

| CONCEPT NUMBER | CONCEPT NAME             | SUB-CONCEPT NAME                   |  |
|----------------|--------------------------|------------------------------------|--|
| 1.             | CONTACT                  |                                    |  |
| 1.1            |                          | Organisation                       | National Bank of Moldova   |
| 1.2            |                          | Unit                               | Financial stability Division   |
| 1.5            |                          | Address                            | blv. Grigore Vieru 1, Chisinau, Moldova, MD-2005   |
| 1.6            |                          | Email                              | <a href="mailto:stabilitate@bnm.md">stabilitate@bnm.md</a>   |
| 1.7            |                          | Phone                              | +373 22 822-461<br>+373 22 822-557<br>+373 22 822-557  |
| 2.             | METADATA UPDATE          |                                    |  |
| 2.1            |                          | Metadata last certified            |  |
| 2.2            |                          | Metadata last posted               |  |
| 2.3            |                          | Metadata last updated              |  |
| 3.             | STATISTICAL PRESENTATION |                                    |  |
| 3.1            |                          | Data description                   | The residential property price index (RPPI) measures the price evolution for residential dwellings available for households on the primary (new) and secondary (existing) market in Chisinau.  |
| 3.2            |                          | Classification system              | The RPPI is classified according to the following categories:<br>1. RPPI - New and existing dwellings for Chisinau<br>1.1. RPPI - New dwellings for Chisinau<br>1.2. RPPI - Existing dwellings for Chisinau  |
| 3.3            |                          | Sector coverage                    | The RPPI covers online listed residential properties for the household sector in the reference periods.  |
| 3.4            |                          | Statistical concepts & definitions | RPPI data for the new and existing dwellings is compiled using online listed prices. The weights for the two sub-indices is equal to the total value of dwelling transactions for new and existing dwellings as registered by the Land Registry. Both prices and weights include the land value component.   |
| 3.5            |                          | Statistical unit                   | Online list prices of individual residential dwellings.  |
| 3.6            |                          | Statistical population             | Residential dwellings in Chisinau.   |
| 3.7            |                          | Reference area                     | Chisinau   |
| 3.8            |                          | Time coverage                      | From the first quarter of 2019.  |
| 3.9            |                          | Base period                        | The RPPI is an annually chain-linked Laspeyres-type price index that uses the year 2019 as reference year. The average of the quarterly indexes for 2019 equals 100.   |
| 4.             | UNIT OF MEASURE          |                                    | Index figures are available as well as quarterly and annual growth rates in percentages. Weights are given as percentages.   |
| 5.             | REFERENCE PERIOD         |                                    | For every quarter, the RPPI is compiled based on data for dwellings that were listed online during that quarter. The average characteristics to define a typical property in the hedonic model are updated every year and refer to the fourth quarter of the previous year.<br>Weights are updated annually and refer to the average of the total transaction number of the last 3 years in Chisinau for the primary and secondary market. |
| 6.             | INSTITUTIONAL MANDATES   |                                    |  |
| 6.1            |                          | Legal acts & other agreements      | RPPI is part of the Financial Soundness Indicators of the International Monetary Fund.   |
| 6.2            |                          | Data sharing                       | Not applicable.  |

| <b>7</b>    | <b>CONFIDENTIALITY</b>                |                                  |  |
|-------------|---------------------------------------|----------------------------------|--|
| <b>7.1</b>  |                                       | Confidentiality policy           | The RPPI itself and its two sub-indexes of new and existing dwellings are not confidential.  |
| <b>7.2</b>  |                                       | Confidentiality - data treatment | Confidential data may not be published without permission of the National Bank of Moldova.   |
| <b>8.</b>   | <b>RELEASE POLICY</b>                 |                                  |  |
| <b>8.1</b>  |                                       | Release calendar                 | The RPPI is released on a quarterly basis, one quarter after the reference period. The weights of the primary and secondary market are released annually with the index release of the first quarter of every year.  |
| <b>8.2</b>  |                                       | Release calendar access          | The release calendar is published on the website of the National Bank of Moldova.  |
| <b>8.3</b>  |                                       | User access                      | Respecting professional independence of the National Bank of Moldova, all users are treated equitably in an objective, professional and transparent manner.  |
| <b>9.</b>   | <b>FREQUENCY OF DISSEMINATION</b>     |                                  | RPPI is released on a quarterly basis, one quarter after the reference period.   |
| <b>10.</b>  | <b>DISSEMINATION FORMAT</b>           |                                  |  |
| <b>10.1</b> |                                       | News release                     | <a href="#">RPPI releases</a>  |
| <b>10.2</b> |                                       | Publications                     | <a href="#">RPPI releases</a>  |
| <b>10.3</b> |                                       | Online database                  | Not available  |
| <b>10.4</b> |                                       | Micro-data access                | Not available  |
| <b>11.</b>  | <b>ACCESSIBILITY OF DOCUMENTATION</b> |                                  |  |
| <b>11.1</b> |                                       | Documentation on methodology     | <a href="#">Technical note.</a>  |
| <b>11.2</b> |                                       | Quality documentation            | Not applicable.  |
| <b>12.</b>  | <b>QUALITY MANAGEMENT</b>             |                                  |  |
| <b>12.1</b> |                                       | Quality assurance                | RPPI data are checked for completeness and consistency with statistical concepts and definitions. Automatic quality controls have been implemented within the production process, in order to detect and correct errors in the data files that are used. Outliers, such as dwellings with particularly small or large floor area or very high or low prices are excluded from the index. |
| <b>12.2</b> |                                       | Quality assessment               | Not applicable.  |
| <b>13.</b>  | <b>RELEVANCE</b>                      |                                  |  |
| <b>13.1</b> |                                       | User needs                       | Ministries of Economic Affairs; Land Registry; Central Banks; Mortgage lending institutions (banks etc.); Economic analysts; International Institutions (IMF)  |
| <b>13.2</b> |                                       | User satisfaction                | Not available  |
| <b>13.3</b> |                                       | Completeness                     | The RPPI consists of an aggregate index of online listed dwellings, including two sub-indexes (primary and secondary market).  |
| <b>14.</b>  | <b>ACCURACY AND RELIABILITY</b>       |                                  |  |
| <b>14.1</b> |                                       | Overall accuracy                 | The price collection methods are designed to ensure sufficient coverage and timeliness. Prices are listed prices and not actual transaction prices.  |
| <b>14.2</b> |                                       | Sampling error                   | Not applicable.  |

|             |                                   |                              |  |
|-------------|-----------------------------------|------------------------------|--|
| <b>14.3</b> |                                   | Non-sampling error           | Not applicable.  |
| <b>15</b>   | <b>TIMELINESS AND PUNCTUALITY</b> |                              |  |
| <b>15.1</b> |                                   | Timeliness                   | The RPPI is published in the quarter following the reference quarter.  |
| <b>15.2</b> |                                   | Punctuality                  | The RPPI is published around 45 days after the end of a quarter.   |
| <b>16</b>   | <b>COMPARABILITY</b>              |                              |  |
| <b>16.1</b> |                                   | Comparability - geographical | RPPI is compiled only for Chisinau.  |
| <b>16.2</b> |                                   | Comparability over time      | RPPI is comparable over time.  |
| <b>17.</b>  | <b>COHERENCE</b>                  |                              |  |
| <b>17.1</b> |                                   | Coherence - cross domain     | There is only one RPPI available.  |
| <b>17.2</b> |                                   | Coherence - internal         | The RPPI is internally coherent. Higher levels are derived from sub-indexes according to well-defined procedures.  |
| <b>18.</b>  | <b>COST AND BURDEN</b>            |                              | Data is obtained automatically using web scraping minimizing the burden for respondents.   |
| <b>19.</b>  | <b>DATA REVISION</b>              |                              |  |
| <b>19.1</b> |                                   | Data revision - policy       | The RPPI is currently not revised, all published data is final.  |
| <b>19.2</b> |                                   | Data revision - practice     | Not applicable.  |
| <b>20.</b>  | <b>STATISTICAL PROCESSING</b>     |                              |  |
| <b>20.1</b> |                                   | Source data                  | For the calculation of the indexes the microdata is obtained from listings of dwellings on popular real estate websites. Data for the weights of the primary and secondary market are obtained from the Land Registry and are based on transaction values.   |
| <b>20.2</b> |                                   | Frequency of data collection | Data is collected every two weeks, the RPPI is published quarterly.  |
| <b>20.3</b> |                                   | Data collection              | RPPI microdata is collected using web scraping from popular real estate listing websites.  |
| <b>20.4</b> |                                   | Data validation              | Source data files are verified (e.g. number of records, file size, content of the variables is as expected). Statistical outlier detection procedures are applied to remove outliers. Records with missing characteristics on key variables are excluded from the index compilation.   |
| <b>20.5</b> |                                   | Data compilation             | To adjust for the quality-mix of dwellings listed in different quarters a characteristics hedonic method is used. The characteristics hedonic method measures the price evolution of a "typical" property. This "typical" property is estimated by averaging the characteristics of all the properties in the stratum for a reference period. The reference period for the current year is the 4th quarter of the previous year.<br>A log-linear specification is applied and the regression is estimated every quarter using ordinary least squares for each stratum (primary and secondary market). The variables included in the hedonic model are for instance the surface and the number of rooms. A "shadow" price is then estimated for each characteristic in current quarter and in the reference quarter. The price index is calculated by comparing the price of the typical property in the current quarter with the price of the "typical" property in the reference quarter.<br>The long time series for all levels (stratum indexes and overall index) obtained by chaining the current period by the chained index of the last period of the previous year.<br>Weights are updated annually and are based on the average of the total transaction value of the last 3 years in Chisinau for the primary and secondary market.<br>More information can be found in a technical note ( <a href="#">link</a> ). |