

METHODOLOGY

of calculating and publishing of the “UZONIA” (Uzbek Overnight Index Average) of the Interbank money market of the Republic of Uzbekistan

This document reflects the methodology of calculation and publication of interest rates and indexes for operations performed in the interbank money market by the Central Bank of the Republic of Uzbekistan (hereinafter – Central Bank).

The procedure for calculating "UZONIA" was discussed and agreed upon with the participation of commercial banks at the meetings of the Money Market Working Group. This indicator represents the overnight interest rate at which Uzbek banks lend and borrow from each other in national currency where credit, liquidity and other risks are minimal.

I. Basic concepts

1. The following basic concepts are used in this methodology:

"UZONIA" (Uzbek Overnight Index Average) – is an interest indicator, calculated as the weighted average interest rate for overnight deposit operations between commercial banks in the national currency in the unsecured interbank money market;

"UZONIA Index" – is an index calculated by compounding daily "UZONIA" rates for 1 sum unit from the first day;

"Compounded UZONIA" – is an interest indicator, which expresses the compounded interest return for 1 sum invested at the "UZONIA" interest rate for a certain period in the past;

Money Market Working Group – is a working group established in cooperation with the European Bank for Reconstruction and Development to further improve the money market and includes representatives of the Central Bank and all commercial banks.

II . Method of calculation of "UZONIA" interest rate and index

2. "UZONIA" is calculated in the form of weighted average interest rate for "80 percent trimmed mean" of overnight deposit transactions performed during the day on the Interbank money market. Overnight deposit operations performed between commercial banks on the "Electronic trading platform for the interbank money market" of the Uzbek Republican Currency Exchange are taken as eligible operations.

3. There are no restrictions on the volume of each individual transaction or total transactions during the day included in the "UZONIA" interest rate calculation base.

4. When calculating the interest rate of "UZONIA":

a) All overnight deposits made during the day in the unsecured interbank money market are placed in ascending order of the nominal interest rate;

b) the volumes of operations with the same nominal interest rate are aggregated and multiplied by the number of operations;

c) 10 percent of transactions made at the highest and lowest interest rates are excluded from the calculation base;

d) "UZONIA" interest rate is calculated as the weighted average interest rate of the remaining transactions as follows:

$$UZONIA = \sum_{i=0}^n \frac{(R_i * V_i)}{V}$$

In this:

R_i – nominal interest rate;

V_i – volume of overnight operations carried out at the nominal interest rate;

V – is the volume of all operations in the computational base.

5. In addition to the "UZONIA" interest rate, the Central Bank publishes the "Compounded UZONIA" interest rates for the convenience of commercial banks.

In the initial period, 7, 30, 90 and 180-day "Compounded UZONIA" interest rates will be announced, and later, based on the demand of market participants, the series of these term interest rates may be changed.

"Compounded UZONIA" interest rates are calculated as a compounded multiple of "UZONIA" rates for each calendar day (for the last 7, 30, 90 or 180 calendar days) based on the following formula. In this case, for calendar days that are not bank business days, the "UZONIA" rate rate on the last bank business day is used:

N-day Compounded UZONIA interest rate =

$$= \left[\prod_{i=1}^d \left(1 + \frac{UZONIA_i * n_i}{365} \right) - 1 \right] * \frac{365}{T}$$

In this:

"UZONIA" _i – "UZONIA" interest rate calculated for *i* bank working day;

n_i – the number of calendar days during which "UZONIA" for banking day *i* is valid (usually 1 day, 3 days on weekends and holidays may vary);

d – the number of bank working days during the period;

T – is the number of calendar days in the period (7, 30, 90 or 180 days).

6. In order to calculate the "UZONIA" interest rate, at least 2 overnight deposit operations in the money market during the banking day are necessary.

If less than 2 overnight deposit operations are performed in the interbank money market or not at all, the "UZONIA" interest rate is calculated based on the following formula, using the average difference of the "UZONIA" rate from the policy rate of the Central Bank over the last 5 bank working days:

$$UZONIA_t = p_t + \frac{\sum_{i=t-5}^{t-1} (UZONIA_i - p_i)}{5}$$

In this:

"UZONIA" _i – "UZONIA" interest rate calculated for *i* bank working day;

p_i – the policy rate of the Central Bank;

7. January 5, 2022 (the first banking day of the year) is set as the first day of calculation of the "UZONIA Index". The value of the "UZONIA Index" is equal to 100 on this date. Subsequent values of the Index are calculated

for each calendar day in the form of compounding, based on the following formula:

$$UZONIA\ index_t = UZONIA\ index_{t-1} * \left(1 + \frac{UZONIA_i * n_i}{365} \right)$$

In this:

t – the calendar day on which the "UZONIA" index is calculated;

"UZONIA Index" _{t-1} – "UZONIA" index indicator on the last bank working day;

n_i – the number of calendar days during which "UZONIA" for banking day *i* is valid (usually 1 day, 3 days on weekends and holidays may vary);

"UZONIA" _i - "UZONIA" interest rate calculated for the last banking day

8. The following formula can be used to calculate the Compounded "UZONIA" rate for any tailored period:

$$Compounded\ UZONIA_{period} = \left[\frac{UZONIA\ index_{end\ of\ the\ period}}{UZONIA\ index_{beginning\ of\ the\ period}} - 1 \right] * \frac{365}{T}$$

T – is the number of calendar days during the period.

III. Publication of "UZONIA" interest rates and index

9. "UZONIA" interest rates and "UZONIA" index are calculated by the Central Bank after the end of the banking day, and announced on the official website of the Central Bank, telegram channel and other social media pages by 10:00 a.m. the next bank working day.

10. "UZONIA" interest rates and "UZONIA Index" are published on the Telegram channel with 4 decimal places and on the website of the Central Bank with 8 decimal places in order to increase the accuracy and convenience in usage. Overnight and compounded "UZONIA" interest rates are published in the form of an annual interest rate.

11. These indicators are valid after their official publication and are not allowed to be changed and/or corrected. If the error made during the calculation is more than 0.05 percentage points, the "corrected" interest

rates and index of "UZONIA" will be announced by the Central Bank again during the announced working day.

12. The Department of Monetary Operations is responsible for the calculation and publication of "UZONIA" interest rates and the "UZONIA Index". Also, the Department ensures that it is published on Refinitiv, Bloomberg or other foreign statistical information platforms, as necessary.

IV. The procedure for making changes and additions to this methodology

13. The Central Bank will review this methodology on an ongoing basis, at least annually, and propose amendments in necessary cases in view of structural changes in the money market to ensure the benchmark continues to measure adequately the rate at which Uzbek banks lend and borrow from each other in national currency in circumstances where credit, liquidity and other risks are minimal.

In this case, the proposed changes and additions to be introduced will be discussed in detail in the Money Market Working Group with the participation of commercial banks, and the results of the discussion will be submitted to the Credit Committee of the Central Bank.

14. Changes to this Methodology will enter into force on the date specified in the Central Bank Board's decision.