BBVA

Corporate & Investment Banking

"Best Investment Bank for Sustainable Financing"
Global Winner
BBVA
Global Finance, 2021

"Best Investment Bank in Spain"
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Global Finance, 2021

BBVA Global Markets & Investment Banking and Finance

IBOR Transition Information

"Best Investment Bank in Spain"
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Euromoney, 2020

March 2021

Creando Oportunidades

Disclaimer

Introduction (1/2)

The purpose of this section is to summarise current market trends and latest developments of the industry regarding the IBOR transition (except EURIBOR, which is not scheduled to be ceased). BBVA acts as a financial entity and does not provide financial, legal, tax advise or otherwise nor a personal recommendation.

Timing Considerations

- The regulatory message is that **banks need to transition all LIBOR referenced contracts (USD, GBP, CHF and JPY) to alternative reference rates** such as the Risk Free Rates (RFRs), **or include robust fallbacks in contracts** that permit rate switch when LIBORs cease to be published or will no longer be representative, **as soon as practically possible and at least before the relevant LIBOR cessation dates or lack of representativeness dates.**

- On 5 March 2021, the FCA announced the dates on which all LIBOR settings will either cease to be published by any administrator or will no longer be representative. The following dates apply to each LIBOR currency and setting:
- All GBP, EUR, CHF and JPY LIBOR settings will either cease to be published or will no longer be representative **after 31 December 2021**
- For USD LIBOR settings, publication will cease or will no longer be representative:
  - (i) for one week and two month settings, **after 31 December 2021**
  - (ii) for overnight, one month, three month, six month and twelve month settings, **after 30 June 2023**

- Referred to ISDA contracts, Bloomberg announced subsequently the 5 March 2021 as the **Spread Adjustment Fixing Date for all LIBOR Tenors across all LIBOR currencies**

- The Federal Reserve Board (FRB), Federal Deposit Insurance Corporation (FDIC) and Office of the Comptroller of the Currency (OCC) issued supervisory guidance encouraging banks "**to cease entering into new contracts that use USD LIBOR as a reference rate as soon as practicable and in any event by December 31, 2021." While Bank of England and the Sterling RFR WG recommended to cease initiation of new GBP LIBOR-linked loans that expire after the end of 2021 by end of March 2021**

Forward vs. backward looking

- **Backward looking rates: RFRs are daily interest rates while LIBORs are term rates.** There are some term rate curves available for these new RFRs for certain tenors and currencies. However**, the convention is to use the daily interest rates already being published (backward looking) with a large support for publication of such rates from market participants and authorities.**

- **Forward looking rates:** The ARRC will not be able to recommend a **SOFR term rate** by mid-2021 and cannot guarantee that it will be in a position to recommend an administrator that can produce a robust term rate by the end of 2021 (Link). A **Term SONIA** benchmark rate by Refinitiv has been available in 1-month, 3-month, 6-month and 12-month tenors since January 2021, whilst other **Term SONIA** rates by 2 independent benchmark administrators (FTSE Russell, IBA) are presently available as "beta version".

BBVA has been working on LIBOR Transition topics for the last 2 years. We are following very closely the recommendations from the Regulatory/Industry Working Groups for each of the new Risk Free Rates (SOFR in US, SONIA in UK, €STR in Europe, etc.) and currently our systems are being prepared to process the recommended new RFR conventions

Introduction (2/2)

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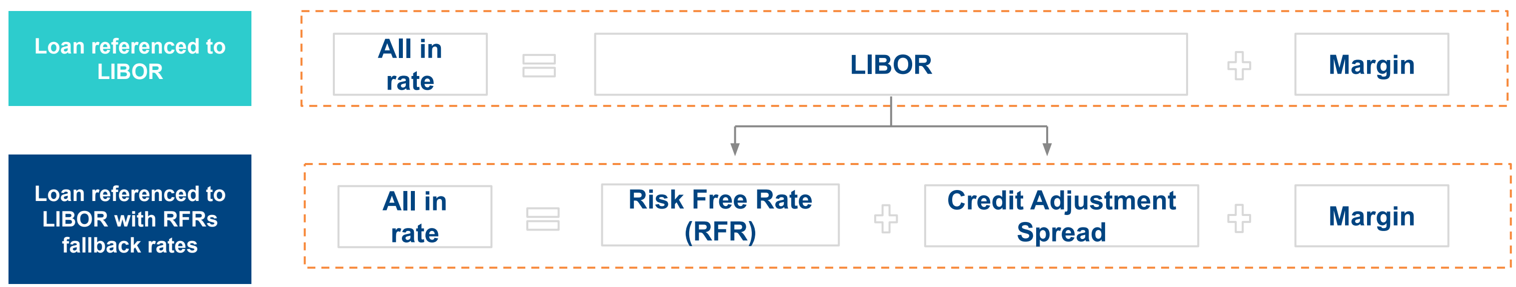
Economic concepts measured = Equivalent Result

- RFRs are designed to be nearly risk-free rates. As a consequence they do not incorporate any credit or liquidity premium. By contrast most IBORs are designed to provide an indication of the average rates at which submitter banks could obtain wholesale unsecured funding for set periods and incorporates both a credit premium (to reflect term bank credit risk) and a term liquidity premium (to reflect the risk inherent in longer dated funding).



- **Risk Free Rates (the Alternative Reference Rate):** Overnight 'risk-free' rate after applying the agreed convention, for each term rate (e.g. Daily Compounded SOFR in arrears with Lookback)
- **Credit Adjustment Spread:** This spread is usually calculated following ISDA methodology as the historical median over a five-year lookback period of the difference between the relevant RFR and LIBOR (published by Bloomberg). After the FCA announcement of LIBOR cessation dates, the ISDA credit adjustment spread value published by Bloomberg has been fixed. These fixed values can be found here
- **Margin:** Margin components (include funding costs and commercial margin) would be added to the Fallback Rate (RFR + Credit Adjustment Spread)

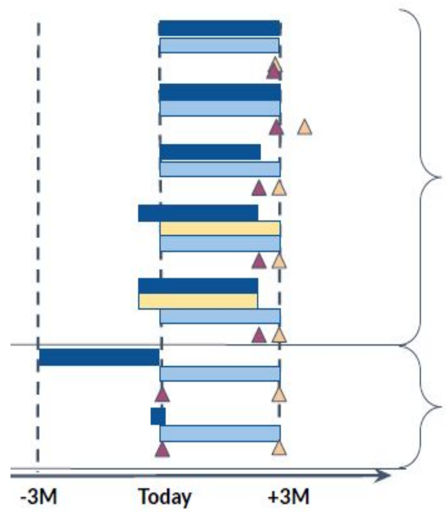
Conventions - Interest calculation approaches

Methodologies for computing the overnight rate differ on when the interest rate will be set relative to the interest payment due date

Daily interest calculation approaches for **simple** or **compounded** **RFR** (Illustrative example):

In Arrears
- Plain
- Payment delay
- Lockout period
- Lookback
- Observation shift period

In Advance
- Last Reset
- Last Recent



Next interest payment is known **close to the end** of the interest period

Next interest payment is known **at the beginning** of the interest period

- Observation period. Period used to calculate the average RFR
- Interest period. Period for which an interest installment is paid
- Period used for weighting daily RFRs
- Payment date
- Date that payment is known
- Expected to be used more *
- Expected to be used less*

The European loan market is following the 5-day lookback period without observation shift or, to a smaller degree, with observation shift*

In Arrears

Lookback vs. **Observation Shift Period**

Lookback
- The observation period used of daily RFR is shifted backwards "n" lag days but the weighting of the daily RFRs remains based on the calendar days of the interest period. Standard lag is [2 to 5] business days

Observation Shift Period
- Both the observation period used of daily RFR and the weighting of this RFRs shifts backwards "n" lag days. Standard lag is [2 to 5] business days

In Advance vs forward-looking (term) rate

In Advance method vs. **Forward-looking rates (RFR term rates)**

In Advance method
- Uses historical rates to determine the simple or compounded rate at the start of the interest period.
- Historical rates for the calculation of In Advance are currently available (published RFRs)

Forward-looking rates (RFR term rates)
- Uses forward-looking interest rates which incorporate the market´s projection of future RFRs (e.g. via OIS or futures market) to determine the interest rate at the start of the interest period
- Forward-looking (term) rates require a sufficient level of liquidity in the RFR OIS markets. SONIA Term is published by Refinitv and 2 beta versions available (FTSE Russell, IBA). SOFR Term (2H2021) ..

*According to the latest transactions published by the LMA

Conventions and Proposed Fallbacks

Fallback concepts

- Fallback language relates to provisions that apply if the underlying reference rate in the product (LIBOR) is discontinued/not representative **can be triggered via different contractual or legislative provisions (i.e.: (permanent) cessation, pre-cessation and anticipated triggers). The fallback provisions** regulates the consequences of such underlying reference rate cessation/non representativeness.
- Market standards for fallback language are already available for loans (ARRC/LSTA and LMA) and derivatives (ISDA). Although there are certain differences between ARRC/LSTA and LMA recommendations

	ARRC Hardwired Fallbacks	LMA Hardwired Fallbacks	Derivatives - ISDA IBOR Fallback Supplement & Protocol
Objective	ARRC* has published LIBOR USD hardwired fallbacks for syndicated/bilateral loans during 3Q20. The LSTA published a SOFR concept credit agreement following ARRC directions	LMA has published draft fallbacks for multicurrency loans and RCF following UK Sterling WG recommendations	Enables parties to add new fallbacks to new (supplement) and existing transactions (protocol) referencing an IBOR as defined by the ISDA Definitions
Approach (Adjusted reference rate waterfall)**	**Step 1:** Term SOFR **Step 2: Daily Simple SOFR in arrears with lookback** Alternatives to step 2: • Daily Compounded SOFR in arrears with lookback • Compound SOFR in advance **Step 3:** Selected Rate (Lender - if bilateral, or Borrower and Administrative Agent if syndicated)	**Step 1: Daily compound SOFR/SONIA in arrears with lookback**** **Step 2:** Compound Central bank rate **Step 3:** Cost of funds (optional)	**Daily compound in arrears observation shift period of 2 business days**
Credit adjustment Spread	**Step 1 and 2:** ISDA Credit Adjustment Spread (published by Bloomberg) **Step 3:** Selected Spread adjustment (Lender - if bilateral, or Borrower and Administrative Agent if syndicated)	**Step 1:** ISDA Credit Adjustment Spread (published by Bloomberg) **Step 2:** Central Bank Spread	• Spread Adjustment (median 5 years between the LIBOR and RFR) • Bloomberg was selected to calculate and publish adjustments related to LIBOR fallbacks. Bloomberg publishes daily the Spread adjustment (the median of the historical differences between an IBOR and the RFR for a given period)

** Please note that, for hedge loans, ARRC recommends for loans to follow the derivatives market (using ISDA IBOR fallbacks) when a perfect hedge with a standard derivative convention is required*
*** be rounded (not truncated) to 5 (SOFR) & 4 (SONIA) decimal points, amounts are rounded to 2 decimal points. Some approaches may not be feasible in certain legislations or applicable laws, for specific products or under certain circumstances.*

Trigger events commonly used in the market

1. **Permanent Cessation:** Regulator announces that the administrator has or **will cease** to provide the benchmark, and there is no successor
2. **Pre-Cessation:** Regulator with authority over the administrator of the benchmark officially announces that the benchmark is **no longer representative**
3. **Anticipated Triggers**: Anticipated triggers are triggers that can be initiated via contractual arrangements:

3.1 Early opt-in (defined by the **ARRC**), which can be initiated by:
A notification by the Agent that at least [five] outstanding U.S. facilities contain (as a result of amendment or as originally executed) a SOFR-based rate as a benchmark rate the joint election by the Agent and the Borrower to trigger a fallback from USD LIBOR and the written notice of such election to the Lenders. The lenders have five business days to object to the “early opt-in” election

3.2 Backstop date (defined by the **LMA**), which can be initiated by a deadline put in place so that once all the conditions of a given contract have been fulfilled the rate switch will occur automatically. This backstop date can be moved if agreed by the requisite parties

IBOR Transition & ISDA Protocol and Supplement

Background

- ISDA 2020 IBOR Fallback Protocol and supplement covers the fallbacks and conventions to be used for derivatives under ISDA and other Master Agreements' covered documentation
- 25 January 2021 as the effective date for the ISDA Fallbacks Protocol and Supplement (to the 2006 ISDA Definitions)
- **ISDA Supplement Fallback Rate** is the sum of two components: Adjusted Reference Rate and Spread Adjustment
- Key components: trigger events, rate options and conventions and spread adjustment

	ISDA Supplement	
Triggers events	Cessation Triggers Pre-Cessation Trigger	**1.- Permanent Cessation**: Regulator announces that the administrator has or will cease to provide the benchmark, and there is no successor **2.- Pre-Cessation**: Regulator with authority over the administrator of the benchmark officially announces that the benchmark is no longer representative
Rate options & RFR Conventions	Adjusted RFR interest conventions : Daily compound in arrears observation shift period of 2 business days (ISDA 2020 Protocol)	$In\ arrears = \left[\prod_{i=1}^{d_b}\left(1+\frac{r_i\ x\ n_i}{N}\right)-1\right] x\ \frac{N}{d_c}$ $In\ arrears\ (2-d\ Obs.Shift) = \left[\prod_{i=1}^{d_b}\left(1+\frac{r_{i-2d_b}\ x\ n_{i-2d_b}}{N}\right)-1\right] x\ \frac{N}{d_c}$
Spread adjustment	Adjusted Reference Rate + **Spread Adjustment:** the historical median over a five-year lookback period of the difference between the relevant RFR and LIBOR. This spread is fixed once a pre-cessation / cessation announcement for the relevant tenor takes place	

ISDA Protocol

Enables to introduce the new fallbacks included in the Supplement, in existing ISDA derivative transactions.

Also applies to certain non-ISDA master agreements (as CMOF).

Up to date

On 5 March 2021, the UK Financial Conduct Authority (FCA) issued an **announcement** on the future cessation and loss of representativeness of the LIBOR benchmarks

IBOR Transition & ISDA Protocol and Supplement (II)

Publication of Fallback Rates

- Bloomberg Index Services Limited (“BISL”) is publishing the compounded setting in arrears rate, the spread adjustment and the “ all in“ fallback rate , for the relevant IBORs except for SOR and THBFIX, which are published by ABS and Bank of Thailand respectively
- Bloomberg follows the ISDA fallback rates.

Bloomberg Terminal:

FBAK < GO > : the ‘home’ page for the latest values
DES < GO >: the description page associated with the given fallback data
HP < GO > : historic data associated with the given fallback data

Derivatives and products that will require bilateral agreements

- ISDA fallbacks may not be economically appropriate for some derivatives. In those cases, bilateral agreements should be assessed.

In-arrears Swaps	**Range Accruals**	**Fwd-start swaps**	**Cross-currency swaps**	**Constant-Maturity swap (CMS)**	**Swaptions**
Caps/Floor	**Swaps with stubs**	**Bonds/MTNs**	**Structured Notes**	**Hedging IRS**	**Structured deposits**

- ISDA has produced bilateral templates that may be used for bilateral agreements, which enable parties to bilaterally adopt the terms of the IBOR Fallbacks Supplement and the ISDA 2020 IBOR Fallbacks Protocol and/or amend the terms and scope of the amendments made by the Protocol.
  - Please review the following official **ISDA webinar** for more detailed information on these templates.
  - Please find **here** an overview of the IBOR Transition bilateral templates that are available on the ISDA website.

External links

Please find below an overview of some key links to external resources and documents which you can access for more information on the IBOR Transition:

Jurisdiction	RFRs WGs	Link to websites/docs
UK	**Working Group on Sterling Risk- Free Reference Rates**	Link
	Statement on behalf of the Working Group on Sterling Risk-Free Reference Rates – Recommendations for SONIA Loan Market Conventions	Link
	Working Group on Sterling Risk-Free Rates Detailed Loans Conventions	Link
	Use Cases of Benchmark Rates: Compounded in Arrears, Term Rate and Further Alternatives	Link
US	**Alternative Reference Rates Committee (ARRC)**	Link
	ARRC hardwired recommended fallback language for syndicated loans	Link
	SOFR “In Arrears” Conventions for Syndicated Business Loans”	Link
	ARRC Releases Updated Recommended Hardwired Fallback Language for Bilateral Business Loans	Link
	SOFR “In Arrears” Conventions for Use in Bilateral Business Loans	Link
	A User’s Guide to SOFR	Link
SWITZERLAND	**Swiss National Bank – National Working Group on Swiss Franc Reference Rates**	Link
EU	**Working Group on euro risk-free rates**	Link
JAPAN	**Bank of Japan – Study Group on Risk Free Rates**	Link

Abbreviation	Supranational entities and relevant organizations	Link to websites/docs
ECB	Banking Supervision ECB – European Central Bank	Link
FCA	FCA – Financial Conduct Authority	Link
FSB	FSB – Financial Stability Board	Link
ISDA	ISDA – International Swaps and Derivatives Association	Link
	ISDA 2020 IBOR Fallbacks Supplement	Link
	ISDA 2020 IBOR Fallbacks Protocol	Link
	ISDA 2020 IBOR Fallbacks Protocol (IBOR Fallbacks Protocol) FAQs	Link
	IRFR Conventions and IBOR Fallbacks Product Table	Link
LMA	LMA – Loan Market Association	Link
LSTA	LSTA – Loan Syndications and Trading Association	Link