



**METHODOLOGY FOR CALCULATING THE
CBONDS FAMILY OF SECONDARY
HOUSING MARKET RETURN INDEXES IN
THE RUSSIAN FEDERATION**



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1. General Provisions

1.1. Subject of Calculation

1.1.1. This Methodology defines the procedure for calculating the family of secondary housing market return indexes (hereinafter referred to as the "Indexes").

1.1.2. The Indexes are designed to assess the efficiency of investments in residential real estate on the secondary market in key cities of the Russian Federation.

1.1.3. The family of indexes includes the following baseline instruments:

- Secondary Housing Return Index - Moscow (MSKREIX)
- Secondary Housing Return Index - St. Petersburg (SPBREIX)
- Moscow Secondary Housing Annual Return
- St. Petersburg Secondary Housing Annual Return

1.2. Currency and Units of Measurement

1.2.1. All calculations are performed in Russian Rubles (RUB).

1.2.2. Baseline data (prices and rental rates) are used in the calculation per square meter.

1.2.3. Index values are published in points with a precision of two decimal places.

1.2.4. Return indicators are published in percent per annum with a precision of two decimal places.

1.3. Base Period

1.3.1. January 2023 is established as the base period for all Indexes in the family.

1.3.2. The base value of the Indexes is set at 1000 points.

2. Data Sample Formation

2.1. Information Sources

2.1.1. Verified data on average market sales prices and average market rental rates in the secondary housing market are used to calculate the Indexes.

2.1.2. Data sources include reputable real estate aggregators, data from real estate agencies, and official statistics.

2.1.3. The calculation uses data for the following types of secondary market residential premises: studio apartments, one-bedroom, two-bedroom, and three-bedroom apartments. Objects of other types (including four-bedroom apartments, aparthotels, suburban real estate, and rooms in communal apartments) are excluded from the sample.

3. Calculation Methodology

3.1. Calculation of the Monthly Return Indicator

3.1.1. The baseline element for the calculation is the secondary housing return indicator (R_t), calculated using the following formula:

$$R_t = \frac{\text{Rent}_{t-12} \times 12 + (\text{Price}_t - \text{Price}_{t-12})}{\text{Price}_{t-12}} \times 100 \quad (1)$$

where:

- R_t — the return indicator for the reporting month t (in % per annum);
- Price_t - the average sales price per 1 m² for the previous month;
- Price_{t-12} — the average sales price per 1 m² twelve months prior to the period of Price_t .
- Rent_{t-12} — the average monthly rental cost per 1 m² for the month corresponding to the beginning of the 12-month ownership period. The calculation of this parameter is performed using the following formula:

$$\text{Rent}_{t-12} = \frac{\text{Rent}_{\text{object}(t-12)}}{\text{Area}_{\text{median}}} \quad (2)$$

where:

- $\text{Rent}_{\text{object}(t-12)}$ - the average monthly rental cost of the object for the month corresponding to the beginning of the 12-month ownership period;
- $\text{Area}_{\text{median}}$ - a fixed value of the median area of apartments in the city. Current values of the fixed median apartment area for the cities for which the Indexes are calculated are provided in the Appendix to this Methodology. Revision of fixed values is permitted no more than once a year and is carried out only upon identification of sustained structural changes in the supply on the secondary housing market.

3.1.2. Calculation Logic:

- The numerator represents the total financial result of owning the asset over the last 12 months, consisting of the potential annual rental income and the change in the market value of the asset.
- The denominator represents the cost of entry into the position (purchase of 1 m²) twelve months ago.
- The methodology excludes the effect of reinvestment of rental payments.

3.2. Calculation of the Index Value

3.2.1. The Index value at date t is calculated based on the current return indicator (R_t) and the return indicator of the base period (R_{base}) using the formula:

$$\text{Index}_t = \frac{100+R_t}{100+R_{\text{base}}} \times 1000 \quad (3)$$

где:

- Index_t — the Index value at the calculation date t ;
- R_t - the return indicator calculated using formula (1) for period t ;
- R_{base} — the return indicator calculated using formula (1) for the base period (January 2023);
- 1000 — the base value of the Index.

4. Calculation and Publication Schedule

4.1. Frequency

4.1.1. The Indexes and return indicators are calculated monthly.

4.1.2. The calculation date is the first calendar day of the month following the reporting month.

4.2. Publication

4.2.1. Calculation results are published within 5 business days after the end of the reporting month.

4.2.2. Publication is carried out on the official Cbonds website, via API, and in the Excel add-in.

4.2.3. In the event of errors detected in the source data or calculation algorithms, the Index Provider may conduct a retrospective recalculation of values. Information about the fact and reasons for the recalculation is published simultaneously with the updated data.

Appendix A

Table A.1. – Fixed Values of Median Apartment Area Used in the Calculation of the Indexes

City	Period of Validity for the Fixed Value	Median Apartment Area, m ²
Moscow	31.01.2023 - 31.12.2025	49.78
	31.01.2026 - ...	45.25
St. Petersburg	31.01.2023 - 31.12.2025	38.95
	31.01.2026 - ...	33.87

Explanatory Notes to Table A.1:

1. The median area values valid from 31.01.2023 to 31.12.2025 were used for the retrospective calculation of the index base and values for the specified reporting periods. Historical data will not be recalculated using the new values.
2. The values with a start date of 31.01.2026 are applied for calculating return indicators and Index values starting from the reporting date of January 2026 onwards.
3. Information regarding changes to the median area values is published simultaneously with the update of this Methodology and this Appendix.