

REFINITIV LIMITED

Methodology Consultation: Summary

Tokyo Swap Rate (TSR)

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1. Introduction

- 1.1 Refinitiv, a London Stock Exchange Group business, is a leading calculator and administrator of benchmarks and indices. Refinitiv benchmark products include the WM/Refinitiv FX benchmarks, convertible bond indices and commodity indices. Within the interest rate asset class, Refinitiv administers products such as the Canadian Dollar Offered Rate (CDOR) and the Saudi Arabian Interbank Offered Rate (SAIBOR). In January 2021, Refinitiv Term SONIA¹, a family of GBP term rates based on OIS rates, was released as a regulated benchmark and in March 2021, the Alternative Reference Rates Committee (ARRC) in the USA announced that Refinitiv had been selected to publish its recommended spread adjustments and spread adjusted rates for USD cash products². Refinitiv administers benchmarks either directly under the IOSCO Principles for Financial Benchmarks or via its authorised subsidiary, Refinitiv Benchmark Services (UK) Limited (RBSL), under the UK Benchmark Regulation³.
- 1.2 Refinitiv calculates and administers the Tokyo Swap Rate (TSR), a Japanese Yen (JPY) interest rate swap (IRS) benchmark family comprising benchmarks rates for JPY LIBOR (6-month) swaps with tenors from 1 year to 40 years and TIBOR (6-month) swaps with tenors from 1 year to 10 years. LIBOR TSR benchmarks are determined using input data from a panel of seven banks and TIBOR TSR benchmarks are determined using input data from a panel of five banks. Input data is supplied for swaps cleared by the Japan Securities Clearing Corporation (JSCC). LIBOR TSR is published at 10:30 and 15:30 Tokyo time, and TIBOR TSR is published at 15:30 Tokyo time, on each business day in Japan.
- 1.3 On 19 April 2021, Refinitiv issued a public consultation seeking feedback on a number of questions relating to the future development of the Tokyo Swap Rate in the context of LIBOR cessation. A summary of the key points received and the decisions taken by Refinitiv are in Section 2. For further details regarding the questions, please refer to the public consultation⁴.
- 1.4 Refinitiv is grateful for all responses received for the public consultation.

¹ www.refinitiv.com/en/financial-data/financial-benchmarks/term-sonia-reference-rates

² www.newyorkfed.org/medialibrary/Microsites/arrc/files/2021/20210317-press-release-Spread-Adjustment-Vendor-Refinitiv.pdf

³ Following the UK's withdrawal from the EU and the end of the transition period, the BMR has been onshored and brought into UK law (UK BMR). The BMR is Regulation (EU) 2016/1011 of the European Parliament and of the Council of 8 June 2016.

⁴ www.refinitiv.com/content/dam/marketing/en_us/documents/white-papers/re1384668-ia-whitepaper.pdf

2. Summary of Key Points and Decisions

TONA Tokyo Swap Rate

1. Do you have a preference whether D2C executable quotes from an electronic platform or indicative quotes from voice brokered markets are the primary or secondary source of data in the waterfall?
 - Feedback is divided between D2C executable quotes and indicative broker data as the primary source of input data.
 - D2C data is preferred by some as it is electronic, executable and the result of many dealers. Prices are streamed continuously.
 - Indicative voice data is preferred by some as the inter-dealer market sees more transactions and therefore may have better price discovery.
 - Input data should be compared (for example, the number of sources, frequency of updates in the quotes, clearing house) before making a decision.
 - If electronic D2D platforms with central limit order books become a feasible option in the future, these would be the preferred source of input data at that time.

Pending further analysis of input data, Refinitiv expects to use D2C executable quotes as the primary input and indicative quotes from voice brokered markets as the secondary source in the waterfall. It is noted that executable quotes are typically prioritised over indicative rates in benchmark standards such as the IOSCO Principles for Financial Benchmarks. Refinitiv will assess the potential to include D2C executable quotes that alone would not reach the threshold for the first level in the waterfall as additional inputs into the second level.

2. If the minimum threshold is not reached for the second level, should a “NO FIX” be published or should the benchmark value for the relevant tenor or tenors from the previous business day be re-published?
 - “No Fix” is preferred to republishing T-1 rates as such rates may be out of date or applied inconsistently across different tenors.
 - If specific tenors only do not have adequate data to be fixed, a ‘daily delta’ based on interpolation of adjacent tenors could be used.

Refinitiv will adopt a “No-Fix” policy in general but will assess the feasibility of introducing a ‘daily delta’ to handle individual tenors that have insufficient input data but are between adjacent tenors that can be published.

3. Data is sampled at a customised time within each 30-second interval. Do you believe there should be any adjustments to the sampling frequency? Please provide supporting rationale.



- 30 second intervals over 30 minutes is generally considered acceptable.
- 30 minutes may be considered quite a wide window for longer duration interest rates and could be reduced. However, this needs to be balanced against a robust methodology that manages the risk of spikes in data. 15 or 20 minutes should be also considered.

Pending further analysis of the sufficiency of the input data, Refinitiv will implement a 20 minute window with 30-second intervals for sampling data.

4. What other factors should Refinitiv consider when developing a TONA TSR benchmark (for instance, other sources of data)?
- JPY bond futures close at 15:00. Currently, the afternoon fixing of TSR is representative of 15:00 and panel bank submissions are from 15:00 to 15:25. When moving to new sources of data (D2C, D2D), a collection window ending by 15:00 should be considered as liquidity drops after this time.
 - The timing of the morning fixing should be reviewed. The current submission-based TSR receives submissions from 10:00 to 10:25 but the benchmark is representative of rates at 10:00. For TONA TSR, a sampling period for data from the new sources (D2C, D2D) should either be centered on 10:00am (e.g. 09:50am to 10:10am) or, to align with a 15:00 window close for the afternoon fixing, should end at 10:00am (e.g. 09:40am to 10:00am).

Pending further analysis, Refinitiv will implement a 20 minute window from 14:40 to 15:00 for the afternoon TONA TSR setting and will also review the data sampling window for the morning TONA TSR setting.

A Fallback Rate for JPY LIBOR TSR

Option 1
$$F_{6M}^{TSR} = TSR_{12M}^{TONA} + S_{6M} \cdot \frac{365}{360}$$

Option 2
$$F_{6M}^{TSR} = 2 \cdot \left[\sqrt{1 + TSR_{12M}^{TONA}} - 1 \right] + S_{6M} \cdot \frac{365}{360}$$

5. Are there any reasons for preferring Option 1 rather than Option 2?
- Option 2 is preferred. There is little difference when rates are low, but if and when rates rise, there will be a difference and Option 2 is more accurate.
 - Option 2 is consistent with the approach being taken for comparable swap rate benchmarks in other currencies.

Refinitiv will implement Option 2 for the JPY LIBOR TSR fallback.



6. Are there any additional factors that Refinitiv should consider before selecting an Option?
- Refinitiv may wish to consider producing TONA TSR on both an annual and a semi-annual payment convention. The market convention for TONA OIS is annual today, but this may change in the future.
 - However, it is noted that this may introduce confusion and TONA TSR should follow market conventions only rather than anticipate changes in market conventions.

Refinitiv will publish a TONA TSR that reflects current market conventions (i.e. annual payment) and will continue to monitor for any change in market conventions that may require this decision to be revised.

Publication of Rates and Cessation of JPY LIBOR TSR

7. Should Refinitiv continue to publish JPY LIBOR TSR up to 31 December 2021 (subject to the ongoing availability of input data from panel banks) to avoid a gap between the availability of JPY LIBOR TSR and the date from which the JPY LIBOR TSR fallback rates are intended for use (the intended use being from immediately after 31 December 2021 onwards)?
- JPY LIBOR TSR must be published until the cessation of 31 December 2021.
 - This depends on the ability of current panel banks to support JPY LIBOR TSR until 31 December 2021.

Refinitiv will work towards the goal of ensuring that JPY LIBOR TSR continues to be published up to 31 December 2021 and will issue notice once this is confirmed.

8. The JPY LIBOR TSR fallbacks will be published on dedicated pages, and tiles and RICs. Immediately following any cessation of JPY LIBOR TSR, should the fallback rates also be published on the JPY LIBOR TSR Refinitiv Eikon page <17143>, tiles and RICs, or should the fallbacks be published on dedicated pages, tiles and RICs only?
- Feedback is evenly split depending on whether the focus is on continuity or on possible legal risk.
 - Some consider that the fallback should be published on the same pages as JPY LIBOR TSR in order to facilitate existing contracts that reference those pages such as <17143>.
 - Others consider that the fallbacks are economically different to JPY LIBOR TSR and should be on separate pages only in order to ensure that consent is achieved when switching to the fallbacks. Publishing on the same pages may lead to unintentional use of the fallbacks and as a result may lead to contractual frustration or legal risk.

- It has been noted that similar benchmark fallbacks in other currencies will be published on separate pages only.

Following careful consideration of the points raised, Refinitiv will publish the JPY LIBOR TSR fallbacks on separate (i.e. dedicated) pages, tiles and RICs only and not on existing JPY LIBOR TSR pages, tiles and RICs following any cessation of JPY LIBOR TSR. It is noted that the fallbacks are different rates to JPY LIBOR TSR and should not be perceived as synthetic (i.e. broadly equivalent) versions of JPY LIBOR TSR. It is further noted that although Refinitiv will introduce fallbacks, users of JPY LIBOR TSR may opt to use alternative rates or solutions and that the Refinitiv fallbacks should not be perceived as the only solution. Consequently, use of the Refinitiv fallbacks should be by deliberate selection by users.

9. What other factors relating to the cessation of JPY LIBOR TSR and the publication of the related fallbacks should Refinitiv consider?

- No other factors noted.

3. Next Steps

- 3.1 Refinitiv is assessing input data for the TONA TSR and expects to publish a prototype TONA TSR in August 2021. The prototype will contain the first level of the waterfall only. A benchmark containing the second level and complying with UK benchmark regulations (UK BMR) is expected to be published in September.
- 3.2 The JPY LIBOR TSR fallback will be introduced at the same time as the TONA TSR prototype. It is noted that the JPY LIBOR TSR fallbacks are only intended for use after the cessation of JPY LIBOR (i.e., from immediately after 31 December 2021 onwards).
- 3.3 Refinitiv will continue to work towards ensuring that JPY LIBOR TSR will continue until 31 December 2021 and expects to issue confirmation of this in due course.
- 3.4 Any questions regarding TSR or this document should be sent to index_queries@refinitiv.com and include 'TSR Consultation' in the email subject.