alternative rates and the development of new products that refer to them.

Risk Free Rates (RFRs)

Regulators and working groups in several jurisdictions have identified replacement benchmarks and have developed strategies for transition. RFRs in the jurisdictions of each LIBOR currency have been judged to comply with new regulatory standards governing financial benchmarks that have been adopted since the 2008-era financial crisis. These standards are derived from principles set forth by the International Organization of Securities Commissions (**IOSCO**).

RFRs are calculated based on information gathered from large volumes of actual transactions, often taken from regulated exchanges or other central clearing platforms, and do not rely on the expert judgment of panel banks. In this regard, RFRs have been judged to be more robust and transparent than LIBOR, and less susceptible to potential manipulation.

Certain jurisdictions have adopted a multiple rate approach, which sees the jurisdiction's existing IBOR being reformed and to exist alongside a new RFR for the currency in such jurisdiction. The multiple rate jurisdictions are set out in the table below, and include the Euro-zone, Hong Kong, Japan and Singapore.

Certain examples of IBORs which are either ceased or being reformed are set out in the table below.

Jurisdiction	**Currency**	**Multiple rate jurisdiction?**	**IBOR**	**RFR**
US	US Dollars	No	LIBOR *(1-week and 2-month settings ceased on 31 December 2021; Remaining settings will cease on 30 June 2023)*	Secured Overnight Financing Rate (**SOFR**)
Euro-zone	Euro	Yes	LIBOR *(ceased on 31 December 2021)*	euro Short-term Rate (**€STR**)
			EONIA (EONIA ceased on 3 January 2022, and has been	

			recalibrated to refer to €STR plus a fixed spread of 8.5 basis points)	
			EURIBOR *(reformed)*	
UK	Sterling	No	LIBOR *(ceased on 31 December 2021)*	Sterling Overnight Index Average (**SONIA**)
Japan	JPY	Yes	LIBOR *(ceased on 31 December 2021)*	Tokyo Overnight Average Rate (**TONA**)
			TIBOR	
			Euroyen TIBOR *(may be discontinued)*	
Switzerland	CHF	No	LIBOR *(ceased on 31 December 2021)*	Swiss Average Rate Overnight (**SARON**)
Australia	Australian Dollars	Yes	BBSW	Reserve Bank of Australia Interbank Overnight Cash Rate (**AONIA**)
Canada	Canadian Dollars	Yes	CDOR	Canadian Overnight Repo Rate Average (**CORRA**)
Hong Kong	Hong Kong Dollars	Yes	HIBOR	Hong Kong Dollar

				Overnight Index Average (**HONIA**)
Singapore	Singapore Dollars	Yes	SIBOR *(reformed)*	Singapore Overnight Rate Average (**SORA**)

The table above is not exhaustive. There may be other interest rate benchmarks which either are or will be discontinued or where changes have been or will be made to their methodology.

Key differences/comparison between RFRs and LIBOR/other IBORs

IBORs are term rates which are published for a number of different terms (such as three months and six months). IBORs are also forward-looking rates, that is, they are published at the beginning of the relevant observation period. This means that, for example, a borrower will know at the time of borrowing what the interest rate will be for the term of borrowing.

However, RFRs are backward-looking overnight interest rates based on actual historical transaction data (as opposed to relying on the expert judgment of panel banks as is the case with IBORs), and are published after the end of the overnight borrowing period. This means that borrowers can only know at the end of the term what the relevant rate was. Unlike IBORs, overnight RFRs, by definition, do not have different tenors.

RFRs are near risk free rates while IBORs incorporate both term risk (i.e. they have a term element, such as one month, three months, six months and so on) and counterparty credit risk (i.e. the risk that a counterparty defaults on repayment of sums owed). IBORs on the other hand incorporate elements of counterparty credit risk premium and liquidity premium.

To effect a transition of existing contracts and agreements that refer to IBORs to RFRs, adjustments for credit and term differences may need to be incorporated and applied to the RFR so as to ensure the economic and commercial performance of the RFR is comparable to the IBOR being replaced.

Industry working groups as well as market participants are reviewing the calculation methodologies for these adjustments, with a view to developing robust forward-looking term versions of the RFRs. To date, Term SOFR, Term SONIA and Tokyo Term Risk Free Rate (TORF) have been published in the market.

What market participants should do

All market participants should identify their own exposure to IBORs, and the need to undertake IBOR transition in their contracts and business relationships. Certain steps to consider include:

- conducting a review of all existing contracts to identify where references to IBORs may arise;
- considering what steps need to be taken from a legal, operational, risk, compliance accounting and tax perspective to ensure readiness for transition;
- engaging with counterparties and their own customers to facilitate transition of existing contractual arrangements to include appropriate fallbacks to alternative rates;
- remaining aware of industry and regulatory developments; and
- understanding the new RFRs and considering whether and when to enter into new transactions that utilize new RFRs.

To date, market participants have transitioned away from the LIBOR settings that ceased publication after end-2021. For existing USD LIBOR-denominated transactions that extend beyond 30 June 2023, clients may have to decide whether to replace LIBOR with the alternative benchmark in advance or to use "fallback" provisions that provide a mechanism for the replacement of LIBOR with an alternative benchmark if a trigger event occurs.

Market participants should take similar steps with respect to other IBORs.

Trigger events for these fallbacks may differ, but frequently refer to either a cessation of an IBOR or a regulatory determination that, prior to actual cessation, the IBOR does not reflect underlying financial reality or is not sufficiently representative of the market (so called "pre-cessation" triggers).

There are industry efforts to standardize approaches across jurisdictions and financial products, although fallbacks may include different provisions across products such as different trigger events or a different fallback rate. Market participants should be aware of the possibility that a mismatch may exist between fallback provisions in related assets or financial products, which may have unintended or unforeseen consequences.

What could these changes mean for BOCHK clients?

The changes arising from IBOR transition may affect a number of our products and services currently used by you or which you may use in the future. The impact will depend on various factors, such as:

- which particular IBOR is referred to in a product;
- the adjustments which need to be made to reflect credit and term differences between the relevant IBOR and the RFR;
- the nature and term of the product or contract;
- the date when any changes arising from IBOR transition take effect; and
- the nature of any fallback provisions in the particular contract, if any.

IBOR transition could have a number of effects on BOCHK's clients. These include, for example, changes to the value of products, the need to amend existing contracts, the possibility that products may no longer serve the purpose for which they were originally intended and making changes to existing operational processes and/or systems.

There may also be tax, regulatory, legal and accounting effects depending on a client's particular situation.

The effect of IBOR transition may also vary depending on whether the relevant benchmark is being discontinued or reformed. A reformed IBOR may result in different calculation methodologies being adopted, which may result in the reformed IBOR performing materially differently than it did prior to the reform.

Further, the effects of IBOR transition may be experienced at different times with respect to different products and in different jurisdictions or regions.

BOCHK recommends you conduct your own independent assessment of the impacts and risks as a result of the IBOR transition.

Will contracts or products which refer to HIBOR be affected?

Currently, there is no plan to discontinue HIBOR, whether for Hong Kong Dollars or for offshore Chinese Renminbi (CNH). HIBOR has been used for Hong Kong Dollar transactions for many years and remains widely recognised by market participants as a credible and reliable interest rate benchmark.

For HIBOR (in Hong Kong Dollars), the HONIA has been identified by the Treasury Markets Association (**TMA**) in Hong Kong as the preferred alternative reference rate. It is expected that both HIBOR and HONIA will co-exist, and market participants may elect to use either HIBOR or HONIA. In addition, existing HIBOR-based transactions can continue to be used, notwithstanding that HONIA will also be available for use as an alternative reference rate for Hong Kong Dollar transactions. We do not expect that HIBOR will be replaced by HONIA as the alternative reference rate in existing contracts and transactions in the near future. The basis of calculation of HIBOR may, however, be continuously enhanced.

What are some of the key target and dates for IBOR transition?

Several of the working groups have set target dates for LIBOR transition milestones to occur prior to LIBOR's scheduled discontinuation date. For example, the ARRC has set target dates for US financial institutions ceasing to offer new USD LIBOR-denominated products by 31 December 2021 and for the inclusion of fallbacks in financial contracts denominated in USD LIBOR. The UK FCA has set a target date for UK financial institutions ceasing to offer new GBP LIBOR-denominated loan products (expiring after Q4 2021) by the end of Q1 2021. The Hong Kong Monetary Authority (HKMA) has developed three LIBOR transition milestones which authorized institutions should endeavour to achieve: (1) Authorized institutions should be in a position to offer products referencing the ARRs to LIBOR from 1 January 2021; (2) Adequate fall-back provisions should be included in all newly issued LIBOR-linked contracts that will mature after 2021 from 1 January 2021; (3) Authorized institutions should cease to issue new LIBOR-linked products that will mature after 2021 by 31 December 2021. As certain USD LIBOR settings will continue to be published for an additional 18 months after 2021, it is recognised that there may be a need for authorized institutions to issue new USD LIBOR-linked contracts under certain exceptional circumstances until June 2023 in order to manage (or help customers manage) risks associated with pre-existing USD LIBOR-linked contracts. The HKMA notes that banking regulators in several jurisdictions have specified the exceptional circumstances under which their banks are permitted to issue new USD LIBOR-linked contracts after 2021. Having consulted the TMA and other relevant industry bodies, the HKMA set out below the circumstances under which authorized institutions are permitted to issue new USD LIBOR-linked contracts after 2021:

- transactions that reduce or hedge an authorized institution or its clients' USD LIBOR exposures connected with contracts entered into before 1 January 2022;
- market making in support of client activities related to USD LIBOR transactions executed before 1 January 2022;
- novations of USD LIBOR transactions executed before 1 January 2022; and
- transactions executed for purposes of required participation in a central counterparty auction procedure in the case of a member default, including transactions to hedge the resulting USD LIBOR exposure.

ISDA has published the 2006 ISDA Definitions and a related multilateral protocol on 23 October 2020, which will take effect from 25 January 2021. The revised ISDA definitions will contain IBOR fallbacks to RFRs for new trades. The protocol will allow parties to have the revised definitions apply to legacy trades among protocol adherents. The protocol and the revised definitions became effective from 25 January 2021.

ISDA has selected Bloomberg Index Services Limited to calculate and publish adjustments related to fallbacks that ISDA intends to implement for certain interest rate benchmarks in the ISDA definitions. Bloomberg has produced and published the fallback rates (based on RFRs compounded in arrears), the spread adjustment and the "all-in" fallback rate (the compounded in arrears rate plus the spread) in mid-2020. The publication of these rates should provide market participants with more clarity on the calculation of the spread and term adjustments to the RFRs that would apply to fallback rates.

Aiming for a smooth transition for the existing LIBOR contracts, ICE Benchmark

Administration consulted the industry regarding the "potential extension of some LIBOR cessation dates to June 2023" in November 2020 with the result published on 5 March 2021. Following this, the FCA announced that all LIBOR settings will cease or no longer be representative, as below:

- After December 31, 2021: all Sterling, Euro, Swiss franc and Japanese Yen LIBOR settings, and 1-week and 2-month US dollar LIBOR settings

- After June 30, 2023: remaining US dollar LIBOR settings (overnight, 1-month, 3-month, 6-month and 12-month)

ISDA also confirmed the announcement constituted an index cessation event under the ISDA IBOR Fallbacks Supplement or ISDA IBOR Fallbacks Protocol and the spread adjustment is fixed as of 5 March 2021.

How is transition likely to occur for particular financial products?

Depending on the product, currency and jurisdiction involved, parties may be able to enter into a new transaction that refers to an RFR now. RFR-denominated transactions include futures, derivatives, floating rate notes, securitizations and loans.

In many cases, parties to a legacy transaction that refers to an IBOR will need to amend the underlying documentation to refer to a different interest rate or to include a fallback provision (if a fallback is not already included). In some instances, fallback provisions already exist, such as to "cost of funding" in the case of many facility agreements, but these may prove difficult to implement on a long-term basis. Market participants may also consider refinancing or replacing their IBOR-denominated products with RFR-denominated products, although there may be costs involved in doing so.

For legacy derivatives using ISDA definitions, it is expected that amendments to include the revised ISDA definitions and fallbacks may be accomplished by using the protocol, if the other party also adheres to the protocol. Parties to legacy derivatives may also enter into bilateral amendments.

Where derivatives are used to hedge an underlying transaction that itself references an IBOR, such as a loan portfolio, there may be a mismatch between the fallback rate under the derivative determined by applying the ISDA methodology and the rate used in the underlying transaction, which may apply existing fallbacks or new model fallback methodologies recommended by relevant industry bodies such as the Loan Market

Association (LMA) or Asia Pacific Loan Market Association (APLMA), which are different from the ISDA fallbacks. This mismatch may, for example, result in the hedging being "imperfect".

Parties seeking amendments may need to obtain the requisite consent of their contractual counterparties, and should be mindful of required vote thresholds. For example, many indentures require a 100% bondholder vote to change the interest rate provisions.

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BOCHK is actively monitoring developments on IBOR transition and assessing any changes which may need to be made to existing contracts, products and transactions. BOCHK will continue to provide more information on this topic as appropriate.

IBOR transition may affect products and services in a number of ways and the information provided on this page is general in nature and is not exhaustive. You should contact your professional advisors on the possible impact of IBOR transition on the financial products and services you use or may use in the future.

The content of this page reflects BOCHK's current understanding of IBOR transition as at 18 March 2022. Due to the current level of uncertainty, this overview is not complete or exhaustive and does not constitute any form of advice or recommendation. Clients should contact their professional advisors on the possible implications of IBOR transition, such as financial, legal, accounting or tax consequences.

For more information

If you wish to obtain general information on the IBOR transition, please consider reviewing published information from regulators, working groups and other industry bodies, including those listed below:

United States

- Alternative Reference Rates Committee (ARRC)

Euro-zone

- European Central Bank (ECB)

United Kingdom

- Bank of England (BoE)
- Financial Conduct Authority (FCA)

Japan

- Cross-Industry Committee on Japanese Yen Interest Rate Benchmarks

Switzerland

- Swiss National Bank (SNB)

Hong Kong

- Hong Kong Monetary Authority (HKMA)
- Treasury Markets Association (TMA)

Global

- Asia Pacific Loan Market Association (APLMA)
- Financial Stability Board (FSB)
- International Swaps and Derivatives Association (ISDA)
- Loan Market Association (LMA)
- Loan Syndications & Trading Association (LSTA)