

Methodology for producing and publishing RUONIA –
the Ruble Overnight Index Average

Chapter 1. Key definitions

“RUONIA” (Ruble Overnight Index Average) is an interest rate index that represents a weighted average of interest rates used by credit institutions on the RUONIA List to execute unsecured ruble lending transactions overnight.

“The RUONIA List” is the list of Russian credit institutions whose transactions are used to calculate RUONIA; the RUONIA List is approved by the Bank of Russia under the established procedure.

“RUONIA Participant” is a credit institution on the RUONIA List.

“Ordinance No. 4927-U” is Bank of Russia Ordinance No. 4927-U, dated 8 October 2018, “On the list, forms and procedure for compiling and submitting credit institutions’ reporting forms to the Central Bank of the Russian Federation”.

“Form 0409701” is Daily Reporting Form 0409701 “Reporting on Operations in the FX and Money Markets”, as introduced by Ordinance No. 4927-U.

“Form 0409801” is Reporting Form 0409801 “Reporting on Banking Group’s Membership and Credit Institution’s Investments in Units of Mutual Investment Funds”, as introduced by Ordinance No. 4927-U.

“RUONIA’s Fallback Value” is the value of RUONIA calculated under the procedure for ensuring RUONIA’s continuous calculation as per Chapter 4 hereof.

“Bank of Russia Website” is the official website of the Central Bank of the Russian Federation.

“The Supervision Committee” is the Committee for RUONIA Supervision established within the Bank of Russia pursuant to Bank of Russia Order No. OD-966, dated 22 June 2020, “On Establishing the Committee for RUONIA Supervision within the Bank of Russia”.

Chapter 2. Procedure for calculating RUONIA

2.1. RUONIA is calculated as a weighted average of rates based on the central 80% of the weight equal to the volume of transactions multiplied by the number of credit institutions participating in these transactions (remaining after the top 10% and bottom 10% of the rates have been excluded from calculation).

2.2. Calculating RUONIA involves the following steps:

1) Transactions are sorted according to their respective rates, in ascending order.
 2) Transactions with identical rates are combined into groups characterised by the r_i rate, where i is the number of the group with the r_i rate ($i = 1, \dots, K$, where K is the number of different values of r_i).

3) Composite weight¹ f_i is calculated for each r_i rate using the following formula:

$$f_i = V_i \cdot C_i ,$$

where V_i is the total volume of transactions executed at the r_i rate; and

C_i is the number of credit institutions on the RUONIA List that have executed transactions at the r_i rate.

4) Total composite weight F is calculated using the following formula:

$$F = \sum_{i=1}^K f_i ,$$

where K is the number of different values of r_i rates.

5) The weights of the lowest rates (bottom 10% of the total F weight) and the highest rates (top 10% of the total F weight) are excluded.

6) RUONIA is calculated using the following formula:

$$\text{RUONIA} = \frac{\sum_{j=1}^L r_j \cdot f_j}{\sum_{j=1}^L f_j} ,$$

where L is the number of different values of r_j rates, after the top 10% and bottom 10% of the composite weight in terms of rates have been excluded ($L \leq K$);

r_j is the j -th rate annualised after the exclusion;

¹ Composite weight is used because of the situation in the Russian interbank lending market that stems from its highly heterogeneous nature: the higher the volume of transactions performed at a certain rate and the number of banks participating in these transactions, the more significant the rate is.

f_j is the composite weight of r_j after the exclusion.

Chapter 3. Data used for calculation, and the procedure for data quality control

3.1. RUONIA is calculated based on the daily reporting under Form 0409701 submitted by credit institutions pursuant to Ordinance No. 4927-U.

3.2. Of the data provided in Form 0409701, calculation of RUONIA includes overnight transactions that involve providing unsecured ruble loans from one credit institution on the RUONIA List to another credit institution on the RUONIA List, executed within the business day for which the calculation is performed.

Data used for calculating RUONIA does not include:

- transactions between a credit institution's head office and its branch;
- transactions between branches of the same credit institution;
- transactions between credit institutions belonging to the same banking group, according to the information reported under Form 0409801.

Chapter 4. Ensuring continuous calculation

4.1. RUONIA's continuous calculation is ensured by calculating RUONIA's Fallback Value in case at least one of the following conditions is met:

- 1) the number of RUONIA Participants that accept loans overnight is lower than three;
- 2) the number of RUONIA Participants that offer loans overnight is lower than three;
- 3) a single RUONIA Participant's share in attracting or offering loans exceeds 75% of the total volume of transactions²;
- 4) there is no data for more than 50% of RUONIA Participants;
- 5) it is technically impossible to calculate RUONIA.

4.2. If RUONIA's previous value was not a Fallback Value, if there is information on the RUONIA Participants' transactions for the reporting date and if it is technically possible to calculate RUONIA, RUONIA's Fallback Value is calculated as a weighted average of RUONIA's value for the previous date and

²In accordance with Bank of Russia Order No. OD-913, dated 20 May 2021, Subclause 3 of Clause 4.1 shall not be applied during the period from 20 May 2021 through 31 December 2021 when determining whether conditions exist for calculating RUONIA's Fallback Value.

RUONIA's value calculated based on the data available for the current date, with the respective volumes of transactions used for weighting:

$$\text{Fallback RUONIA (t)} = \frac{\text{RUONIA (t-1)} \cdot V(t-1) + \text{RUONIA (t)} \cdot V(t)}{V(t-1) + V(t)},$$

where t is the date for which RUONIA is calculated;

t-1 is the date of the previous business day for which RUONIA was calculated;

Fallback RUONIA (t) is the Fallback Value of RUONIA for date (t);

RUONIA (t) is the value of RUONIA calculated based on the available data for date (t);

RUONIA (t-1) is the value of RUONIA for date (t-1);

V (t) and V (t-1) are volumes of transactions for dates (t) and (t-1), respectively.

4.3. If it is impossible to comply with the conditions set out in Section 4.2 hereof, RUONIA's previous value is used as the Fallback Value.

4.4. If the factors that have led to calculating RUONIA's Fallback Value remain in place for more than three days, the matter of further steps with regard to calculating and publishing RUONIA, in particular the decision on whether it is necessary to alter the methodology, is referred to the Supervision Committee.

Chapter 5. Publication

5.1. RUONIA's value is published on the Bank of Russia Website every business day no later than at 15:00 (Moscow time, GMT+3) on the business day following the day for which the calculation is performed. RUONIA is not calculated on weekends and holidays (in accordance with the official Russian Federation Working Days Calendar for a five-day working week) and on days when RUONIA is not to be calculated pursuant to a decision issued by the Bank of Russia.

5.2. The following information on the transactions factored in the calculation (before the exclusion under Section 2.2 hereof) is to be published simultaneously with RUONIA's value:

- total volume of transactions;
- number of transactions;
- number of RUONIA Participants conducting transactions;
- parameters of interest rate distribution:

- lowest value;
- 25th percentile;
- 75th percentile;
- highest value.

5.3. After RUONIA's value is published, it is not to be altered.

5.4. When RUONIA's Fallback Value is published, it should be made clear that the Fallback Value approach was used. In this case, additional information as per Section 5.2. hereof is not published.

Chapter 6. Altering the RUONIA calculation procedure, and terminating RUONIA calculation and publication

6.1. In order to identify structural changes in the interbank lending market that may require changing the procedure for calculating RUONIA or terminating the calculation and publication of RUONIA altogether, the Bank of Russia Statistics and Data Management Department continuously analyses the situation in the interbank lending market.

The analysis aims to determine whether the interbank lending market can maintain the volume and liquidity at levels required to provide basis for calculating a reliable and stable interbank market interest rate indicator.

Based on the analysis, at least once every six months, the team in charge compiles materials on whether the procedure for calculating RUONIA is adequate given the current situation in the interbank lending market ("Analytical Materials"), or proposals with regard to required amendments to the procedure for calculating RUONIA or with regard to termination of calculating and publishing RUONIA.

6.2. The Bank of Russia Statistics and Data Management Department presents Analytical Materials and proposals with regard to altering the RUONIA calculation procedure for the consideration of the Supervision Committee.

6.3. Subject to a decision by the Supervision Committee, Analytical Materials may be provided for further consultations to the Expert Council on Indicators and Rates of Self-Regulating Organisation "National Financial Association" and other interested users, as well as published on the Bank of Russia Website.

The Bank of Russia Statistics and Data Management Department reviews all the submitted proposals and comments within 14 business days after the deadline for their submission, and presents the results of the review to the Supervision Committee. Subject to the Supervision Committee's decision, the summary of

reviewing the proposals and comments (indicating whether they were accepted or declined) may be published on the Bank of Russia Website.

6.4. In order to ensure that the calculation of RUONIA remains transparent, at least every six months the Bank of Russia Statistics and Data Management Department presents the Supervision Committee with a summary of information on the detected errors that have affected the RUONIA values published and on the reasons for publishing RUONIA's Fallback Values ("Summaries on Errors").

Summaries on Errors should include data on the number of errors of different types (e.g., data presentation errors), separately listing the absolute impact of errors of each type, i.e. the difference between the RUONIA value published and the value calculated based on the updated data.

Summaries on Errors should feature errors with an absolute impact exceeding two basis points. Summaries on Errors are included in the biannual Reports of the Supervision Committee published on the Bank of Russia Website.

6.5. If analysis of the interbank lending market shows that the interest rate indicator has become inadequate due to the changes in the market, the Bank of Russia Statistics and Data Management Department presents a proposal on terminating the calculation and publication of RUONIA and on possible alternatives for the consideration of the Supervision Committee.

6.6. When the Supervision Committee is considering the proposal on terminating the calculation and publication of RUONIA, the Bank of Russia Statistics and Data Management Department presents the Analytical Materials and the documents for terminating the calculation and publication of RUONIA for the consideration of the Bank of Russia Governor.

6.7. After a decision is made to terminate RUONIA's calculation and publication, the calculation and publication of RUONIA shall continue for as long as the decision in question stipulates, but for no less than six months. The Bank of Russia Statistics and Data Management Department ensures that the information on terminating the calculation and publication of RUONIA is published on the Bank of Russia Website and, if necessary, communicated to stakeholders by another means chosen by the Supervision Committee, at least six months before RUONIA's calculation and publication is terminated.