APPROVED
Order
National Bank of Ukraine
No. 425-Ho dated 23 June 2020

Procedure for Calculating and Publishing the Reference Index of Interbank Rates on Swap Transactions

- 1. Calculation and publication of the reference index of interbank rates on swap transactions (hereinafter the reference swap index) is performed with the aim to provide information to market participants on value indicators for resources in the Ukrainian interbank market that are raised through overnight swap transactions.
- 2. Calculation of the additional swap index shall be based on the information on transactions of each business day set forth in paragraph 3 hereof. Information on the transactions is available for calculation of the reference swap index at 8 a.m. Kyiv time on the next business day following the transactions.

If after the time set forth in indent one of this paragraph the National Bank of Ukraine (hereinafter – the NBU) receives any additional/adjusted information on transactions of the preceding business day via information exchange channels of the corresponding trade information systems (hereinafter – the TIS), the reference swap index shall not be recalculated.

- 3. The reference swap index shall be calculated on the basis of information of all the transactions conducted via the TIS to purchase US dollars for hryvnias on the overnight swap terms.
- 4. For the purposes of paragraph 3 hereof, overnight transactions shall mean transactions settled on the next business day following the date of their conclusion. If the next business day following the day of a swap transaction is not a business day in the U.S., transactions with settlement terms within two business days following said transaction shall be used for calculation of the overnight reference swap index for that day.

The information source for such transactions shall be the data obtained by the NBU via information exchange channels with the TIS.

5. The NBU shall calculate the reference swap index for a certain date, if at 8 a.m. of the next business day the NBU has obtained information via information exchange channels with the TIS on at least five transactions in which at least three different banks participated as counterparties.

If the aforementioned terms are not met, the reference swap index shall not be calculated, and the information subject to publication shall be marked with "—" in the corresponding line.

- 6. The reference swap index shall be calculated using the estimated values of interest rates, which shall be calculated with the formula provided in the Annex hereto.
- 7. The reference swap index shall be calculated as a percentage per annum with an accuracy of four decimal digits in accordance with the Annex hereto.
- 8. The reference swap index for the respective business day shall be published before 10 a.m. on the next business day on the NBU's official website.
- 9. Any changes to the procedure for calculation of the reference swap index on swap transactions shall come into effect no earlier than a week after their approval.
- 10. The NBU shall publish the full archive of the reference swap index values on its official website starting from the day when the reference swap index calculation was launched, as well as all versions (including the current one) of the calculation procedure for the reference swap index indicating the timeframes when they were in effect.

Director Open Market Operations Department

Serhii PONOMARENKO

Annex

to the Procedure for Calculating and Publishing the Reference Index of Interbank Rates on Swap Transactions (paragraphs 6, 7)

Calculation of the Reference Index of Interbank Rates on Swap Transactions

- 1. The NBU shall create the initial sample of the transactions selected under paragraphs 2 and 3 of the Procedure for Calculating and Publishing the Reference Index of Interbank Rates on Swap Transactions for calculation of the reference swap index.
- 2. The reference swap index shall be calculated on the basis of the estimated interest rate values of transactions under paragraphs 2 and 3 of the Procedure for Calculating and Publishing the Reference Index of Interbank Rates on Swap Transactions using the following formula:

Stavka_swap = $[(FX \text{ rate } 2 - FX \text{ rate } 1) \cdot 365 \cdot 100\%]$: $[FX \text{ rate } 1 \cdot (Date 2 - Date 1)]$, where: Stavka_swap is a rate based on all FX purchase transactions on swap terms

FX rate 1 is a rate based on the first part of a swap transaction

FX rate 2 is a rate based on the second part of a swap transaction

Date 1 is the UAH value date of the first swap transaction

Date 2 is the UAH value date of the second swap transaction

365 is the estimated number of days in a year.

3. The resulting series of transactions under paragraph 1 hereof shall be ranged from the lowest to the highest interest rate value.

In the resulting range, 5% of transactions shall be cut top-down and 5% of transactions shall be cut bottom-up.

If 5% of the total number of transactions is not an integer, the corresponding value is rounded to the nearest integer value.

4. The standard deviation of an interest rate is calculated from the range of transactions resulting from the execution of paragraph 3 hereof under the following formula:

$$\sigma_{r} \sqrt{\frac{\sum_{i=1}^{n} (X_{ri} - \overline{X_r})^2}{n}}$$
 ,

where $\sigma_{\mathbf{r}}$ is the standard deviation of the interest rate X_{ri} is the interest rate of *i*-transaction

- \overline{X}_r is the arithmetic mean value of the interest rate series
- **n** is the number of transactions.
- 5. Transactions with interest rates that deviate from the arithmetic mean value
- \overline{X}_r by more than two standard deviation values of the interest rate σ_r shall be cut from the transactions range resulting from paragraph 3 hereof.
- 6. The range resulting from the execution of paragraph 5 hereof shall be deemed as the base range for the reference swap index calculation.
- 7. The reference swap index value shall be calculated as the simple arithmetic mean of the base range.