

# Post LIBOR\_2021.09.07

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In the previous report, we focused on "TORF" and "Compounded TONA" as alternative interest rate benchmarks to Yen LIBOR used in existing transactions (Lending, Bonds and Derivatives), and explained the terminology. In this report, we will focus mainly on the Derivatives aspect, and report on the "Progress toward Post-LIBOR" in Tokyo Yen IRS Markets.

## Multiple Rate Approach

Currently, several countries including Japan are considering the "**Multiple Rate Approach**", in which each of the IBOR and RFR interest rate benchmarks is used based on the nature of the financial instrument or transaction such as Lending, Bonds and Derivatives.

In Japan, in July 2017, the JBA TIBOR Administration (: **JBATA**) implemented the "**JBA TIBOR Reform**", which mainly consists of unifying and clarifying the process of calculating and determining reference bank quoted rates. Since then, several rounds of public consultations have been held, and a multiple rate approach using both RFR and TIBOR is being considered.

## TIBOR

**TIBOR** (: Tokyo Interbank Offered Rate) is an interest rate benchmark for the Yen that reflects the prevailing transactions in the interbank market, one of the short-term financial markets.

There are two types of TIBOR: **Euroyen TIBOR** (commonly known as "**ZTIBOR**"), which reflects the prevailing market conditions in the Japanese offshore market, and **Japanese Yen TIBOR** (commonly known as "**DTIBOR**"), which reflects the prevailing market conditions in Japanese uncollateralized call market. The major difference between the two is the day count. Euroyen TIBOR is expressed in money-based at Act/360, while Japanese Yen TIBOR is expressed in bond-based at Act/365. JBATA calculates 5 types of rates (1-week, 1-month, 3-month, 6-month and 12-month) reflecting the prevailing market conditions as of 11:00 am Tokyo time, and releases them at around 12:50 pm every business day.

TIBOR is also used as a floating rate for IRS. Currently, there are two types of TIBOR swaps traded: Euroyen TIBOR swap and Japanese Yen TIBOR swap, each with a reference interest rate period of 1-month, 3-month, or 6-month.

JBATA is currently considering "Integration of Japanese Yen TIBOR and Euroyen TIBOR, etc." This is due to the shrinking of the Euroyen market, which is the basis for Euroyen TIBOR, and it seems that the

most likely option of all at this stage is to retain Japanese Yen TIBOR and discontinue Euroyen TIBOR.<sup>1</sup>

Then, on March 29, 2021, JBATA made an announcement<sup>2</sup>, albeit unofficially, that it expected the end of December 2024 as the implementation date of "Retaining Japanese Yen TIBOR". Currently, Tokyo Yen IRS markets have largely factored in the fact that Euroyen TIBOR will be discontinued at the end of December 2024.

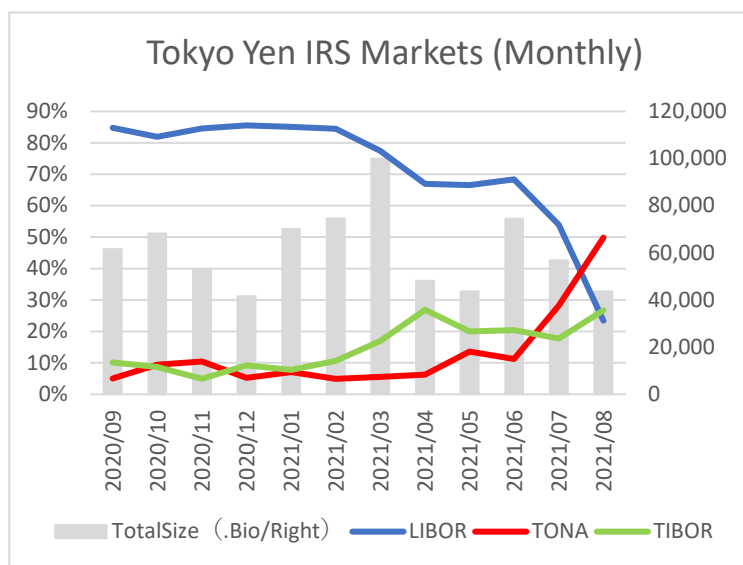
TIBOR is well supported as an alternative interest rate benchmark that can replace Yen LIBOR,

Products	Alternative Benchmark (Order of Preference)
Lending	TORF
	TIBOR
	Compounded TONA

especially for "Lending". In Japan, where the multiple rate approach is being pursued, TIBOR, along with TORF and compounded TONA, can be considered as one of the leading "alternative interest rate benchmarks" for post-LIBOR.

### Progress toward Post-LIBOR

On July 26, 2021, the Study Committee on Japanese Yen Interest Rate Benchmarks (hereinafter referred to as the "Study Committee") released a statement on "TONA First"<sup>3</sup>. In the statement, it was clearly stated that the end of July 2021 would be the date when the quotations in Yen IRS markets



would be shifted from Yen LIBOR to TONA basis, and that the suspension of all Yen LIBOR swap transactions in the interbank market would be expected from the following August.

The graph on the left shows the percentages of Yen LIBOR swaps (Blue line), TONA swaps (Red line), TIBOR swaps (Green line), and the face value of transactions (Gray bars, Unit: billion yen) in Tokyo

Yen IRS markets.<sup>4</sup> Until June 2021, there was little progress in the shift from Yen LIBOR swaps to TONA

<sup>1</sup> "Result of public consultation: 1st Consultative Document / Approach for Integrating Japanese Yen TIBOR and Euroyen TIBOR" (2019.5.30) <https://www.jbatibor.or.jp/english/news/consultative%20document.html>

<sup>2</sup> Reference to: [https://www.jbatibor.or.jp/english/news/Compliance with IOSCO 19principles\\_2021.html](https://www.jbatibor.or.jp/english/news/Compliance_with IOSCO_19principles_2021.html)

<sup>3</sup> Reference to: [https://www.boj.or.jp/en/paym/market/jpy\\_cmt/cmt210726b.htm/](https://www.boj.or.jp/en/paym/market/jpy_cmt/cmt210726b.htm/)

<sup>4</sup> Based on data from JSCC (Japan Securities Clearing Corporation). The total of Yen LIBOR swap, TONA swap and TIBOR swap (: sum of Euroyen TIBOR and Japanese Yen TIBOR) is "1", and the percentage (%) of each is shown in the

swaps, but it can be seen that the shift has progressed suddenly since July.

In August, about 20% of Yen LIBOR swaps are still traded. One of the reasons for this is that some Yen LIBOR swaps are being accepted, such as spread trading against TONA swaps. In addition, Yen LIBOR swaps can still be traded<sup>5</sup> for customer transactions only, and direct unwinding (: unwinding of existing transactions) also seems to be traded.

Another interesting point is that the percentage of swaps that use TIBOR as the reference interest rate has been stable, accounting for about 10-20% of the total Tokyo Yen IRS markets.

This may suggest that Tokyo Yen IRS markets are functioning as a market that can stably hedge "Lending" and other positions with TIBOR as the reference rate. This is a relief both for those involved in Derivatives who wish to activate the market and for those who use the TIBOR reference rate for Lending and other purposes. The multiple rate approach proposed by the Study Committee is probably to continue such a market condition in a stable manner.

### What TORF need to do to gain Market Confidence

"TORF, which was recommended as the 1st alternative interest rate benchmark to Yen LIBOR for " Lending" and "Bonds", has been available since April 26, 2021 and can be used for the actual transactions. On the other hand, in the field of "Derivatives", TORF has been added to ISDA 2006 as of

Products	Alternative Benchmark
Derivatives	Compounded TONA
	TIBOR
	(TORF)

August 25, 2021, and can be traded under the ISDA Master Agreement. However, at the time of this writing, TORF swap<sup>6</sup> is not subject to clearing by the Japan Securities Clearing Corporation (: JSCC) and have not been traded in the interbank market.

There are three types of TORFs: 1-month, 3-month, and 6-month. Each TORF reference rate is

TORF Swap Market (Derivative)	TORF Ref Market (Lending, Bonds)
1-,3-,6-month TONA Swap Market	
Yen Uncollateralized Call O/N Market	

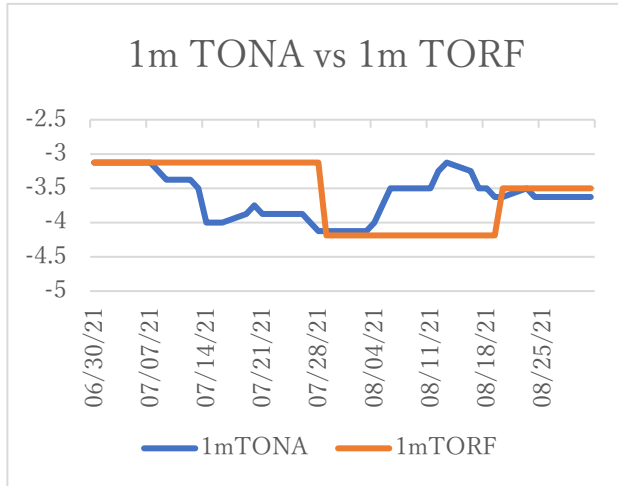
calculated based on the actual trading data and quote data for 1-month, 3-month, and 6-month in the TONA swap market. This means that for TORF to become a reliable benchmark for interest rates, it needs robust TONA swap data to be backed by real transactions.

graph.

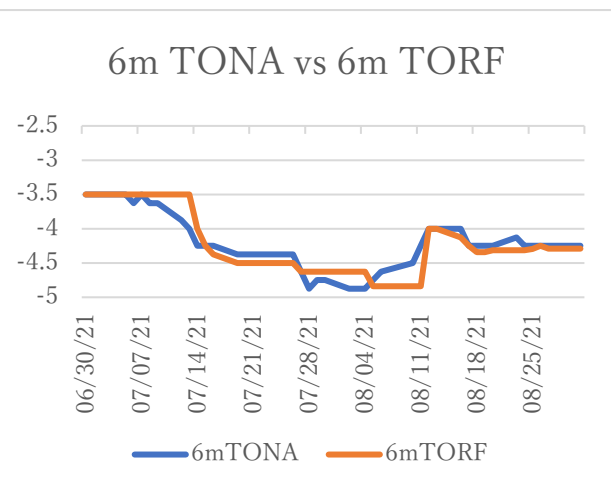
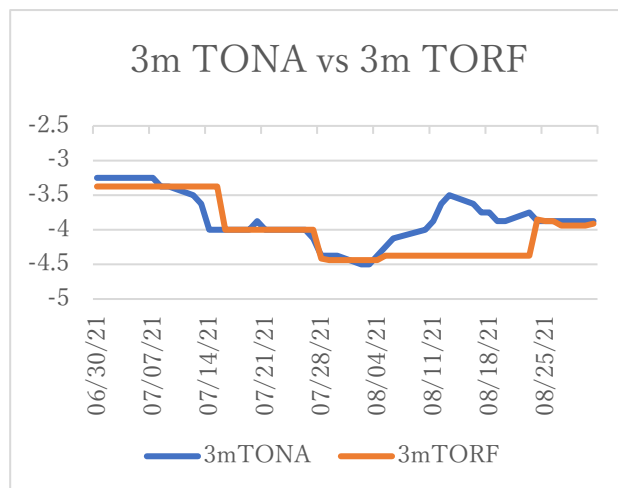
<sup>5</sup> Reference to: [https://www.boj.or.jp/en/paym/market/jpy\\_cmte/cmt210326c.pdf](https://www.boj.or.jp/en/paym/market/jpy_cmte/cmt210326c.pdf)

<sup>6</sup> "TORF Swap" is an off-balance sheet product that exchanges fixed interest rate for TORF (: setting in advance) for a fixed period.

QBS (: QUICK Benchmarks), the company that calculates and publishes TORF data, has adopted a waterfall structure in which the first priority is actual trading data, and if there is no data available, the data of the next priority is adopted.



However, under the current system, if there is no offer/bid price in TONA swap market, or, if there was, it was only one of offer/bid, the price of the previous day will be used as TORF for the day, which may result in a large discrepancy between the two. Unfortunately, the current lack of liquidity in the short-end TONA swap market makes it difficult to calculate the TORF level correctly.



The three graphs above show the 1-month, 3-month, and 6-month TORFs from June 30, 2021 to August 31, 2021 (Red lines) and the TONA swap quote for the same period (Blue line). About four months have been passed since the release of TORF, and TORF (Red line) often lagged behind the TONA swap quote (Blue line), with the gap between TORF and the TONA swap quote widening to nearly 1bp in some cases for 1-month and 3-month contracts.

As mentioned above, in order for TORF as an alternative interest rate benchmark to Yen LIBOR to be used safely in the fields of Derivatives, Lending, and Bonds, it seems necessary to increase liquidity in the short-end TONA swap market.

## Appendix: Glossary of Terms

The **Multiple Rate Approach** refers to the use of IBOR and RFR interest rate benchmarks based on the nature of the financial instruments and transactions, such as Lending, Bonds, and Derivatives. In Japan, the multiple rate approach, which uses both RFR and TIBOR, is under consideration.

**TIBOR** (: Tokyo Interbank Offered Rate) is an interest rate benchmark for the Yen that reflects the prevailing transactions in the interbank market, one of the short-end financial markets. There are two types of TIBOR: **Euroyen TIBOR** (commonly known as "**ZTIBOR**"), which reflects the prevailing market conditions in the Japanese offshore market, and **Japanese Yen TIBOR** (commonly known as "**DTIBOR**"), which reflects the prevailing market conditions in Japanese uncollateralized call market. The major difference between the two is the day count. Euroyen TIBOR is expressed in money-based at Act/360, while Japanese Yen TIBOR is expressed in bond-based at Act/365. **JBATA** calculates 5 types of rates (1-week, 1-month, 3-month, 6-month and 12-month) reflecting the prevailing market conditions as of 11:00 am Tokyo time, and releases them at around 12:50 pm every business day.

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**TIBOR swap** is an off-balance sheet product that exchanges fixed interest rate and TIBOR (: setting in advance) for a fixed period of time. Currently, there are two types of TIBOR swaps traded: Euroyen TIBOR swap and Japanese Yen TIBOR swap, each with a reference interest rate period of 1-month, 3-month, or 6 month.

**TORF Swap** is an off-balance sheet product that exchanges fixed interest rate and TORF (: setting in advance) for a fixed period of time. There are three types of TORFs: 1-month, 3-month, and 6-month. At the time of this writing, TORF swap is not subject to clearing by the Japan Securities Clearing Corporation (: JSCC) and have not been traded in the interbank market.

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