Level 3 national report on quality of statistics underlying the MIP indicators

Statistical domain: Housing Price statistics

Country: Belgium

Institution: Statistics Belgium

Reference year: 2024

Date of update: 03/2025

National report providing information on quality, sources and methods, together with information on the statistical processes used for the compilation of the statistics underlying the MIP indicators (including concrete specifications for housing price statistics) - 2025 update

Reporting institution: Statistics Belgium

Selected principles					Some specific examples for indicators and related questions (Response options, unless indicated otherwise: not implemented; partially implemented; fully implemented)	Statistical domain specifications	Country response
European Code of Practice principles	**Public Commitment on European Statistics by the ESCB**	**Selected elements**					
Institutional Environment	*Institutional Environment*	*CoP/PC*	*IMF DQAF*	*SIMS*	*Question(s)*	*Housing price statistics*	Housing price statistics
CoP1 Professional Independence	PC1 Professional Independence	1.1/1.1	1.1.1 1.1.2		The independence of [name of reporting institution], from political and other external interference in developing, producing and disseminating official statistics is guaranteed by law. *Legal basis: Please confirm the independence*	*Legal basis:* Please specify the statutory basis for ensuring independent professional authority in all statistical decision making and activities at the institutional level.	Statistics Belgium carries out independent statistical activities of the state and other activities delegated by the Law on public Statistics of 4/7/1962, last modified on 26/01/2023. The Law on Statistics regulates that statistical activity shall be carried out in compliance with the principles of professional independence, impartiality, objectivity, reliability, confidentiality, and cost efficiency (Article 4 $4). Statistics Belgium also follow the Code of Practice of the European Statistical System and is frequently audited in the framework of the Peer Review System.

CoP2 Mandate for data collection	PC2 Mandate for data collection	1.4/1.5			*by referring to the relevant national and EU legal act(s) and the formulation used in the legal act.* The [name of reporting institution] has an annual statistical work programme which is made public. *Statistics work programme: Please confirm the existence of a statistics work programme and specify where to find it (or similar document), if available.*	This legal authority provides the ground to exercise professional integrity to the fullest extent and is conducive to embedding a professional culture in the statistical office. *Statistics work programme:* Please confirm the existence of a statistics work programme covering housing price statistics and specify where to find it, if available.	Each year, Statistics Belgium establishes a work program including the production of routine statistics and projects aiming at modernising the production of existing statistics. Currently, this work program is not published.
CoP2 Mandate for data collection	PC2 Mandate for data collection	2.1/2.1	0.1.1	S 7.1	The mandate(s) of the [name of the institution(s)] to collect information for the development, production and dissemination of European	*Allocation of responsibilities:* Please explain the allocation of responsibilities for the production	Statistics Belgium is the unique national agency responsible for the compilation and dissemination of the Belgian HPI. The mandate for the production of house price statistics is laid down in the Parliament and Council Regulation (EU) 2016/792 of 11 May 2016 completed by the implementing Commission Regulation 2023/1470 of 17 July 2023.

					Statistics is specified in law. *Allocation of responsibilities: Please explain the allocation of responsibilities in producing the relevant statistics.* *Legal basis: Please confirm the mandate by referring to the relevant legal act(s) and any other kind of formal agreements.*	of housing price statistics. *Legal basis: Please confirm the mandate for the production of housing price statistics by referring to the relevant legal act(s) and/or any other kind of formal agreements.*	
CoP6 Impartiality and objectivity	PC6 Impartiality and objectivity	6.6/6.6	1.2.4	S9.1 + S9.2 S.20.1	Advance notice is given on release calendars and on major revisions or changes in methodologies, source data and techniques. *Advance release calendar: Please confirm the existence of an advance release calendar and provide a link to it.* *Revision policy: Please explain succinctly the revision policy and provide*	*1.3.1 Advance release calendar: Please confirm the existence of an advance release calendar for housing price statistics and provide a link to it.* *1.3.2 Revision policy: Please explain succinctly*	The house price index is included in the general publication calendar of all statistics published by Statistics Belgium which is available at the following address: https://statbel.fgov.be/en/calendar The HPI is subjected to revisions according to the European regulation on harmonised indices of consumer prices and the house price index (792/2016) and EU regulation laying down methodological and technical specifications as regards the house price index and the owner-occupied

Statistical Processes	Statistical Processes	CoP/PC	IMF DQAF	SIMS	Question(s)	Housing price statistics	
					a link to material on the revision policy, if existent.	the revision policy for housing price statistics and provide a link to material on the revision policy, if existent.	housing price index and (1470/2023). In particular, the indexes for the last available quarter should be considered as provisional and are revised a quarter later due to the fact that additional data from the land registry has been obtained.
CoP7 Sound methodology	PC7 Sound methodology	7.1/7.1	2.1 2.2 2.3 2.4	S4.3 S4.4 S4.5 S4.6 S 6 S12.1	Please specify the relevant statistical standards to which the statistics abide. *Links/references to existing comprehensive methodological documentation on specific aspects of the national sources and methods can also be provided*	*2.1.1 General remarks*: Specify if housing price statistics follow the methodological recommendations in the Technical Manual and the RPPI Handbook.	The HPI compilation follows methodological standards set out in in the Handbook on Residential Property Prices and in the Technical Manual on Owner-Occupied Housing for HICP provided by Eurostat to ensure comparability of HPI indices across Member States. The HPI measures the evolution of market prices of all residential properties purchased by households. It includes both new and existing dwellings, regardless of whether the purchase is for own-occupancy or investment. Land price is included in prices and weights.
					Please specify adherence or deviations from concepts and rules according to international standards and highlight coverage gaps that are of material relevance for the statistics.	Deviations from concepts, rules, and coverage gaps specific to housing prices statistics with material impact should be identified.	The geographical coverage of house price statistics is the entire national territory. Until end of 2013, producer price index for the construction was used for the index of new dwellings instead of transaction prices. From 2014 onwards, transaction prices are used for both new and existing dwellings.

						Please indicate whether actions to address the deviations and coverage gaps are envisaged.	
CoP8 Appropriate Statistical procedures	PC8 Appropriate Statistical procedures	8.2/8.2	3.1 3.3 3.4	S12.1 S21.1 S21.3 S 21.5-6	Please provide a succinct assessment of the robustness of the statistics by elaborating briefly on the relevant sources of information, statistical methods and procedures used across the various frequencies. *Please provide links/references to existing comprehensive methodological documentation on specific aspects of the national statistical procedures. The objective should be to get an overview on how much the statistical output are anchored in actual collected data rather than on estimation methods or similar judgemental inputs.*	*Main features:* For *housing price statistics,* this description should start by assessing the soundness of sources of information, procedures and methods used in data compilation of the most relevant frequency (quarterly), e.g. price concept, index formula, weights, and adjustments. *Country specific aspects:* Present succinctly information on the collection methods of specific material	The production of HPI statistics is based on administrative data; in particular, prices of dwellings gathered from notarial deeds of sales data provided by the Land Registry administration. Data transmission between the Tax Office and Statistics Belgium is done on a quarterly basis. Prices of dwellings are taken into account in the quarter where the final deed of sales is signed and ownership rights are transferred. The database of dwelling transactions contains notarial deeds with multiple properties and deeds with only one property. In the first case a price is not consistently given to the separate properties, making it impossible to perform regressions on those observations. These are therefore discarded. The evolution of the number of transaction from one quarter to another is examined and compared with other sources (mainly professional corporation of real estate agents or notaries) to detect possible incomplete datasets. If strong decreases are observed, the land registry administration is contacted to check possible problems. Statistical outlier detection methods are applied on the administrative data to filter transaction prices which are incorrectly recorded. Data with insufficient characteristics variable are discarded. The rolling time-dummy hedonic method is used to take quality changes into accounts. A log-linear specification is used and parameters are estimated using ordinary least squares for each type of property (house, apartment, villa). A rolling window of 5 quarters is used to compile the indices. The index is obtained by taking the exponent of the estimated coefficient for the

						relevance for house price data. A link could be provided to the national provisions in this respect, if existent.	time-dummy parameter of the last quarter and the resulting index is spliced on the index of the previous quarter. Parameters used include age of the building, comfort characteristics, number of floors, number of rooms, inhabitable area, and location). However, detailed characteristics of the dwellings are only available since 2007. Previously, only location and surface were used as regression parameters. The location is modeled via a clustering analysis to regroup area sharing common characteristics. The indexes of each property type (elementary aggregate) are computed using the geometric mean (Jevons formula). Weights of the different items of HPI are annually revised using the most recent national accounts data (t-2) and are price updated to the last quarter of year t-1. The weight for the new dwelling component is based on the gross fixed capital formation in housing. Data on building permits are used to separate new dwellings and self-build dwellings and major renovation. The total value for the purchase of building land based on Land registry data is added to include the value of land in the weight for newly built dwellings. The weight for the existing dwelling component corresponds to the total transaction value obtained from the transactions data of the land registry. Weights of the different property types in the index for purchase of existing dwellings are computed as the total transaction costs for each of them.

Statistical Output	Statistical Output	CoP/PC	IMF DQAF	SIMS	Question(s)	Housing price statistics	
CoP11 Relevance	PC11 Relevance	11.1-11.3	0.3	S.14	Please specify briefly why the statistics are relevant by referring to the multiple purposes for which the statistics are used at (i) international, (ii) EU and (iii) national level. References to the statistical legislation and other formal or informal commitments could be sufficient. In addition, if applicable, the outcome of user consultation processes could also be given.	A variety of potential uses of HPIs are provided for consideration: - to assess housing affordability over time - a measure of specific price trends - for inflation targeting - to monitor economic imbalances and financial stability - an input for national accounts purposes - an input to economic forecasting and analysis - an input for decision making	The HPI responds to the needs of all users interested in knowing the behaviour of prices in the housing market. These price indices are based on registered transaction prices. The potential users are the Belgian National Bank, real estate agencies, economic journalists, Banking Institutions, Federal and Regional Government.

						in respect to the housing market	
CoP12 Accuracy and reliability	PC12 Accuracy and reliability (including stability)	12.1/12.1	3.5	S 15.1 S 15.2 S15.3 S.18.2 S 20.2	The analysis should be based on the following indicators (to be compiled by the ECB/Eurostat on a common data vintage) on the reliability of first releases for the relevant series (selected for their material impact and to avoid compensatory effects in the case of balancing items): - Directional reliability indicators; - Revisions indicators (e.g. MAPE, MACE or RMSRE depending on the indicator). and provide a succinct assessment of the accuracy	The accuracy of housing price statistics can be monitored by assessing the methodological soundness of price and weight sources and adherence to the methodological recommendations. Please also provide a detailed description on the data sources for both weights and prices, and price collection methods.	The HPI is perceived to be accurate and to reflect correctly the overall behaviour of the housing market. The index is not subject to sampling error, because index calculation is based on administrative data which cover the universe of dwelling transactions. Methodological rules and guidelines established in the OOH technical manual and in the Handbook on Residential Property Price are followed in the processes of data collection, modelling, weighting, and estimation. The data sources, which are administrative data supplied by the Land Registry, are monitored on a routine basis for accuracy, reliability, stability, and exhaustiveness.

					and reliability of the statistics on the basis of the results, with an attempt to provide a relative objective measure, explaining also the main reasons for revisions.		
					Please provide a succinct assessment of the level of the statistical discrepancies ("*internal consistency*")		
CoP13 Timeliness and punctuality	PC13 Timeliness (including punctuality)	13.1 13.4	4.1	S.16	Please specify the timeliness requirements for international and EU purposes and the national target publication dates. Please specify punctuality defined as deviations in relation to the timeliness requirements and target dates specified above.	*3.3.1 National requirements*: HPIs may be required at national level at different frequencies and timeliness. *3.3.2 EU and other international requirements*: HPIs are released after 100 days from the end of the reference	House price statistics are released within the timeliness limits set at the European level. Nationally, dissemination of quarterly HPIs follows the preannounced release schedule which corresponds to the deadline for sending the data to Eurostat (t+85 days). Provisional indices of the current quarter are transmitted to Eurostat 85 days after the end of reference period, and final estimates are provided in the following quarter.

						quarter. The release schedule has significantly improved and close to T+1Q at present, which is the target timeliness for this indicator	
CoP14 Coherence and comparability	PC14 Consistency and comparability	14.1/14.1	4.2.1 4.2.2 4.2.3	S17.2 S 18.1	Please provide a succinct assessment of the results of the consistency check of the statistics with other related domains or data sets with which the statistics must show coherence ("*external consistency*"). The results should provide a relative objective measure to facilitate cross-country comparability, e.g. be presented as a ratio of the inconsistency between compared statistics, as a percentage of GDP, where appropriate.	*3.4.1 Consistency with related statistics*: Housing price estimates may be confronted with other indicators available at the national level, e.g., price valuation by a national appraisal board.	The OOH partly overlap the scope of the HPI. However, both indices cover a different set of transactions. Purchase of existing dwellings partly overlap with statistics on the housing market published on the following page: https://statbel.fgov.be/en/themes/housing/real-estate. However, the methodology used in these statistics differs from the methods used in the HPI which only focuses on the household sector and which takes into account quality changes using the time dummy hedonic method. Also new dwellings are not covered in the above mentioned data. HPI indices are also compared to indicators provided by the Notarial professional federation and other private providers.

| | | | | | | Please provide a succinct assessment of the time series consistency, specifying (i) whether the time series presents breaks and if so explaining the reasons for the breaks; (ii) the length of the series for which back data are consistent; and (iii) whether the statistics are consistent across the various frequencies (monthly/quarterly/annual) where relevant. | *3.4.2 "Time" and back data consistency*: In the housing price statistics context, specify the following:

- breaks in time series and reasons (whether they relate to methodological or other changes)

- time periods for which data are consistent

- availability of back data and back calculations performed. | Data are available since 2005 for all index series. The data source has been improved from 2007 onwards and from that year contains information on characteristics of the dwellings which allows to use more precise hedonic regression models. From 2005 to 2013, the index for new dwellings is approximated by the producer price index for the construction sector. From 2014 onwards, this index is also based on transaction data from the land registry. |

| CoP15 Accessibility and Clarity | PC15 Accessibility and Clarity | 15.1/15.1 | 5.1.1 5.2.1 | S9.3 S 11 S12.1 | Please provide a brief description of the dissemination policy and dissemination means, including links to the data and respective metadata. | Please provide a brief description of the dissemination policy and dissemination means, including links to the data and respective metadata. | HPI indices are published on the website of Statistics Belgium at the following address: https://statbel.fgov.be/en/themes/housing/house-price-index Metadata are available on the French and Dutch version of the website. Metadata in English are available on the website of Eurostat at the following address: https://ec.europa.eu/eurostat/cache/metadata/EN/prc_hpi_inx_esms_be.htm |