**APPROVED**

Executive Board

Moscow Exchange

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Chairman

Executive Board

Moscow Exchange

**Calculation methodology**

**for the Moscow Real Estate DomClick Index**

**Moscow 2020**

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# Introduction

* 1. Terms and Definitions
     1. The following terms and definitions are used for the purpose of this Moscow Exchange Methodology for the Moscow Real Estate DomClick Index (the “Methodology”):
        + - Constituents – the list of the Moscow Real Estate Market Segments used to calculate the Index;
          - The Exchange, Moscow Exchange, MOEX – Public Joint Stock Company Moscow Exchange MICEX-RTS.
          - Review date – the date for which statistic data used to evaluate the Constituents parameters is calculated. The review date is the last Monday preceding 1 March, 1 June, 1 September and 1 December.
          - DomClick – Sberbank Real Estate Center LLC.
          - Index – the measure of the average price (in RUB) per square meter of residential real estate in Moscow. The Index is calculated by Moscow Exchange based on aggregated data on mortgage contracts (the “mortgage deals”) provided by DomClick.
          - Moscow Real Estate Market Segment, Segment – a group of real estate units combined based on factors having the most impact on the price per square meter of residential real estate in Moscow. Unless the Exchange sets out otherwise, the Index is calculated by using segments stated in Appendix 1 which are determined based on characteristics of a house in which the real estate unit is located and the distance between the unit and the nearest metro station.
          - Expert Council – the permanent advisory and consultative body of the Exchange.

* + 1. Terms not specifically defined in this Methodology shall have the meaning ascribed to them in MOEX’s other internal documents, laws and regulatory acts of the Bank of Russia.
  1. Overview
     1. The Index is a composite benchmark of the Moscow real estate market which is calculated by Moscow Exchange based on aggregated data on mortgage deals provided by DomClick. The Index tracks the average price (in RUB) per square meter of residential real estate in Moscow.
     2. The Index name is «Индекс московской недвижимости ДомКлик» in Russian and “Moscow Real Estate DomClick Index” in English. The Index code is MREDC.
     3. Wordings “ДомКлик” and “DomClick” in the Index name are trademarks of DomClick registerd with the Russian Public Register of Trademarks and Service Marks on 13 September 2017 (trademark certificates No 630064 (“ДомКлик”) and 630063 (“DomClick”).
     4. The Methodology and any amendments and supplements thereto are written subject to recommendations from the Expert Council.
     5. The Methodology and any amendments and supplements thereto are adopted by the Exchange and take effect on the date set by the Exchange.
     6. The Methodology may be amended and supplemented once a quarter or less. The Exchange announces changes to the methodology, also its new version at least one week before they take effect,

# Index Calculation

* 1. Input Data for the Index Calculation
     1. The Index is calculated using DomClick’s data on mortgage deals with Sberbank containing all necessary information about the deal price and qualitative factors of a real estate unit. Deals shall have the following features:
        + Mortgage guarantees the performance of obligations arising out of the sale of real estate units;
        + The mortgaged property (real estate unit) is an apartment in a multi-unit building put into service;
        + The apartment shall be in the following Moscow administrative districts: Central, Western, North-Eastern, Eastern, South-Eastern, Southern, South-Western, Western, North-Western and Novomoskovsky;
        + The apartment price shall be no more than RUB 30,000,000 (thirty million);
        + The sale was not within the developer's marketing campaign;
        + The total area of the apartment is 20-200 square meters; the number of rooms is 1-4;
        + The apartment is in a
        + The apartment shall be in a panel, brick or cast-in-place concrete buildings with no more than 26 floors which were constructed after 1901.
     2. The Index does not include deals with the price per square meter above 300% or less 30% of the average price per square meter in a given administrative district which average price is determined based on all deals for the previous four weeks which meet requirements set out in clause 2.1.1 above.
  2. Index Calculation Method
     1. The Index is the weighted average price per square meter across Moscow’s administrative districts and Real Estate Market Segments set out in Appendix 1 hereto:

where:

In – the Index value as of the nth moment;

Pin – the average price per square meter across the total space calculated based on real estate deals within the Segment for the previous four weeks;

Win – the weight of the ith Segment in the Index which is determined based on clause 2.3 below.

* + 1. The average price per square meter across the Segment is determined as the average price of the deals compliant with clause 2.1 above, which were concluded in apartments of the Segment in the preceding four weeks.
    2. The average price per square meter for every Segment is calculated by DomClick and transmitted to the Exchange at least one trading day before the day following the period when deals used in the Index were concluded.
    3. The average price per square meter is determined to two decimal points.
    4. If less than ten deals compliant with conditions set out in clause 2.1 above were concluded in the preceding four weeks, the average price per square meter in the Segment is calculated using prices of last ten deals over the whole period.
    5. The Index has a starting value I1= 159,646.69, as at 28 December 2016.
    6. The Index is denominated in RUB and calculated to two decimal points.
  1. Determining the Real Estate Segment's weight (Wi) in the Index
     1. The weight of the ith Real Estate Segment in the Index is calculated as Moscow administrative district weighting factor W1i multiplied by the weighting factor of the Segment depending on the Moscow administrative district, the category of the building in which the apartment is located and the distance between the apartment and the nearest metro station.
     2. Weight (Wi) of the ith Real Estate Segment in the Index is calculated to nine decimal points.
     3. The weighting factor (W1i) of the Moscow administrative district is determined based on the ratio of the population in the district to the total population of all districts included in the Index. To calculate the district weight, data last published by Russian Federal State Statistics Service (Rosstat) on its website by the Review Date is used. If accurate data on Moscow districts population for the last 18 months is not available, the Exchange may determine weights based on expert opinion as recommended also by the Expert Council and also based on the ratio of the number of mortgage deals in the Moscow districts for the previous 12 months.
     4. The weighting factor (W2i) of the Segment within an administrative district is determined based on the ratio of the number of mortgage deals in apartments within the Segment to the total number of deals in all Segments within the district over 52 weeks preceding the Review Date.

# Index Construction and Review Processes

* 1. Rules for Selecting Index Constituents
     1. The list of the Index Constituents contains codes and names of the Moscow Real Estate Market Segments.
     2. The Moscow Real Estate Market Segments (the Index Constituents) are listed in Appendix 1 hereto. The list of Index Constituents may be changed as recommended by the Expert Council in accordance with the procedure set out in clause 3.2 below.
     3. The Constituents’ parameters are the Segments’ weights in the Index. The parameters are determined as of the Review Date in accordance with the procedure set out in clause 2.3 above.
     4. The Constituents’ parameters are calculated using data provided by DomClick to the Exchange by the Review Date.
  2. Index Review Procedure
     1. The list of the Moscow Real Estate Market Segments (the Index Constituents) and weighting factors used to calculate the Index (the Constituents’ parameters) are changed when reviewing the Constituents.
     2. The Index Constituents and their parameters are reviewed quarterly or less except the cases provided for by this Methodology. Changes arising from the reviews are effective beginning the forth Monday of March, June, September and December. The Exchange may decide to move the effective date for these changes.
     3. The Index Constituents may be reviewed in a fast-track manner if an event has taken place which may have material impact on the Index and requires prompt review of the Constituents and their parameters.
     4. The Exchange announces a regular review of the Index Constituents and their parameters at least two weeks before the changes take effect.
     5. The Exchange announces an extraordinary review of the Index Constituents and their parameters at least one day before the changes take effect.

# Calculation Rules and Disclosure

* 1. Expert Council
     1. The Exchange supervises and amends the Methodology as recommended by the Expert Council. The Expert Council’s functions and power are set out in the Expert Council Regulations.
     2. The Index is constructed, calculated, reviewed and updated as well as this Methodology is amended in accordance with the administrative principles and rules set out in the Moscow Exchange Index Management Policy.
  2. Index Calculation Frequency
     1. The Index is calculated once a week. The week’s Index value is its current and closing value at the same time until its next calculation. The calculation frequency may be changed by the Exchange’s decision.
     2. The Index value is published within three days of its calculation.
     3. Unless otherwise prescribed by the Bank of Russia regulatory acts, the Exchange may change the Index calculation frequency. The Exchange provides notice advising of its decision with respect to this clause at least five business days before the relevant changes take effect, unless the Exchange has set other timing.
  3. Control over the Index Calculation
     1. If technical failure occurs when the Index, or aggregated data on mortgage deals is being calculated, which results in corruption of data having been used to calculate the Index, the Index value as of the previous week may be recalculated. In this case, the Index is recalculated as soon as possible after the technical failure was identified. If recalculating the Index, the Exchange publishes a notice concerning the Index recalculation on its website.
     2. If circumstances occur that may have an adverse impact on the Index’s ability to effectively represent the Moscow real Estate Market, the Exchange can take any measures necessary to ensure the Index representativeness, including requesting DomClick to provide input data for the audit of the parameters, setting parameters used to calculate values set out in this Methodology and others.
  4. Disclosure
     1. The information that must be disclosed due to this Methodology and the Bank of Russia’s regulatory acts is published on the Moscow Exchange website.
     2. When changing values used to calculate the Index that are based on expert opinion, the Exchange gives a notice on its website concerning circumstances taking into account in changing the values and the ground for these changes, within one day after the changes took effect.
     3. The Exchange publishes the Index’s closing value on a weekly basis in addition to other information that must be disclosed under this Methodology.
     4. This Methodology and the Index’s closing values for the past 12 months are made freely available on the Exchange website.
     5. The information that must be disclosed under this Methodology may be disseminated in other ways, also via information agencies distributing MOEX’s market data.

# Appendix 1

**The list of Real Estate Market Segments eligible for the Index universe**

| **Segment code** | **Moscow Administrative District** | **Segments depending on the distance to the nearest metro station** | **Segment depending on the category of the building in which the apartment is located** |
| --- | --- | --- | --- |
| CNALLEC | Central | - | Up to 5-storey brick building or prefabricated panel building |
| CNALLCM | More than 5-storey brick building or cast-in-place concrete building |
| NRMETEC | Northern | less than 1,100 m | Up to 5-storey brick building or prefabricated panel building |
| NRMETCM | More than 5-storey brick building or cast-in-place concrete building |
| NRNOMEC | more than 1,100 m | Up to 5-storey brick building or prefabricated panel building |
| NRNOMCM | More than 5-storey brick building or cast-in-place concrete building |
| NEMETEC | North-Eastern | less than 1,100 m | Up to 5-storey brick building or prefabricated panel building |
| NEMETCM | More than 5-storey brick building or cast-in-place concrete building |
| NENOMEC | more than 1,100 m | Up to 5-storey brick building or prefabricated panel building |
| NENOMCM | More than 5-storey brick building or cast-in-place concrete building |
| ESMETEC | Eastern | less than 1,100 m | Up to 5-storey brick building or prefabricated panel building |
| ESMETCM | More than 5-storey brick building or cast-in-place concrete building |
| ESNOMEC | more than 1,100 m | Up to 5-storey brick building or prefabricated panel building |
| ESNOMCM | More than 5-storey brick building or cast-in-place concrete building |
| SEMETEC | South-Eastern | less than 1,100 m | Up to 5-storey brick building or prefabricated panel building |
| SEMETCM | More than 5-storey brick building or cast-in-place concrete building |
| SENOMEC | more than 1,100 m | Up to 5-storey brick building or prefabricated panel building |
| SENOMCM | More than 5-storey brick building or cast-in-place concrete building |
| SUMETEC | Southern | less than 1,100 m | Up to 5-storey brick building or prefabricated panel building |
| SUMETCM | More than 5-storey brick building or cast-in-place concrete building |
| SUNOMEC | more than 1,100 m | Up to 5-storey brick building or prefabricated panel building |
| SUNOMCM | More than 5-storey brick building or cast-in-place concrete building |
| SWALLEC | South-Western | - | Up to 5-storey brick building or prefabricated panel building |
| SWALLCM | More than 5-storey brick building or cast-in-place concrete building |
| WSMETEC | Western | less than 1,100 m | Up to 5-storey brick building or prefabricated panel building |
| WSMETCM | More than 5-storey brick building or cast-in-place concrete building |
| WSNOMEC | more than 1,100 m | Up to 5-storey brick building or prefabricated panel building |
| WSNOMCM | More than 5-storey brick building or cast-in-place concrete building |
| NWALLEC | North-Western | - | Up to 5-storey brick building or prefabricated panel building |
| NWALLCM | More than 5-storey brick building or cast-in-place concrete building |
| NMALLEC | Novomoskovsky | - | Up to 5-storey brick building or prefabricated panel building |
| NMALLCM | More than 5-storey brick building or cast-in-place concrete building |