## Result of a Periodic Review of the JBA TIBOR Operational Framework

JBA TIBOR Administration (the Chairperson: Satoshi INOUE) ("JBATA") conducted a periodic review of the JBA TIBOR operational framework pursuant to the Article 48(1) of the JBA TIBOR Operational Rules as described below. As a result of the periodic review, JBATA concludes it is not necessary to change the JBA TIBOR operational framework based on its evaluation that structural changes of the JBA TIBOR's underlying markets have not observed and transparency of current JBA TIBOR calculation and determination processes have been maintained.

JBATA will continue to be committed to comply with the IOSCO Principles and enhance the transparency, robustness and reliability of JBA TIBOR.

## 1. Underlying markets of JBA TIBOR

The conditions of the underlying markets (i.e. the Japan unsecured call market in the case of Japanese yen TIBOR and the Japan Offshore market in the case of Euroyen TIBOR; the same shall apply hereinafter) and other relevant markets of JBA TIBOR are as described in this section. The percentage of the transactions executed by reference banks in the JBA TIBOR underlying markets is approximately 30% to 70%. Note that the figures shown below are estimates calculated based on, among other things, published statistical data solely for the purposes of the JBATA's assessment and consideration. Therefore, JBATA is not liable for any loss or damage arising indirectly or directly from the use of these figures.

(1) Estimated market size of the Japan unsecured call market	(Overall)	Approx. JPY34.9 tril.	*1
	(Term rates)	Approx. JPY15.8 tril.	
	(Overnight rates)	Approx. JPY24.3 tril.	
Estimated share of transactions by reference banks Approx. 32% (Calculated by including overnight rates. The denominator is deposit-taking institutions.)			
(2) Estimated market size of the Japan Offshore market	(Financing side)	Approx. JPY0.3 tril.	*2
	(Funding side)	Approx. JPY0.5 tril.	*2
Estimated share of transactions by reference banks (Calculated by including overnight rates.)		Approx. 69%	
(3) Estimated market size of NCD transactions		Approx. JPY30.0 tril.	*3
(4) Estimated market size of large-account, time de	(Approx. JPY29.4 tril.)	*4	

- \*1 Estimated from the funding side based on the "Trend in the Money Market in Japan Tokyo Money Market Survey (August 2022)" published by the Bank of Japan
  - The estimated market size of "(Overall)" represents the sum of transactions via brokers and transactions through direct dealing with unaffiliated banks, whereas the size of "(Term rates)" and "(Overnight rate)" includes intragroup transactions. Therefore, the sum of the "(Term rates)" and the "(Overnight rate)" does not match the "(Overall)."
  - Furthermore, JBATA does not calculate and publish the overnight JBA TIBOR tenor, therefore, the "(Overnight rate)" transactions are not referenced in most cases.
  - The "(Term rates)" also include various terms that do not necessarily correspond to the given TIBOR tenors.
- \*2 Estimated based on the "Balance of Offshore Account (end of July 2022)" published by the Mistry of Finance Japan. In light of feature of the Japan Offshore market, the market size was estimated from both the financing side (Total Assets/ Deposits and Call Loans/ Denominated in JPY) and the funding side (Total Liabilities/ Deposits and Call Money/ Denominated in JPY)
- \*3 Estimated based on statistics related to the "Deposits and Loan Market (January 2022 to November 2022)" published by the Bank of Japan
- \*4 Estimated based on the "Amounts Outstanding of Deposits by Depositor (semi-annual research <for domestic banks>) (end of September 2022)" published by the Bank of Japan (Transactions for corporate entities only)

## 2. Basis for submission rate calculation by reference banks

The basis for calculation of submission rate by reference banks from January 4 to December 30, 2022 (244 business days in total) is shown in the tables below. During the period, there was no rate submission using the expert judgement by reference bank in both Japanese Yen TIBOR and Euroyen TIBOR.

(1) Japanese Yen TIBOR (15 reference banks)

(1) Japanese Ten Tibok (13 Telefence banks)					
Tenor Level	1W	1M	3M	6M	12M
1st Level	87.3%	90.1%	97.1%	97.2%	51.4%
1-1	0.7%	1.7%	0.0%	0.1%	_
1-2	<del></del>	<del></del>	<u> </u>		<del></del>
1-3	86.1%	87.9%	97.1%	97.1%	51.4%
1-4	0.6%	0.6%	_		0.1%
2nd Level	_	4.5%	2.9%	2.8%	47.9%
2-1	_	_	_	_	_
2-2	<del></del>	<del></del>			
2-3	_	4.5%	2.9%	2.8%	47.9%
2-4		<del></del>			
3rd Level	12.7%	5.4%	_	_	0.7%
4th Level	_	_	_	_	_

## (2) Euroyen TIBOR (14 reference banks)

Le	Tenor	1W	1M	3M	6M	12M
1s	t Level	16.3%	51.5%	71.9%	99.2%	99.2%
	1-1	_	_	_	_	_
	1-2					
	1-3	16.3%	51.5%	71.9%	99.2%	99.2%
	1-4	<del></del>				<del></del>
2r	nd Level	67.6%	43.1%	28.1%	0.8%	0.1%
	2-1	0.7%	0.6%	0.1%		<del></del>
	2-2	<del></del>	<del></del>	<del></del>	<del></del>	<del></del>
	2-3	66.5%	42.2%	28.1%	0.8%	0.1%
	2-4	0.3%	0.3%			
3r	d Level	16.1%	5.4%		_	0.7%
4t	h Level	_	_	_	_	_

(Overview of the calculation and determination process for submission rates in Japanese Yen TIBOR)

1st Level	1-1: Actual transaction data on the Japan unsecured call market
Data of the Japan unsecured	on the relevant business day
call market	1-2: Committed quotes in the Japan unsecured call market
	1-3: Indicative quotes in the Japan unsecured call market
	1-4: Actual transaction data on the Japan unsecured call market
	on the previous business days, etc.
	* Reference banks determine their submission rates in the order of
	1-1 to 1 - 4 (in the case where there is no available data for 1st
	Level, move to 2nd Level).
2nd Level	2-1: Actual transaction data on the Japan Offshore market and
Data of the inter-bank market	Interbank NCD market on the relevant business day
which is similar to the Japan	2-2: Committed quotes in the Japan Offshore market
unsecured call market	2-3: Indicative quotes in the Japan Offshore market
	2-4: Actual transaction data on the Japan Offshore market and
	Interbank NCD market on the previous business days, etc.
	*Reference banks determine their submission rates in the order of
	2-1 to 2-4 (in the case where there is no data available for 2nd
	Level, move to 3rd Level ).
3rd Level	Actual transaction data on the NCD market (excluding the
Data of the relevant market	interbank NCD market), large term deposits, quotes in the short-
including the whole sale market	term government bonds market, the GC repos market and the OIS
	market
	*There is no hierarchy among the markets in the level.
4th Level	Only in the instance where there is no data available for 1st
	Level, 2nd Level and 3rd Level, a reference bank may determine
	their submission rates considering other factors
	(e.g. expert judgment).

<sup>\*</sup> In the calculation and determination process of submission rate for Euroyen TIBOR, "Japan unsecured call market" in the 1st Level is replaced by "Japan Offshore market", "Japan Offshore market" in the 2nd Level is replaced by "Japan unsecured call market".