

## Methodological explanation on the calculation of the AZIR index

The benchmark interest rate – AZIR (Azerbaijan Interbank Rate) – is calculated based on the ‘Regulations on calculation and disclosure of the benchmark interest rate in the unsecured interbank market’ approved by the decision of the Management Board of the Central Bank. National currency denominated unsecured transactions concluded for a maturity of 1 business day between commercial banks operating in the Republic of Azerbaijan, which are not canceled by the end of the day and whose settlement date is the same as the transaction date, are used in the calculation of AZIR.

The calculation of AZIR is solely based on transactions with a maturity of 1 business day. At the end of each trading day, a list of eligible transactions is formed by obtaining information from the Bloomberg trading platform. Then, all eligible transactions are sorted in ascending order by interest rate, and the volumes of all transactions with the same interest rate are aggregated under that rate. To avoid potential distortions and undesirable volatility, 10% of the trading volume is excluded as outliers from both - the highest and lowest ends of the list sorted by interest rate. AZIR is then calculated as the weighted mean of interest rates of remaining transactions in the list, rounded to four decimal place, and reported in percentage per annum, using an actual/360-day count convention:

$$AZIR = \frac{\sum_{i=1}^n v_i \times r_i}{\sum_{i=1}^n v_i}$$

where:

*AZIR* – the weighted average interest rate

*n* – the number of different interest rates on transactions that meet the specified requirements

*r<sub>i</sub>* – each unique interest rate on the transactions (in percentage)

*v<sub>i</sub>* – the cumulative volume of transactions with the same interest rate (*r<sub>i</sub>*)

Additionally, the Central Bank calculates and publishes three compounded term AZIR rates (30-, 90- and 180-day) on every business day based on 1 day AZIR. The compounded rates, referred as ‘30-day Compounded AZIR’, ‘90-day Compounded AZIR’, and ‘180-day Compounded AZIR’, are determined by compounding the AZIR over 30, 90, and 180 days, respectively.

For each of the 30, 90 and 180-day reference period, the AZIR compounded rate is calculated as follows:

$$AZIR \text{ } n \text{ day Compounded Rate} = \left[ \prod_{i=1}^{d_b} \left( 1 + \frac{AZIR_i \times n_i}{360} \right) - 1 \right] \times \frac{360}{T}$$

where:

*AZIR<sub>i</sub>* – the AZIR applicable on business day *i*

$n_i$  – the number of calendar days for which the AZIR interest rate applies

$T$  – the number of calendar days in the reference period (30, 90, or 180 calendar days)

$d_b$  – the number of business days in the reference period.

The AZIR compounded rates are published as percentages rounded to the fourth decimal place. The AZIR compounded rates for a given publication date incorporate all the AZIR values starting exactly 30, 90, and 180 calendar days before the publication date, and extend through the AZIR published on that day.

At the same time, The AZIR Compounded Index (CI) measures the cumulative compounded change of AZIR since the base date and the initial value set to 100,000 000 (one hundred – rounded to six decimal places) as of 1<sup>st</sup> November 2024. Market participants can generate compounded AZIR rate for any non-standard reference period (different from 30, 90 and 180 calendar days) from the published AZIR CI.

When calculating AZIR, if the number of eligible transactions meeting the requirements are fewer than 3 or total amount of transactions is less than AZN 30 million, the Central Bank applies the following contingency (continuity) plans for the calculation and publication of AZIR:

- Contingency plan # 1 – AZIR is calculated using eligible transactions and 10% of transactions conducted at the CBAR overnight Standing Deposit Facility. At that, the Central Bank's deposit facility rate is added by the average spread between AZIR published over the previous 2 business days and the CBAR overnight Deposit Facility rate.
- Contingency plan # 2 – If the volume captured under Contingency Plan#1 is less than AZN 30 million, then AZIR is calculated as the Central Bank's Policy Rate plus the average spread between the AZIR published and the refinancing rate over the previous 2 publication days.
- Contingency plan # 3 – If AZIR is calculated under Contingency Plan # 2 for more than two consecutive days, starting from the third day, it is set equal to the Central Bank's refinancing rate.