




# TOKYO SWAP RATE (FOR SWAPS REFERENCING TIBOR®)

CONSULTATION

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# 1. Responding to this consultation

## Introduction

Refinitiv is committed to transparency when reviewing benchmark methodologies or considering material changes to its benchmarks. To that end, Refinitiv is seeking feedback from interested parties on proposed changes to the established Tokyo Swap Rate (for swaps referencing TIBOR®). Refinitiv invites comments on all proposals put forward in this paper and in particular on the specific questions in section 5. Please structure your comments to:

- Respond to the questions stated
- Contain a clear rationale that includes evidence to support the views expressed
- Describe any alternative choices that Refinitiv should consider

## Submission of responses

Please email your comments to [index\\_queries@refinitiv.com](mailto:index_queries@refinitiv.com) with 'Tokyo Swap Rate' in the subject by no later than 12:00 (UK time) on 27 January 2022. Please note that comments submitted after this deadline or submitted via other means may not be processed.

## Handling of responses

All responses to this consultation will be treated as confidential and will not be made public. A summary of key points may be made available by Refinitiv on an anonymised basis as appropriate.

# 2. Introduction

Refinitiv is a leading calculator and administrator of benchmarks and indices. Refinitiv benchmark products include the WM/Refinitiv FX benchmarks 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 SONIA](#), a family of GBP term rates based on OIS, was released as a regulated benchmark and in March 2021, the Alternative Reference Rates Committee (ARRC) [announced](#) that Refinitiv had been selected to publish its recommended spread adjustments and spread adjusted rates for USD cash products. 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 Regulation.

Refinitiv calculates and administers the Tokyo Swap Rate (TSR), a Japanese Yen (JPY) interest rate swap (IRS) benchmark family comprising benchmarks rates with tenors from 1 - 40 years. Refinitiv currently produce three versions of the Tokyo Swap Rate:

- Tokyo Swap Rate (for swaps referencing TIBOR®)
- Tokyo Swap Rate (for swaps referencing TONA)
- Tokyo Swap Rate Fallback

The Tokyo Swap Rate (for swaps referencing TIBOR®) measures the fixed leg of a vanilla IRS where the floating leg is Euroyen TIBOR® (commonly known as Z-TIBOR®). Z-TIBOR® is calculated and published by JBATA and reflects the prevailing short term interest rates on the Japan offshore market. JBATA also publishes '*Japanese Yen TIBOR*' (D-TIBOR), which reflects the prevailing rates on the unsecured call market<sup>1</sup>. Tokyo Swap Rate (for swaps referencing TIBOR®) is available in 11 tenors from 1-10 years and determined using input data from a panel of banks. It is published at 15:30 Tokyo time, on each business day in Japan.

On 16 December 2021 Refinitiv issued a [consultation paper](#) requesting industry feedback on proposed methodology changes to reduce the minimum number of contributors and simplify the fallback procedure. On 23 December 2021 Refinitiv announced the [outcome of the consultation](#) and confirmed that the proposed changes would be implemented on 4 January 2022.

There are currently three banks contributing to Tokyo Swap Rate (for swaps referencing TIBOR®) and one of them intends to withdraw from the panel immediately after 31 January 2022. The publication of Tokyo Swap Rate (for swaps referencing TIBOR®)

<sup>1</sup> See <https://www.ibatibor.or.jp/english/about/> for further details about TIBOR

using the existing methodology is not viable past this date, hence Refinitiv plans to cease publication of Tokyo Swap Rate (for swaps referencing TIBOR®). **Please note this consultation paper is not a cessation notice for Tokyo Swap Rate (for swaps referencing TIBOR®).** If there is extremely limited use of Tokyo Swap Rate (for swaps referencing TIBOR®), Refinitiv proposes to cease the rate immediately after completion of the consultation and following publication on 31 January 2022. If there is material use of Tokyo Swap Rate (for swaps referencing TIBOR®) in financial contracts that don't have suitable fallback language or other material use cases, Refinitiv proposes to enhance the fallback procedure in the methodology to allow continued publication for more than a few days without bank contributions and issue a cessation notice providing market participants with sufficient time to adopt an alternative benchmark and avoid a disorderly cessation. The purpose of this consultation paper is to collect feedback on the level of use of Tokyo Swap Rate (for swaps referencing TIBOR®) and the approach for an orderly cessation of the rate.

## 3. Existing Tokyo Swap Rate (for swaps referencing TIBOR®)

### **Methodology overview**

The Tokyo Swap Rate (for swaps referencing TIBOR®) is calculated based on the quotes from contributor banks. The contributor banks actively participate in the Japanese market and contribute rates between 15:00 and 15:30 (Tokyo time) for vanilla interest rate swaps that reference 6-month Z-TIBOR®. The last contribution received from each contributor bank before the contribution window is closed is to be taken for use in the calculation.

Where 7 or more contributions are received, the contributions will be ranked with the highest 2 and lowest 2 rates discarded and the remaining rates averaged. Where 4, 5 or 6 contributions are received, the contributions will be ranked with the single highest and single lowest rates discarded and the remaining rates averaged to determine the benchmark. Where 3 contributions are received, the rates will be averaged (without trimming).

If fewer than 3 contributions are received a fallback procedure is followed whereby the contribution window and publication window will be extended to 17:00 (Tokyo time). The average rate will be calculated (without trimming) and published immediately once the number of reference banks reaches 3. If the number of contributor banks does not reach 3 by 17:00 (Tokyo time), rates for previous business day will be published. If there are less than three contributor banks for three consecutive business days, "No Fix" shall be published on the fourth and the following business days.

There are currently three banks contributing to Tokyo Swap Rate (for swaps referencing TIBOR®). The full methodology is available at <http://refinitiv.com/tokyoswaprate>.

### **Benchmark usage**

Market participants can access Tokyo Swap Rate (for swaps referencing TIBOR®) through Refinitiv desktop products and feeds. Tokyo Swap Rate (for swaps referencing TIBOR®) is used by a large number of clients - in 2021 more than 1,100 unique companies accessed Tokyo Swap Rate (for swaps referencing TIBOR®) through Refinitiv desktop products such as Eikon and Workspace. However, fewer than 100 of these firms accessed the rate for more than 6 months of the year. This was due to a combination of casual users, who infrequently accessed the rate and a strong increase in demand during Q4 2021 when Refinitiv launched Tokyo Swap Rate (for swaps referencing TONA). Refinitiv identified a similar pattern of usage within our feed products – only a small proportion of the companies using the rate via feeds (such as Elektron and DataScope) accessed it every month.

Refinitiv has limited information on use of Tokyo Swap Rate (for swaps referencing TONA) in financial contracts. There may be some use of Tokyo Swap Rate (for swaps referencing TIBOR) in PFI and loan contracts. Refinitiv has not identified use in bonds, however, this may reflect access to incomplete information rather than Tokyo Swap Rate (for swaps referencing TIBOR) not being used.

## 4. Future of Tokyo Swap Rate (for swaps referencing TIBOR®)

The publication of Tokyo Swap Rate (for swaps referencing TIBOR®) using the existing methodology is not viable beyond the end of the month. There are currently three banks contributing to Tokyo Swap Rate (for swaps referencing TIBOR®) and one of them intends to withdraw from the panel immediately after 31 January 2022. Given the [potential cessation of JBA Euroyen TIBOR®](#) at the end of December 2024, Refinitiv believes it is unlikely that, once banks stop contributing to the benchmark, they would recommence contributions at a later date. Refinitiv intends to cease publication of the rate and is now consulting on how best to do this.

If there is extremely limited use of Tokyo Swap Rate (for swaps referencing TIBOR®), Refinitiv proposes to cease the rate immediately after completion of the consultation and following publication on 31 January 2022. If there is material use of Tokyo Swap Rate (for swaps referencing TIBOR®) in financial contracts that don't have suitable fallback language or other material use cases, Refinitiv proposes a two-step process. Firstly, to enhance the fallback procedure in the methodology to allow continued publication for more than a few days without bank contributions. Secondly, Refinitiv would issue a cessation notice providing market participants with sufficient time to adopt an alternative benchmark and avoid a disorderly cessation. The objective of the enhanced fallback procedure is to support legacy contracts (and other use cases) for a short period of time whilst market participants identify and implement alternative reference rates. Given the very short implementation period, there is a limit on the complexity of the methodology that Refinitiv can support.

Refinitiv does not believe it is appropriate to use D-TIBOR data as the primary input into the enhanced fallback procedure for Tokyo Swap Rate (for swaps referencing TIBOR®) as the basis between the D-TIBOR and Z-TIBOR has become large and volatile. For example, between 2015 and mid 2019 the average basis for the one-year tenor was 0.4bps and the standard deviation was 0.9bps, but after mid 2019 the average basis increased to 10.4bps and the standard deviation increased 7 fold to 6.5bps. Similar trends can be observed in each of the other tenors. Appendix A shows the comparison of 6M D-TIBOR vs. 6M Z-TIBOR IRS rates for the 11 Tokyo Swap Rate tenors for 2015-2021.

Refinitiv proposes to use Tokyo Swap Rate (for swaps referencing TONA) as the primary input into the enhanced fallback procedure for Tokyo Swap Rate (for swaps referencing TIBOR®). This approach is consistent with cessation of Tokyo Swap Rate (for swaps referencing 6-month JPY interbank offered rates from London banks) and the ISDA protocol for cessation of Z-TIBOR. On 30 December 2021 Refinitiv ceased publication of Tokyo Swap Rate (for swaps referencing 6-month JPY interbank offered rates from London banks) and, to support existing legacy contracts, Refinitiv launched a new benchmark, Tokyo Swap Rate Fallback. Tokyo Swap Rate Fallback is based upon Tokyo Swap Rate (for swaps referencing TONA) and the ISDA spread adjustment measuring the median difference between 6M JPY LIBOR and 6M term adjusted TONA for the 5 years to 5 March 2021. The ISDA protocol specifies that upon the occurrence of an index cessation event, contracts referencing Z-TIBOR will be treated as if they referenced Fallback Rate (TONA), where Fallback Rate (TONA) is term adjusted TONA plus the spread relating to Z-TIBOR.

In order to compensate for the difference between Tokyo Swap Rate (for swaps referencing TONA) and Tokyo Swap Rate (for swaps referencing TIBOR®), Refinitiv proposes to add a spread adjustment. The spread adjustment would be equal to the trimmed average difference between Tokyo Swap Rate (for swaps referencing TONA) and Tokyo Swap Rate (for swaps referencing TIBOR®) for the 10 business days prior to 31 January 2022, specific to the tenor. This approach is designed to:

1. Avoid any significant change in the rate due to the movement from bank contributions to a spread adjusted Tokyo Swap Rate (for swaps referencing TONA); and
2. Exclude the 2 largest and 2 smallest differences between the two rates in order to mitigate against the risk of any spikes in either rate adversely affecting the spread adjustment
3. Reflect the prevailing spread between the two rates as of 31 January 2022

Refinitiv has back-tested the proposed enhanced fallback procedure by calculating the spread adjustment based on the 10-business days to 13 January 2022 (the actual spread used would be 10 business days prior to 31 January 2022) and applying this to Tokyo Swap Rate (for swaps referencing TONA) between 11 August 2021 and 13 January 2022. The average impact is that the enhanced fallback is between 0.7 and 1.2bps higher than Tokyo Swap Rate (for swaps referencing TIBOR®) depending on the tenor. The actual spread adjustment will lead to a different impact. The fallback procedure will reflect credit and liquidity risk which are captured in Tokyo Swap Rate (for swaps referencing TIBOR®) as of the 10 business days immediately prior to 31 January 2022 rather than the dynamic measure of credit and liquidity risk under the current methodology. The correlation between Tokyo Swap Rate (for swaps referencing TIBOR®) and spread adjusted Tokyo Swap Rate (for swaps referencing TONA) has a coefficient of between 0.31 and 0.94 with most tenors having a coefficient greater than 0.9. Appendix B shows a comparison of

Tokyo Swap Rate (for swaps referencing TIBOR®) with the proposed Tokyo Swap Rate (for swaps referencing TONA) spread adjusted methodology.

Refinitiv plans to incorporate the spread adjusted Tokyo Swap Rate (for swaps referencing TONA) by replacing the existing fallback procedure. This means that in most cases the enhanced methodology would be published on the same screens using existing RICs e.g., <JPYTSRT=>. One exception is that <27143> would no longer publish the latest rate. Refinitiv would add a notification to <27143> informing users to go to <JPYTSRT=>. See Appendix C for a list of RICs that would be supported. In many cases users would not need to take any actions to adopt the fallback. Given the risk that the panel may have too few contributors at the start of February Refinitiv does not believe there is sufficient time to introduce the fallback as a new benchmark as market participants would have very little time to update their documentation.

Beyond cessation of the existing Tokyo Swap Rate (for swaps referencing TIBOR®), Refinitiv is considering the introduction of a new Tokyo Swap Rate that would measure the fixed leg of a vanilla interest rate swap which references 6M D-TIBOR (also known as Japanese Yen TIBOR®) and may consult on this in due course.

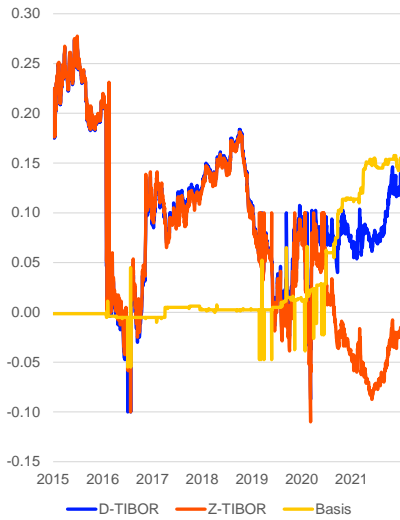
## 5. Consultation Questions

1. How widely is Tokyo Swap Rate (for swaps referencing TIBOR®) used
  - a. As a reference rate in financial contracts, financial instruments, or by funds
    - i. What type of financial contracts, financial instruments, or by funds is it used in?
    - ii. How widely is it adopted in each of these financial contracts? E.g., number of contracts outstanding and notional outstanding
    - iii. What is the remaining maturity of the outstanding financial contracts?
    - iv. Do these financial contracts have suitable fallback language whereby the contract could operate without the publication of Tokyo Swap Rate (for swaps referencing TIBOR®)?
    - v. What is the location of these financial contracts? – i.e., were they issued or traded in the UK, Europe, or rest of world?
  - b. As an input into an index or benchmark
    - i. Please specify which benchmark(s)
    - ii. Could it be replaced with an alternative input?
    - iii. How long would you require to implement the alternative input?
  - c. Please specify any other use cases
2. What is the impact of Tokyo Swap Rate (for swaps referencing TIBOR®) cessation or changes to the methodology on your business?
3. Do you require publication of Tokyo Swap Rate (for swaps referencing TIBOR®) after 31 January 2022 using the proposed enhanced methodology? If so, please explain why.
4. Do you agree with Refinitiv's proposed methodology for calculating the enhanced fallback procedure and publishing it on the existing RICs? If not, please explain your rationale. Please note due to the short implementation timeline there is a limit on the complexity of the fallback that can be implemented.
5. If Refinitiv implement an enhanced fallback procedure, does a lack of support for <27143> represent a material issue to you? Please explain any issues in adopting one of the supported RICs.
6. If Refinitiv enhance the fallback procedure how long do you require Refinitiv to publish Tokyo Swap Rate (for swaps referencing TIBOR®) before ceasing the rate? Please justify the length of time.

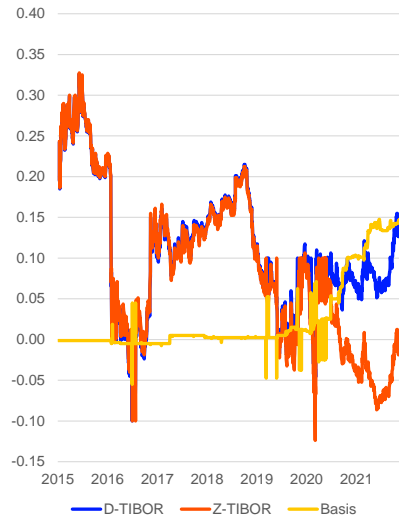
# Appendix A

Figure 1: Spread between 6M D-TIBOR and 6M Z-TIBOR IRS rates for tenors 1-10 years

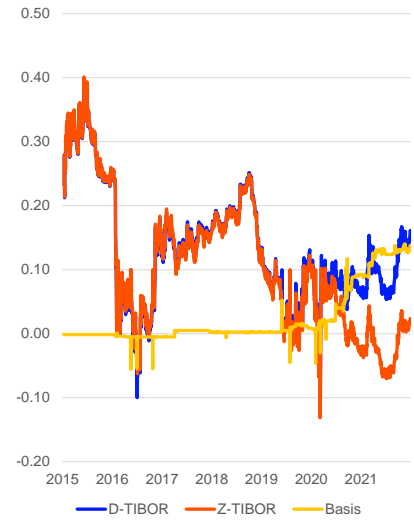
**3YR IRS**  
2015-2021, (%)



**4YR IRS**  
2015-2021, (%)

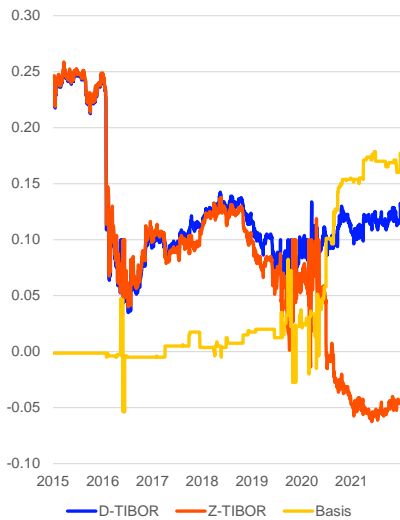


**5YR IRS**  
2015-2021, (%)

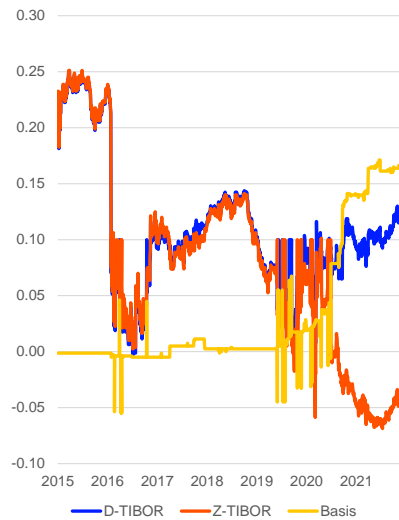


Note: Close mid price for 6M contract  
Source: Ueda Tradition Securities, Refinitiv analysis

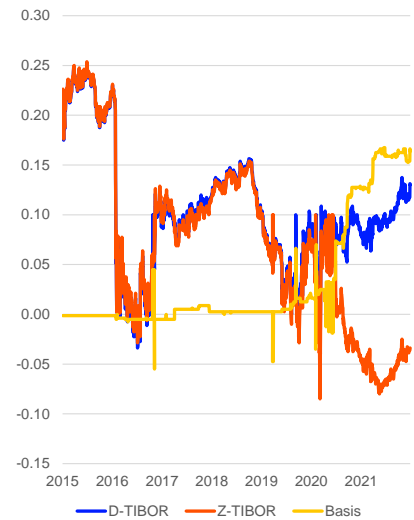
**1YR IRS**  
2015-2021, (%)



**18M IRS**  
2015-2021, (%)

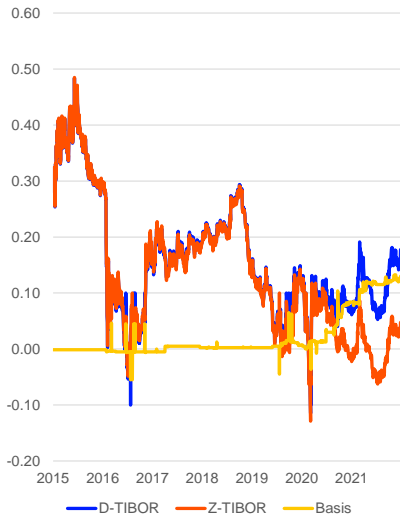


**2YR IRS**  
2015-2021, (%)



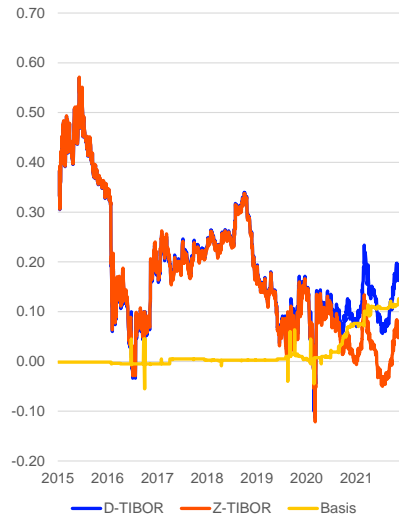
Note: Close mid price for 6M contract  
Source: Ueda Tradition Securities, Refinitiv analysis

**6YR IRS**  
2015-2021, (%)

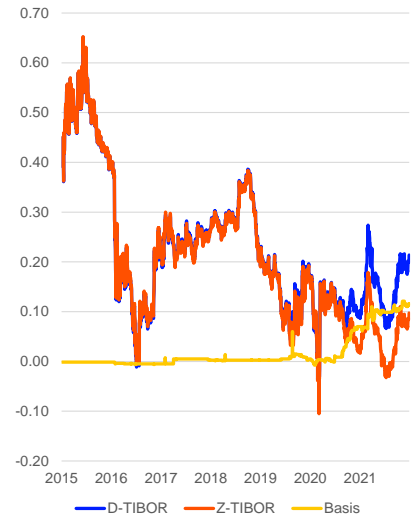


Note: Close mid price for 6M contract  
Source: Ueda Tradition Securities, Refinitiv analysis

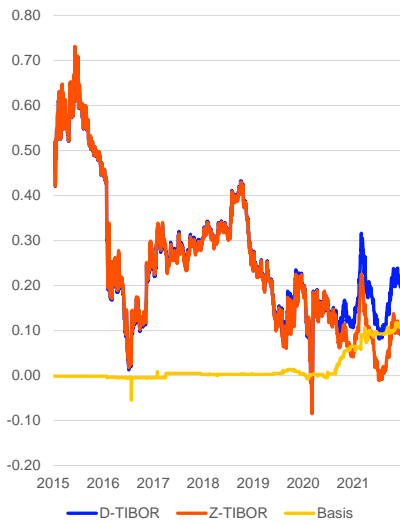
**7YR IRS**  
2015-2021, (%)



**8YR IRS**  
2015-2021, (%)

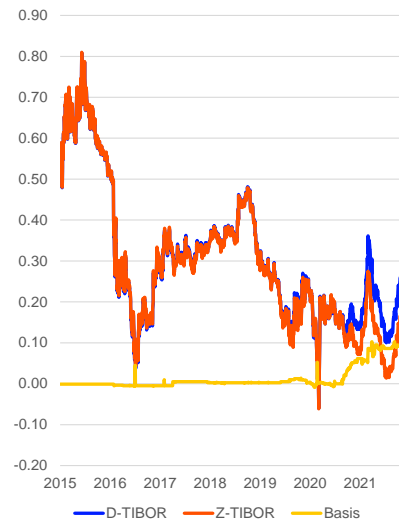


**9YR IRS**  
2015-2021, (%)



Note: Close mid price for 6M contract  
Source: Ueda Tradition Securities, Refinitiv analysis

**10YR IRS**  
2015-2021, (%)



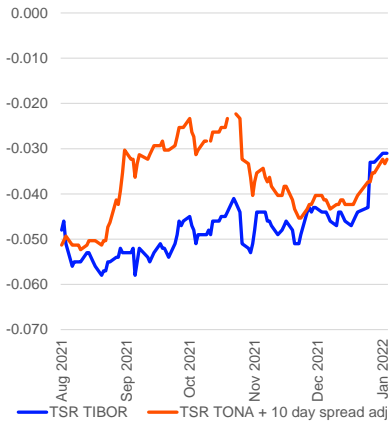


# Appendix B

**Figure 2: Comparison of Tokyo Swap Rate (for swaps referencing TIBOR®) with spread adjusted Tokyo Swap Rate (for swaps referencing TONA)**

**1YR**

11-Aug 2021 to 13-Jan 2022, (%)

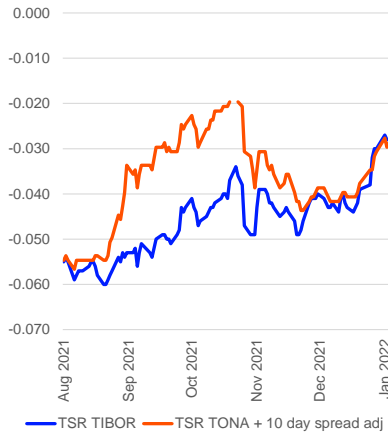


Correlation coefficient: 0.31  
Average difference: 0.012

Source: Refinitiv

**18M**

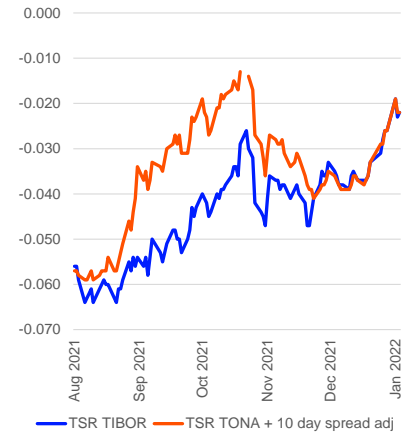
11-Aug 2021 to 13-Jan 2022, (%)



Correlation coefficient: 0.65  
Average difference: 0.010

**2YR**

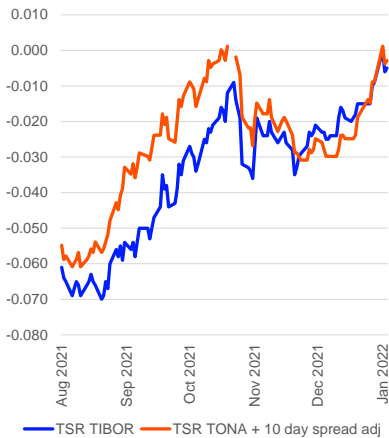
11-Aug 2021 to 13-Jan 2022, (%)



Correlation coefficient: 0.75  
Average difference: 0.010

**3YR**

11-Aug 2021 to 13-Jan 2022, (%)

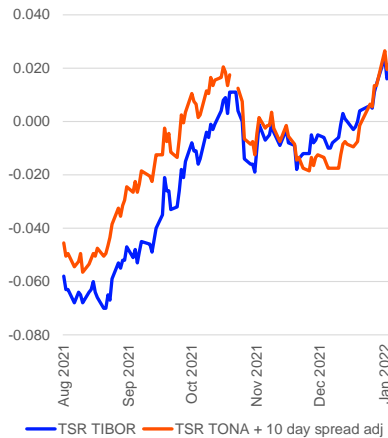


Correlation coefficient: 0.87  
Average difference: 0.009

Source: Refinitiv

**4YR**

11-Aug 2021 to 13-Jan 2022, (%)



Correlation coefficient: 0.91  
Average difference: 0.009

**5YR**

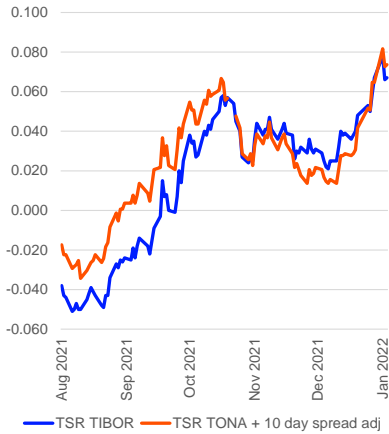
11-Aug 2021 to 13-Jan 2022, (%)



Correlation coefficient: 0.93  
Average difference: 0.007

**6YR**

11-Aug 2021 to 13-Jan 2022, (%)

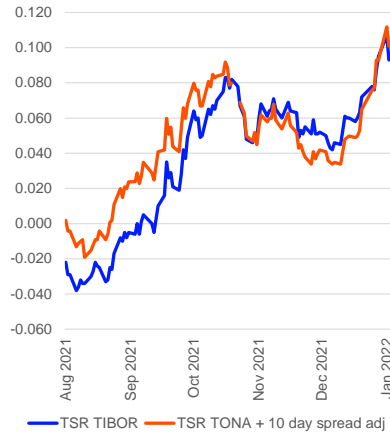


Correlation coefficient: 0.93  
Average difference: 0.008

Source: Refinitiv

**7YR**

11-Aug 2021 to 13-Jan 2022, (%)



Correlation coefficient: 0.93  
Average difference: 0.008

**8YR**

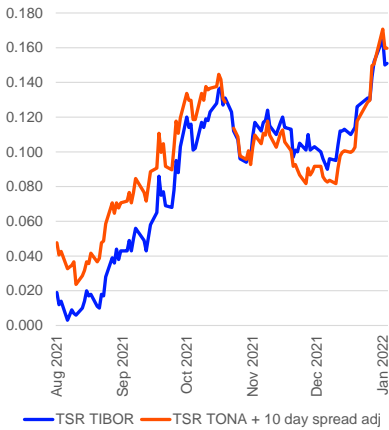
11-Aug 2021 to 13-Jan 2022, (%)



Correlation coefficient: 0.93  
Average difference: 0.008

**9YR**

11-Aug 2021 to 13-Jan 2022, (%)

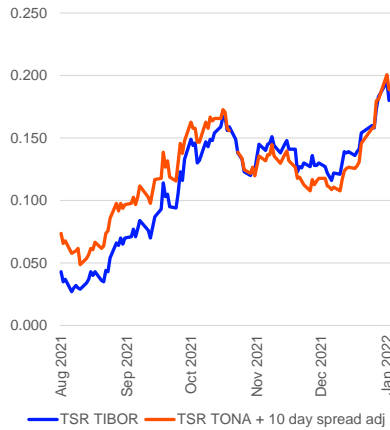


Correlation coefficient: 0.93  
Average difference: 0.008

Source: Refinitiv

**10YR**

11-Aug 2021 to 13-Jan 2022, (%)



Correlation coefficient: 0.94  
Average difference: 0.007

## Appendix C

RICs supported after 31 January 2022 if Refinitiv implement an enhanced fallback procedure.

<b>Tenor</b>	<b>Tokyo Swap Rate (for swaps referencing TIBOR®)</b>
	JPYTSRT=
1-Year	JPYTSRT1Y=
18-Months	JPYTSRT18M=
2-Years	JPYTSRT2Y=
3-Years	JPYTSRT3Y=
4-Years	JPYTSRT4Y=
5-Years	JPYTSRT5Y=
6-Years	JPYTSRT6Y=
7-Years	JPYTSRT7Y=
8-Years	JPYTSRT8Y=
9-Years	JPYTSRT9Y=
10-Years	JPYTSRT10Y=

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An LSEG Business

