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LIBOR

LIBOR fallbacks and transition

Answers to common questions around Bloomberg's preparations for the shift to risk-free rates.

Anticipated completion dates in the glide paths are subject to change.

Last updated: July 8, 2021

Bloomberg

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LIBOR's Rolling Cessation Begins on December 31, 2021

The UK Financial Conduct Authority (FCA) and ICE Benchmark Administration (IBA) have announced that all tenors across GBP LIBOR, JPY LIBOR, CHF LIBOR and Euro-LIBOR will be discontinued or become non-representative after December 31, 2021. Further, all USD LIBOR tenors other than 1 week and 2 month tenors will be discontinued or become non-representative after June 30, 2023. 1 week and 2 month USD LIBOR tenors will be discontinued after December 31, 2021.

The European Money Markets Institute (EMMI) has announced that EONIA will be discontinued after December 31, 2021.

The Board of Governors of the Federal Reserve System, the Office of the Comptroller of the Currency, and the Federal Deposit Insurance Corporation have recommended that banks 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. Similar recommendations have been made by the UK FCA, Swiss FINMA and Bank of Japan.

In October 2020, Bloomberg published a set of LIBOR Transition FAQs to provide answers to common questions around Bloomberg's preparations for the shift to risk-free rates (RFRs). Subscribers can find more information about the transition to alternative RFRs on **RFR** <**GO**> and download the FAQs from **DOCS 2094470** <**GO**>.

Since the publication of the FAQs, the LIBOR Transition working groups (Figure 1) have recommended a number of timelines to guide market participants through the LIBOR transition process, including cessation of new issuance in LIBOR-linked instruments and adoption of robust fallbacks.

Overview of identified alternative RFRs in selected currency areas

Alternative rate	United States **SOFR** (Secured Overnight Financing Rate)	United Kingdom **SONIA** (Sterling Overnight Index Average)	Euro area **€STR** (Euro Short-Term Rate)	Switzerland **SARON** (Swiss Average Overnight Rate)	Japan **TONA** (Tokyo Overnight Average Rate)
Administrator	Federal Reserve Bank of New York	Bank of England	ECB	SIX Swiss Exchange	Bank of Japan
Data source	Triparty repo, FICC GCF, FICC bilateral	Form SMMD (BoE data collection)	MMSR	CHF interbank repo	Money market brokers
Wholesale non-bank counterparties	Yes	Yes	Yes	No	Yes
Secured	Yes	No	No	Yes	No
Overnight rate	Yes	Yes	Yes	Yes	Yes
Available now?	Yes	Yes	Yes	Yes	Yes

FICC = Fixed Income Clearing Corporation; GCF = general collateral financing; MMSR = money market statistical reporting; SMMD = Sterling money market data collection reporting.

Sources: ECB; Bank of Japan; Bank of England; Federal Reserve Bank of New York; Financial Stability Board; Bank of America Merrill Lynch; International Swaps and Derivatives Association.

Figure 1. LIBOR transition working groups and their administrators selected alternative risk free rates

Over the course of 2021, Bloomberg will continue to release functionality, enhance existing analytics, and create new data sets that assist and support customers with their transition plans to the new RFRs.

For most clients, beyond identifying the changes to technology that will need to be implemented to support pricing for impacted instruments with the new alternative reference benchmarks, LIBOR transition is a process that begins with: (1) identifying securities in the portfolio exposed to LIBOR or to an index that contains a LIBOR component(s); and (2) determining whether an affected instrument has adequate LIBOR fallback provisions to address a cessation event.

This document, **LIBOR Fallbacks and Transition FAQs**, is a supplement to Bloomberg's October 2020 FAQs, detailing some of the processes that Bloomberg uses to initially gather, QA, and update instrument fallback information. This document also provides additional detail on what to expect over the next year as the fixed income community glides into end-of-year LIBOR cessation.

LIBOR transition for fixed income securities can be a challenging process. The governing documents for any given LIBOR-linked security may contain robust fallback language that adequately describes the steps to be taken in the event that LIBOR ceases prior to the security's maturity. However, if such language does not exist, additional analysis may be needed to determine how the security will be impacted *(See FAQ Where does the review process stand?)*.

LIBOR transition for derivatives, on the other hand, is shaping up to be a more streamlined process. In January 2021, ISDA's IBOR Fallbacks Protocol and IBOR Fallbacks Supplement went into effect. As of January 2021, all new derivatives contracts that reference ISDA's standard interest rate derivatives definitions will include robust fallbacks. Through the ISDA Protocol, robust fallbacks will also be included in legacy non-cleared derivatives agreements between any two Protocol adherents. ISDA posts updates and provides additional information on the LIBOR transition fallback supplements, protocols and timelines on its website in the protocols section at www.isda.org.

How Bloomberg is Preparing for the SOFR First Initiative

SOFR First is a best practice that has been recommended by the CFTC's Market Risk Advisory Committee's Interest Rate Benchmark Reform Subcommittee. The recommendation, which is modeled after the U.K.'s "SONIA First" Initiative, represents a prioritization of interdealer trading in SOFR rather than LIBOR. The Subcommittee recommends that on July 26, 2021, interdealer brokers replace trading of LIBOR linear swaps with trading of SOFR linear swaps. Interdealer brokers' screens for LIBOR linear swaps would continue to be made available for informational purposes until October 22, 2021. After this date, the Subcommittee recommends turning off these screens altogether.

In light of this recommendation, Bloomberg will continue to monitor the market data available and will maintain support for LIBOR composites for use in our analytics and models until those data sets are no longer available. In addition, Bloomberg SEF will continue to support LIBOR and SOFR linear swaps.

Fixed Income: LIBOR Transition Strategy

As explained in more detail below, LIBOR transition is managed on an instrument level. An algorithm was created to scan for instruments that are affected by LIBOR cessation. Fixed income data analysts review documents for fallback-related information, which is then updated into new reference data fields that have been added in connection with the LIBOR transition process. Once the new alternative benchmark is identified, the instrument's alternative pricing, yields, etc. are calculated, stored and made available throughout the Bloomberg eco-system (Figure 2).

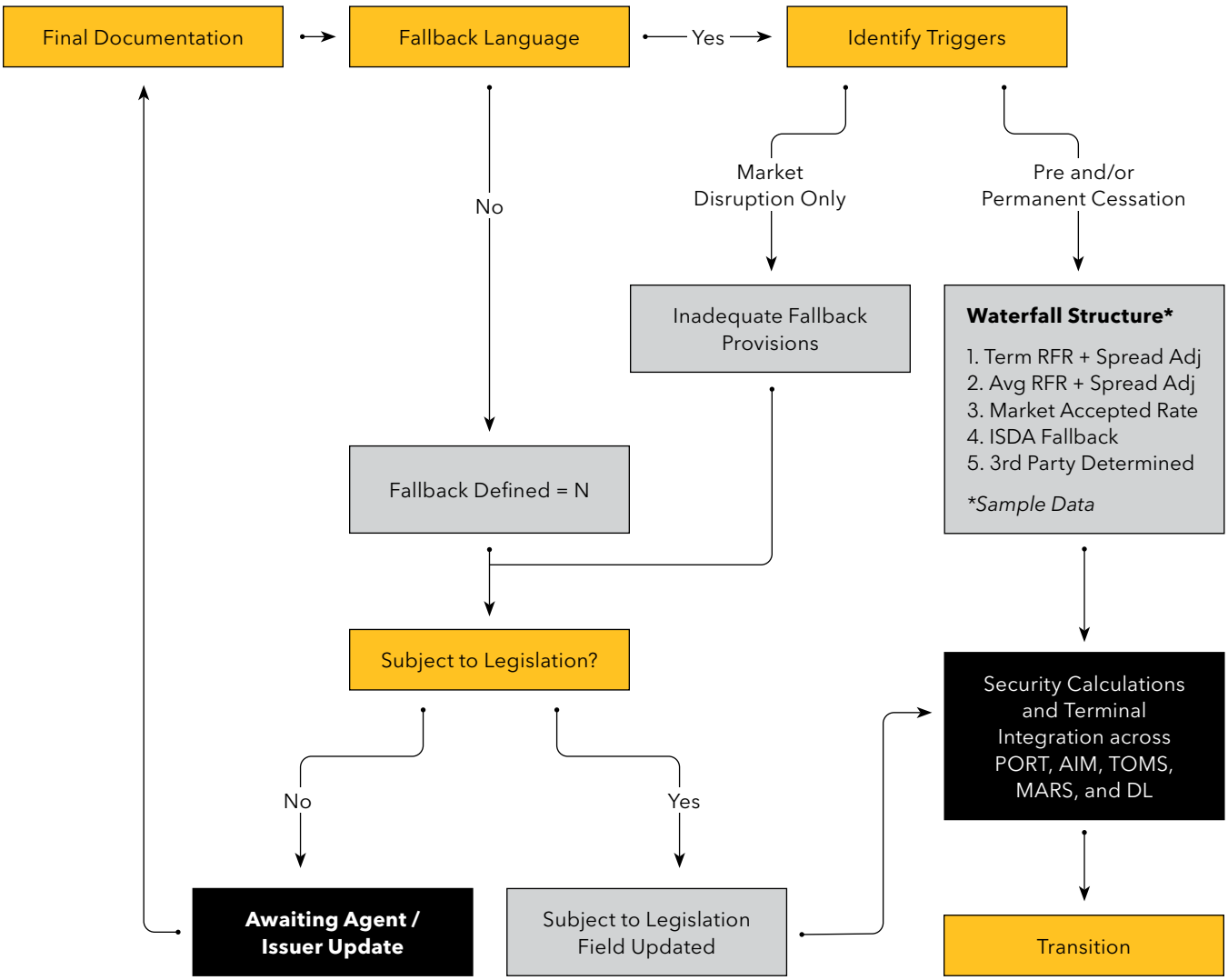


Figure 2. Managing the transition workflow

Identifying securities benchmarked to LIBOR

If an instrument references LIBOR directly or references an index that has a LIBOR component(s) associated with it, the instrument is considered "LIBOR Exposed." An instrument's reference benchmark is a critical piece of reference data that is added to the description profile when an instrument is created and added to the Bloomberg system. Using this methodology, the reference benchmark was used to populate a new "IBOR Exposed" (DW778) field (Figure 3).

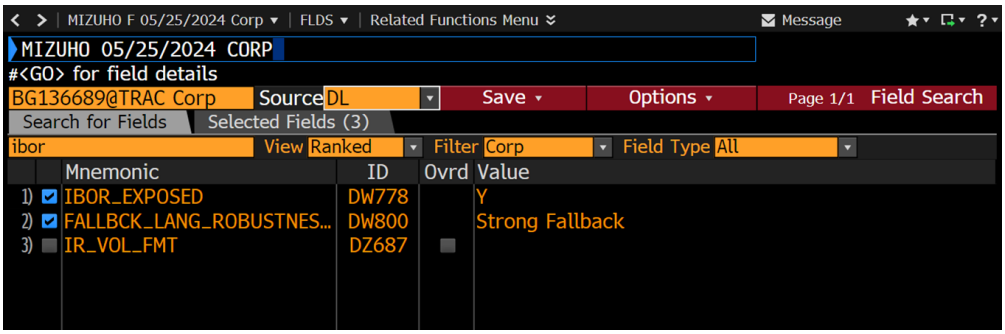


Figure 3. Instrument Fallback lookup - **FLDS** <**GO**>

Enterprise access to this and other LIBOR fallback related fields and the single security fallback lookup analytic, **IBOR** <**GO**>, on the Terminal, are available with a LIBOR Fallback Data License agreement (Figure 4).

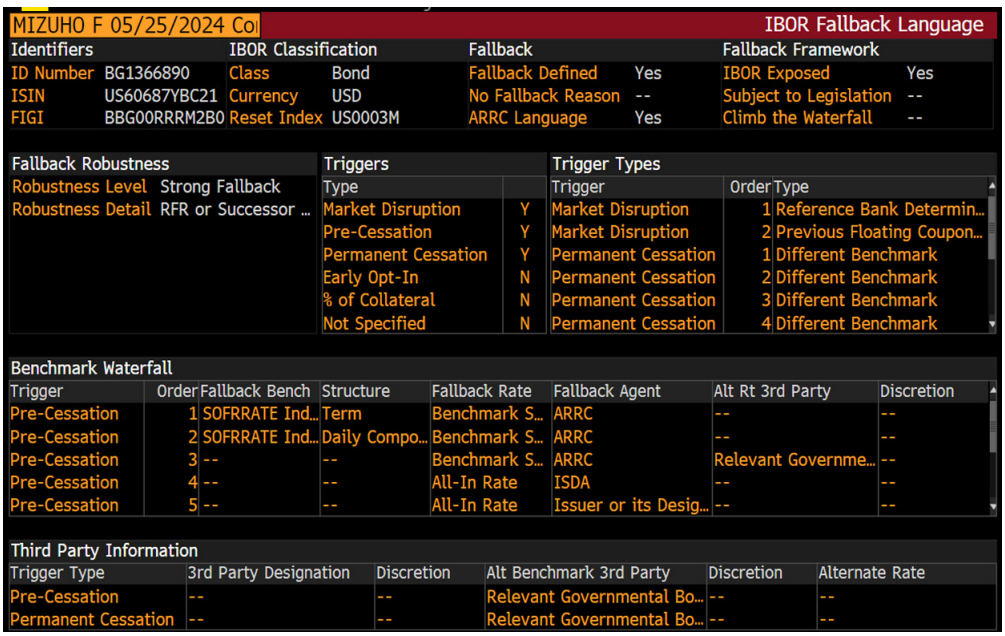


Figure 4. Instrument Fallback lookup - **IBOR** <**GO**>

Managing LIBOR Transition FAQs

How is the fallback determined?

For each "IBOR Exposed" instrument, Bloomberg analysts and/or vendors reviewed documents such as SEC EDGAR filings, prospectuses, and other final documentation to determine whether fallback provisions were specified. The information is placed into a template.

A combination of document-scraping and algorithmic-based technologies are used to search through the final documentation attached to a given security to identify the presence and location of fallback provisions. These tasks generate a template and work items that are reviewed by Bloomberg analysts. Additionally, Bloomberg has several teams of analysts globally tasked with reviewing final documentation such as prospectuses, indentures, credit agreements, offering memorandums, SEC filings, and other docs to detect the presence of fallback language and provisions.

Any new security added the Bloomberg system that is exposed to LIBOR is automatically flagged for review and any new final documentation uploaded to Bloomberg tied to any such security automatically generates a work item for review by an analyst.

Based on this documentation, using the templates, Bloomberg updates the security reference information for each unique security to capture benchmark transition events and triggers as well as corresponding fallback provisions in priority ordering. In order to ensure accurate data capture, several pre-publication business rules are in place to detect inconsistent or illogical updates and block publication of erroneous entries. Rules are also applied across the entire security universe to detect and flag for additional review outliers within the security dataset.

There is also a formal process for consumers of the LIBOR Fallback data file to challenge the data for a given security. Challenges are logged and a review process is initiated to confirm (or correct) the fallback data. The process also includes examination of errors to determine whether there is a potential gap or error in the dataset. Securities with the same features are then checked to determine if other securities with the same structure or fallback provisions has similar errors.

In anticipation of the upcoming cessation events, Bloomberg is engaging with large agent and trustee banks that serve as calculation agent and/or principal paying agent on LIBOR-exposed securities. Bloomberg is partnering with these firms to share and confirm a given security's LIBOR exposure, fallback provisions, and determining parties. As we approach cessation, Bloomberg will also receive details from these parties detailing the determinations made on a given security including specific calculation conventions such as lookback periods, lockout periods, rate rounding, holiday calendars, and other relevant referential and calculation data. Additionally, Bloomberg is engaging some of the largest issuers of LIBOR-linked debt (primarily of tier-1 banks) to confirm details on their securities and ensure alignment during transition.

Status: Review process is <In Progress> (see FAQ Where does the review process stand?) as of May 15, 2021

What is the quality assurance/control process?

The submission of the template *(See FAQ How is fallback determined?)* initiates a Quality Assurance/Quality Control process which included algorithmic checks for logical errors and resubmitting a statistical sampling of affected instruments for re-analysis and algorithmic template comparison for consistency.

Customers impacted by the LIBOR transition perform an active role by communicating to Bloomberg. All challenges are logged, examined and discussed with the client-disputer.

All corrections driven from the QA and QC process are also analyzed for patterns. For example, after issues were found in data for certain bonds with extendible maturity dates, the analysis process was adjusted and the entire "extendible bond" universe was reanalyzed.

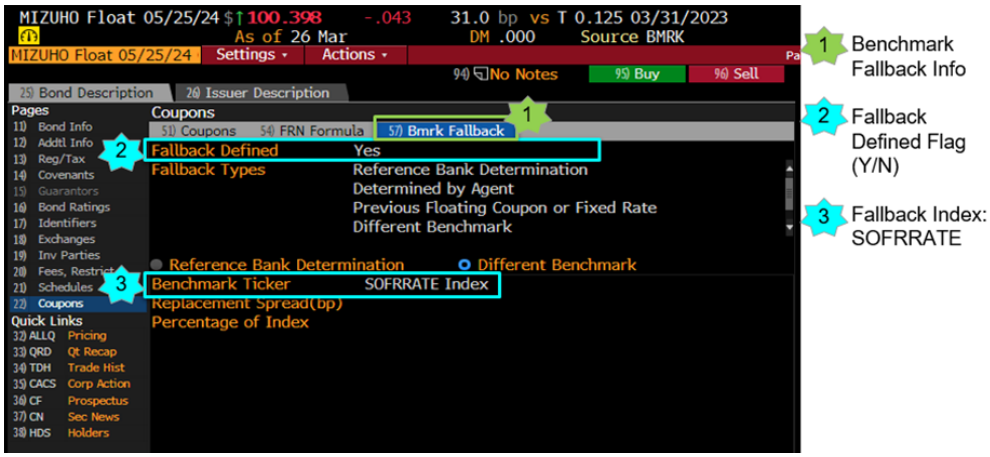
Status: Review process is <In Progress> (see FAQ Where does the review process stand?) as of May 15, 2021

How does Bloomberg update a fallback when an issuer adds a fallback provision(s) to a legacy instrument?

For some instruments, LIBOR fallbacks may be implemented in legacy instruments through a corporate action. For example, in a "consent solicitation", the issuer attains from the majority of its shareholders the consent to add LIBOR fallback language. New documents and filings may also contain fallback language. In both these instances, a corporate action will trigger a reevaluation of the issuer's LIBOR affected instruments. Additionally, any new documentation that is added to the Bloomberg system is automatically flagged for review to search for the presence of fallback language.

Where can I see the new fallback information?

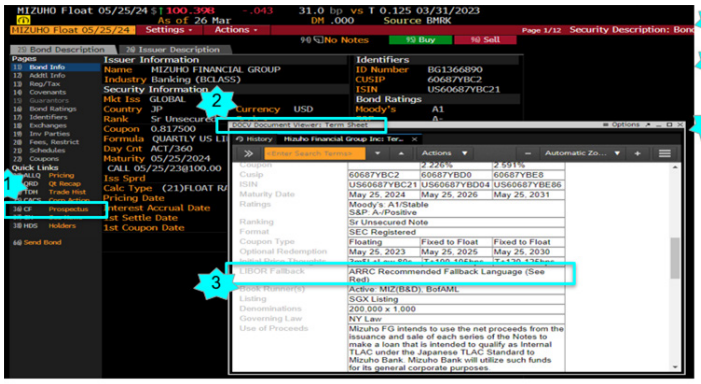
The "Bmrk Fallback" tab (**57** <**GO**>) in the Security Description (**DES** <**GO**>) displays the instrument's defined fallback and the fallback benchmark ticker.



Status: while the review process is <In Progress> (see FAQ Where does the review process stand?), the enhancements to DES <GO> are <Complete> as of May 15, 2021

Where can I see the documentation source that was used to make the determination?

In Security Description (**DES** <**GO**>), you'll find the link to the prospectus (**36** <**GO**>). Search for "ISDA" or "Fallback".



Status: While the review process is <In Progress> (see FAQ Where does the review process stand?), the enhancements to DES <GO> are<Complete> as of May 15, 2021

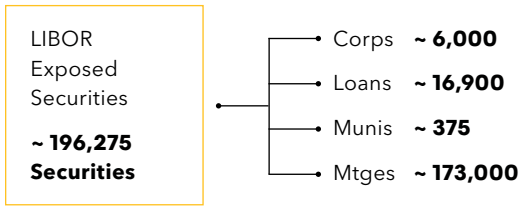
How will Bloomberg communicate future coupon term changes and their corresponding effective date resulting from either a corporate action or because Bloomberg was able to issue an update from existing documentation?

A new corporate action event that will communicate future coupon term changes and their corresponding effective date is being developed. The event will communicate changes due to hardwired fallback language, legislative fallbacks, contract amendments, and active corporate action events including consent solicitations. Once a corporate action event occurs, the reference data fields for the security will be updated automatically to reflect the new terms and conditions.

Where does the review process stand?

The review process is an on-going multi-phase iterative process. The total universe of impacted fixed income securities can be summarized below as:

Universe Impacted: Corps, Loans, Munis, + Mortgages



Securities Included

USD
Maturity date: June 30, 2023

Non-USD
Maturity date: December 31, 2021

LIBOR Transition Strategy FAQs (as of May 15, 2021, subject to change)

What are some of the changes that are occurring in fixed income?

The rate setting is changing from the current LIBOR survey-based rate setting process to transaction-based rate for security accruals and interest payment(s).

Currently, issuers and investors know security accruals & interest payment(s) in "advance." Daily accruals and next coupon are known to the issuer and investor ahead of time with projections of future cash flows based on the underlying swap curve. For example, Z-spread, ASW, OAS spreads are based off the underlying swap curve (e.g. USD floating rate bonds will be off the S23 curve).

After LIBOR transition, in some cases, given the nature of a compounded or averaged daily rate, issuers and investors will not know security accruals and interest payment(s) ahead of time so those calculations will now be made in "arrears." Daily accruals and next coupon are not known to the issuer and investor ahead of time. Typically, they will be known only 2 days prior to the actual coupon payment date. Projections of future cash flows will be based on the underlying RFR curve and Z-spread, ASW, OAS spreads will be based off the underlying risk free rate (e.g. USD floating rate bonds will be off the S490 curve).

Where can I find the current LIBOR reference benchmarks and new fallback conventions?

Security Description (**DES** <**GO**>) was modified to include affected instruments tabs that link to the Fallback information.

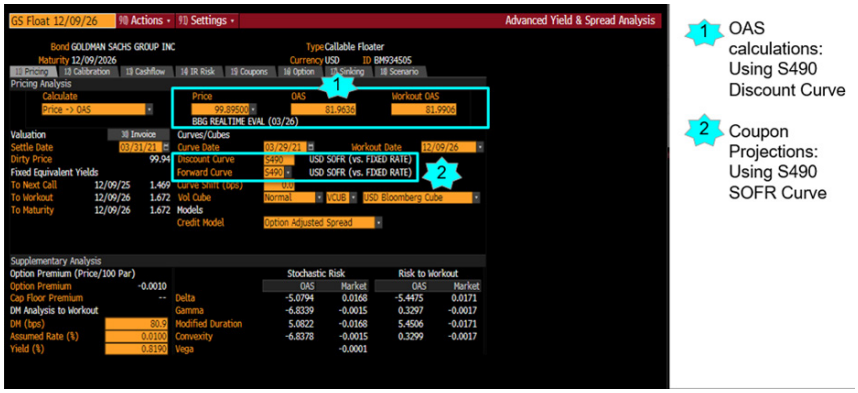
Status: The enhancements to DES<GO> are <Complete> as of May 15, 2021

The FRN formula tab (**54** <**GO**>) provides the old LIBOR and new fallback reference rate calculation with the published spreads (**FBAK** <**GO**>).

Status: Review process is <In Progress> (see FAQ Where does the review process stand?). Many of the fallback conventions are "as of" potentially skipping steps in the waterfall and may be amended later on.

Where are the alternative RFRs supported?

RFRs are supported in Advanced Yield and Spread Analysis (**YASN** <**GO**>) for OAS.



Status: The enhancements to YASN<GO> are <Complete> as of May 15, 2021

RFRs are supported in Portfolio & Risk Analytics (**PORT** <**GO**>) for OAS.

- Supported curves are: USD SOFR (S490), EUR ESTR (S514), GBP SONIA (S141), JPY TONAR (S195) and CHF SARON (S234). AUD, CAD, HKD are planned for mid-2021.
- Provided in parallel to the IBOR analytics and available in PORT position view and PREP reports.
- IBOR analytics will continue to be populated until the underlying IBOR curve is decommissioned for the seven currencies (excluding EUR). We will stitch RFR analytics afterwards (excluding EUR).
- RFR KRDs, RFR OAD, RFR OAC, RFR OAS, RFR OASD, RFR OASC and etc.

Status: OIS <GO> provides an up-to-date list of RFR curves and currencies supported

For structured products, what changes are occurring with Scenario-Based Valuation and Risk Analysis to support LIBOR transition?

LIBOR cessation announcements have triggered fallback language across a number of securities, currencies and products. Bloomberg functionality supports all new RFR securities, includes new RFR curves and a comprehensive set of analytics and indices based on the IBOR replacements.

The **SYT** <**GO**> and **YT** <**GO**> pricing functions will continue to identify LIBOR-based securities and coupon schedules up until the cessation date becomes effective.

Post-cessation, future coupons and risk attributes will be migrated to be reflective of the fallback coupons, as defined in the description (**DES** <**GO**>) of the security.

SYT <**GO**> and **YT** <**GO**> support RFR-based pricing and risk on overnight indices and multiple calculation methodologies (e.g., simple average SOFR in arrears, compounded average SONIA in arrears). Users can run cash-flow model simulations and scenarios and analyze period-by-period projected and historical cash flows for securities using new RFRs. Bloomberg's cash-flow analytics will continue to be enhanced to support new indices and forward term indices as they gain adoption in the marketplace.

Trade Ticketing (BXT/SXT <GO>)

Bloomberg has added support for floating rate securities that use a new RFR in calculators and trade ticketing functions. Users can create and send trade tickets at Buy Ticket (**BXT** <**GO**>) or Sell Ticket (**SXT** <**GO**>), with accurately calculated accrued interest corresponding to any settle date using daily compounded RFRs. Additional detail into the daily rate fixings and compounding embedded in the RFR index calculation has been added to provide greater transparency.

Status: The enhancements to SYT <GO> and YT <GO> are <In Progress> for cessation on December 31, 2021

Derivatives: LIBOR Transition Strategy

(as of May 15, 2021, subject to change)

LIBOR Transition Strategy FAQs

What new RFR curves have been developed?

Bloomberg supports major RFR curves including USD, GBP, JPY, CHF and EUR across its suite of solutions. These curves can be viewed and analyzed within the Bloomberg Swap Curve Builder, **ICVS** <**GO**>. Help on Overnight Index Swaps (**OIS** <**GO**>) provides a full list of supported RFR curves.

Currency	New RFR	Curve
USD	USD OIS SOFR	ICVS 490 <GO>
GBP	GBP OIS SONIA	ICVS 141 <GO>
JPY	JPY OIS TONAR	ICVS 195 <GO>
CHF	CHF OIS SARON	ICVS 234 <GO>
EUR	EUR OIS €STR	ICVS 514 <GO>

Bloomberg's default versions of the above curves are constructed entirely using term OIS instruments (synthetic OIS construction in the case of €STR) and utilize Bloomberg's time-window adaptive composite Bloomberg Generic Price algorithm as the pricing source for instrument rates.

Bloomberg's central assumption is that contributions to LIBOR-based derivative tickers will either be discontinued after December 31, 2021, or liquidity/reliability of contributions will dramatically decline after December 31, 2021, due to guidance from the official sectors across the United States, United Kingdom, Japan and Switzerland recommending no use of LIBOR in new contracts after December 31, 2021.

Status: The enhancements to ICVS are <Complete> (subject to data availability ~ (see FAQ What assumptions is Bloomberg making with LIBOR Transition?) as of May 15, 2021

What assumptions is Bloomberg making with LIBOR Transition?

Bloomberg's central assumption is that contributions to LIBOR-based derivative tickers will either be discontinued after December 31, 2021, or liquidity/reliability of contributions will dramatically decline after December 31, 2021.

Therefore, in line with multi-jurisdictional official sector guidance, Bloomberg recommends its customers actively transition derivative portfolios away from LIBOR and to RFR-based derivatives prior to the end of 2021.

As a "safety belt", for Bloomberg customers and their counterparties who have signed the ISDA 2020 IBOR Fallbacks Protocol, Bloomberg pricing functions will be supporting ISDA fallback methodology across key pricing templates, referencing the relevant RFR-based market data where applicable. *(see FAQ What is the impact of LIBOR Transition on the Bloomberg Derivatives Pricing Behavior Analytics?).*

For any derivative not subject to the ISDA 2020 IBOR Fallbacks Protocol (e.g. derivatives subject to the 2006 ISDA Definitions traded pre-January 25, 2021, but where firms have not signed the ISDA 2020 IBOR Fallbacks Protocol), valuation methodology after the cessation of the relevant LIBOR may not be well-defined. Prior to the cessation date of the relevant LIBOR, Bloomberg intends to migrate the structure of certain key LIBOR single currency interest rate swap and single currency basis curves to a proxy "ISDA fallback" structure.

Prior to the cessation of the relevant LIBOR, on a date on which Bloomberg deems liquidity to have declined sufficiently, certain Bloomberg Default curves will be migrated in instrument structure to reference the appropriate RFR OIS tickers for the given instrument tenor and currency, adjusted by the ISDA fallback spread adjustment for the given currency and LIBOR tenor. This "ISDA fallback" proxy structure migration will utilize point-in-time curve construction in **ICVS** <**GO**> so that when the curve date is rolled back prior to the date of structure change, the original LIBOR instrument structure will be reintroduced. Please note that only Bloomberg Default Source 8 curves will be supported for the "ISDA fallback" structure migration and customers referencing the Bloomberg Default Source 8 curves will need to take no action in order to receive this update. For customers not referencing Bloomberg Default Source 8 curves or who prefer to manage their own curve structure, it will be their responsibility to make appropriate changes based on their view of the market.

Any continued use of these curves will be entirely at the customer's discretion and in the event of LIBOR fixings having been discontinued, at the pricing function level (e.g. **SWPM** <**GO**>), it will be the responsibility of the customer to manually enter their choice of alternative fixings.

Will customers be able to run in parallel (using LIBOR or the new RFR)?

Bloomberg provides the RFR-based alternatives to existing LIBOR-based curves and also plans to provide proxy fallback support for some key LIBOR-based single currency interest rate swap curves.

However, Bloomberg's efforts in providing RFR-based alternatives to existing LIBOR-based curves and volatility surfaces will be subject to the ability of the market to decide on standard market conventions in the RFR space and also for banks and brokers to contribute this data to Bloomberg.

In terms of interest rate curves, LIBOR transition plans can be broken down into 3 main categories - interest rate swap/single currency basis curves; cross-currency curves; other curves with a LIBOR dependency.

What level of support for cross-currency curves is Bloomberg anticipating?

Bloomberg supports a number of different types of "cross currency" curves. For example, float-float cross currency (**XCCY** <**GO**>) basis curves, fixed-float cross currency swap (**CCS** <**GO**>) curves and FX implied yield curves.

Most of Bloomberg's cross currency curves have a dependency on USD LIBOR and some also have a dependency on GBP, CHF or JPY LIBOR. Bloomberg's central expectation is that during the course of 2021 the majority of cross currency markets will migrate to SOFR as an alternative to USD LIBOR and SONIA, SARON and TONAR as an alternative to GBP, CHF and JPY LIBOR, respectively.

Cross currency curves are used to imply FX forwards in order to calculate the set of discount factors to apply to foreign cash flows collateralized in, say USD. Bloomberg will continue to only support one cross currency curve ID per existing cross currency curve.

When the market has agreed RFR-based conventions for each cross currency product and once Bloomberg has been able to create composite pricing sources, Bloomberg will create additional global "named" RFR versions of each cross currency curve. Customers will be able to select either an RFR or IBOR calibrated cross currency curve from the "Name" dropdown in **ICVS** <**GO**>.

For each existing cross currency curve ID, once Bloomberg deems market liquidity to have transitioned from LIBOR-based cross currency to RFR-based currency it will modify the structure of the Bloomberg Default Source 8 curves to be RFR-based. The source 8 option enables clients to input spreads and formulas into their curve construction to build the curve, and is the Bloomberg recommended curve construction source.

The migration in structure of the Bloomberg Default Source 8 curves will utilize point-in-time curve construction in **ICVS** <**GO**> so that when the curve date is rolled back prior to the date of structure change, the original instrument structure and dependency tree will be reintroduced. Please note that only Bloomberg Default Source 8 curves will be supported for the migration and customers referencing the Bloomberg Default Source 8 curves will need to take no action in order to receive this update. For customers not referencing Bloomberg Default Source 8 curves or who prefer to manage their own curve structure, it will be their responsibility to make appropriate changes based on their view of the market.

What other curves with a LIBOR dependency is Bloomberg preparing to support?

Bloomberg supports certain other curves which have a USD LIBOR dependency, for example USD MUNI (vs. % LIBOR) S357. Bloomberg expects the market quotation convention for such instruments to migrate to alternative reference rates such as SOFR, and in some cases Fed Funds. Table 1 below summarizes the transition plan for these curves.

Currency	New RFR	Transition Plan	Curve
AUD	AUD ISDA Standard Rates	Migrate to AUD ISDA CDS AONIA Rates curve on date to be announced by ISDA	**ICVS 268** <**GO**>
CHF	CHF ISDA Standard Rates	Migrate to CHF ISDA CDS SARON Rates curve on date to be announced by ISDA	**ICVS 265** <**GO**>
EUR	EUR ISDA Standard Rates	Migrate to EUR ISDA CDS ESTR Rates curve on date to be announced by ISDA	**ICVS 261** <**GO**>
EUR	EUR EIOPA UFR Curve	Awaiting migration plan from EIOPA	**ICVS 391** <**GO**>
GBP	GBP ISDA Standard Rates	Migrate to GBP ISDA CDS SONIA Rates curve on date to be announced by ISDA	**ICVS 264** <**GO**>
GBP	GBP EIOPA UFR Curve	Awaiting migration plan from EIOPA	**ICVS 390** <**GO**>
JPY	JPY ISDA Standard Rates	Migrate to JPY ISDA CDS TONA Rates curve on date to be announced by ISDA	**ICVS 262** <**GO**>
USD	USD (vs. T-BILL) with TBSM3M	Migrate to alternative reference rate dependency, subject to market confirmation	**ICVS 52** <**GO**>
USD	USD (vs. PRIME) with FCPR	Migrate to alternative reference rate dependency, subject to market confirmation	**ICVS 86** <**GO**>
USD	USD (vs. Commercial Paper) with H15N030Y	Migrate to alternative reference rate dependency, subject to market confirmation	**ICVS 87** <**GO**>
USD	USD MUNI (vs. % LIBOR)	Migrate to alternative reference rate dependency, subject to market confirmation	**ICVS 357** <**GO**>
USD	USD (vs. FED FUNDS) with Short End	Migrate to SOFR dependency	**ICVS 85** <**GO**>
USD	USD ISDA Standard Rates	Migrate to USD ISDA CDS SOFR Rates curve on date to be announced by ISDA	**ICVS 260** <**GO**>
USD	USD EIOPA UFR Curve	Awaiting migration plan from EIOPA	**ICVS 389** <**GO**>

Status: ata availability ~ see (FAQ What assumptions is Bloomberg making with LIBOR Transition?) as of May 15, 2021

What is the impact of LIBOR Transition on the Bloomberg Derivatives Pricing Behavior Analytics?

Interest Rate Volatility Cub (VCUB <GO>) ~ in progress

VCUB <**GO**> will introduce a new RFR cube that calibrates to the RFR caps, floors and swaptions. While market participants are anticipated to switch to the new RFR cube as the cessation date approaches, **VCUB** <**GO**> will give users the option to select legacy LIBOR option based cube in parallel with the new RFR option based cube for valuation and risk analysis. Though there will likely be multiple types of RFR option payoffs used across the market, the new RFR cube will take the most liquid market instrument as inputs for calibration. In terms of the output, the new RFR cube will have the ability to provide volatilities based on different payoff types that match the RFR instruments to be priced. As liquidity and market adoption increases for RFRs, the new RFR cube will be integrated seamlessly everywhere inside Bloomberg, such as Terminal pricers (**SWPM** <**GO**>, **YASN** <**GO**>, **DLIB** <**GO**>, etc.) and also risk systems such as MARS and PORT.

SWAP Manager (SWPM <GO>)

A wide variety of RFR-based derivatives pricing and structuring templates are available on the Bloomberg Swap Manager (**SWPM** <**GO**>) for use on the Bloomberg Terminal. Pricing and structuring is supported by either OIS specific templates for commonly traded vanilla linear derivatives such as fixed-to-float, and float-to-float basis swaps. Alternatively users can load a structuring template. Loading a structuring template supports direct input of the RFR into the "index field" but requires the user to update other features on the main and details tab. OIS mechanisms such as lookback, lockout, and payment delay are supported throughout most SWPM templates. Discounting cash flows with an RFR curve is also supported. Valuation and risk for RFR-based derivatives is also supported in risk systems such as MARS and PORT.

While market participants are urged to exit their LIBOR derivatives before their respective cessation dates, Bloomberg will allow users to value derivatives deals using ISDA Fallbacks post cessation. Commonly used products such as, but not limited to vanilla swaps, swaptions, and caps will support fallback calculations.

As RFR options markets evolve and become more liquid across currencies, pricers will be enhanced to provide flexibility for clients to value RFR-based options using a volatility surface (**VCUB** <**GO**>) calibrated from the new RFR-based data sets.

Derivatives Library (DLIB <GO>)

DLIB will enable customers to structure, price and risk manage structured products referencing RFR underlyings. Life-cycle management of the deals will be supported, clients will be able to manage fixing, cash flows and exercise decisions for RFR based structured products. In addition to the most commonly traded payoffs, **DLIB** <**GO**> will offer the possibility to support any RFR based payoff through the Bloomberg scripting language BLAN. Once the deal is created, it can be saved in **DLIB** <**GO**> or added to our portfolio function **MARS** <**GO**> for pricing and risk management. This will enable customers to continue innovating and issue new products.

Advanced Yield and Spread Analysis (YASN <GO>)

LIBOR cessation announcements have triggered fallback language across a number of securities, currencies and products. The **YASN** <**GO**> "pricer" will continue to support LIBOR-based securities and coupon schedules until the bond related cessation date becomes effective. Post-cessation, future coupons and risk attributes will be migrated to reflect fallback coupons as found in the Bloomberg security description pages (**DES** <**GO**>).

YASN <**GO**> supports RFR discounting and RFR-based pricing and risk. As cumulative indexes, alternative credit indexes and forward term indices gain acceptance in the marketplace, **YASN** <**GO**> will be enhanced to support them. When RFR-based volatility surfaces become available, users will also have the flexibility to use either RFR or LIBOR based volatility for option modeling.

What is the impact of LIBOR Transition on the Bloomberg Derivatives Pricing Behavior Analytics?

Option Valuation Equity/IR (OVME <GO>)

Futures and listed interest rate options will be updated as per the prescribed fallback terms of each exchange, according to their timelines provided. RFR based futures and options for most commonly traded products are currently supported for individual security pricing in **OVME** <**GO**> and portfolio pricing in MARS.

Asset Swap Calculator (ASW <GO>)

The Asset Swap Calculator (**ASW** <**GO**>) will be enhanced to support asset swaps for RFR based floating bonds, where users can swap the floating RFR cash flows to a fixed rate. In addition, Bloomberg will provide more flexibility in ASW settings to allow users to define the default asset swap type and Z-spread benchmark (IBOR or RFR based) to be used in analytics.

Credit Default Swap Valuation (CDSW <GO>)

The first use of RFRs in CDS valuation will be on GBP deals. The use of SONIA will commence on Monday, July 12, 2021. The remaining currencies will follow shortly thereafter. Announcements on the remaining RFRs will come after July 12 from the International Swaps and Derivatives Association (ISDA).

The CDS calculator (**CDSW** <**GO**>) uses the ISDA CDS Standard Model. The new RFR based ISDA Standard Curves compared to LIBOR do not contain deposit rates and as such necessitates a CDS model update. A new version of the model will be used to support both LIBOR and RFR rates starting July 12. The new version of the model will not impact valuation of existing CDS when a valuation date prior to the transition date is used.

CDS deals will be backward compatible. For example, if you backdate an existing GBP deal prior to July 12, the correct GBP LIBOR ISDA Standard curve will be employed and for dates on or after July 12, the RFR based SONIA curve will be used.

What changes is Bloomberg Valuation (BVAL) making to support the LIBOR Transition?

BVAL pricing will continue to reflect the spread to LIBOR up until the cessation date becomes effective.

Post-cessation, future coupons and risk attributes will be migrated to be reflective of the fallback coupons, as defined in the description (**DES** <**GO**>) of the security. LIBOR transition will result in changes to Bloomberg's BVAL pricing and curve products in:

1. Governments, Supranationals, Agencies and Corporates
2. Securitized Product
3. US Municipals
4. Curves

Status: The enhancements to BVAL are <In progress> for cessation on December 31, 2021, as of May 15, 2021

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