

# **Consumer Price Indices**

(User's methodological manual) 2024

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### I. General introduction

Consumer price index ranks among the most important price development indicator in the system of price indices calculated in the Czech Republic. The index measures in a representative way and over time relative changes of final consumer prices of goods and services paid by the population (including all taxes). Consumer price indices (cost of living) for households in total are used for the measurement of inflation in the Czech Republic.

The methodology used in constructing the consumer price indices is regularly updated. The most common change is the modification of weights, sampling of elementary aggregates and calculation of price indices. Weights are changed every two years due to maximize timeliness, the choice of elementary aggregates each year and the methodology according to the real needs or requirements of the EU.

### 1. Current consumer price index

A revision of the weighting system was carried out in 2023. Starting from January 2024, the weights are updated using the average of household expenditure from national accounts statistics. They are determined primarily on the base of expenditure in 2022 and are modified by the estimate of expenditure in 2023. The weights of elementary aggregates are updated using data from the Household Budget Survey extended by other available sources and surveys. Starting from January 2024, the published price indices are calculated according to new revised index schemes.

In determination of methodology of the consumer price index processing the requirements of Eurostat resulting from the consumer price index harmonization and remarks and proposals of the Consulting Commission for the Consumer Price Statistics consisting of representatives of ministries, CNB, research institutes, Economic University, trade-unions, organizations of the retired and selected branches of the CZSO are considered. The Commission discusses the updating of the consumer basket and methodology of the consumer price processing.

### 1.1 Legal acts

Review of legislative documents of the European Community, which serve basis for methodology of data collection, calculations and subsequent presentation.

- Commission Implementing Regulation (EU) No 1148/2020 of 31 July 2020 laying down the methodological and technical specifications in accordance with Regulation (EU) No 792/2016 of the European Parliament and of the Council as regards harmonised indices of consumer prices and the house price index (OJ L 252, 4.8.2020, p. 1–12)
- Council Regulation (EC) 2005/881/EC of 8.12.2005 on the treatment in the Harmonized Indices of Consumer Prices of certain issues in concerning health care reforms within the framework of Council Regulation (EC) No. 2494/95 and specific implementing measures relating hereto (Official Journal L324, 10.12.2005, p. 94–95)

- Regulation (EU) 2016/792 of the European parliament and of the council of 11 May 2016 on harmonized indices of consumer prices and house price index, and repealing Council Regulation (EC) No 2494/95 (OJ L 135, 24.5.2016, p. 11–38)
- Act No. 89/1995 Coll., on State Statistical Service, as amended
- The program of statistical surveys under Act No. 89/1995 Coll., on State Statistical Service, as amended
- Directive No. 6/2020 laying down the procedure for the publication of statistical information
- Directive No. 1/2022 regulating the transmission of the statistical information to external users
- Directive No. 8/2022 on the principles of latest figures in News Releases and selected outputs provision from the CZSO

### 1.2 The use of the Consumer Price Index

Consumer price indices are used for adjustment of wages, pensions and social income. Last, but not least, this information is used also in connection with the lease agreements or other agreements in which the revision of originally agreed financial performance reflecting the inflation is anchored.

#### 1.3 Classification

Starting from January 2018, detailed consumer price indices are calculated based on the new ECOICOP classification (European Classification of Individual Consumption according to Purpose), which replaced the original classification (CZ-COICOP – Classification of Individual Consumption by Purpose). The ECOICOP introduced a more detailed breakdown into the consumer basket, the classification of products and services into **12 divisions** remained. This change occurred according to the Regulation (EU) 2016/792 of the European parliament and of the council.

- **1. Food and non-alcoholic beverages** comprises all food including non-alcoholic beverages.
- **2. Alcoholic beverages and tobacco** comprises alcoholic beverages and tobacco products.
- **3.** Clothing and footwear comprises clothing materials, garments, other articles of clothing, clothing accessories, footwear including hire and repair.
- **4. Housing, water, electricity, gas and other fuels** comprises rentals including imputed rentals, payments for the use of cooperative dwellings, miscellaneous services relating to the dwelling, materials and services for the maintenance and repair of the dwelling, water supply and sewage collection, refuse collection, all kinds of energy (gas, electricity, heat), solid fuels.

- **5. Furnishings, household equipment and routine household maintenance** comprises furniture and furnishing, carpets and other floor coverings, household textiles including bed linen, household appliances, glassware, porcelain, tableware and household utensils, goods and services for routine household maintenance, tools and equipment for house and garden.
- **6. Health** comprises pharmaceutical and other medical products, dental products, services of optometrists, services of physicians, thermal bath care, regulatory fee per using a medical emergency facility.
- **7. Transport** comprises personal transport equipment including repair and spare parts, automotive fuel, transport services (by railway, by road, by air, local), school transport services.
- **8.** Communication comprises postal services, telephone equipment (mobile phones), telephone services.
- **9. Recreation and culture** comprises radio and television receivers, players and recorders, computer technology, musical instruments, sport equipment including repair, books, periodicals, toys, stationery, cultural services, sporting services, domestic and foreign holiday, flowers and flower products, pets and related products including veterinary services.
- **10. Education** comprises all levels of education including language teaching and art education.
- 11. Restaurants and hotels comprises meals and drinks provided by restaurants, cafés and the like, catering services of work canteens, office canteens and canteens in schools and universities, accommodation services of hotels, boarding houses, chalets, accommodation in boarding schools and universities.
- **12. Miscellaneous goods and services** comprises personal care services, electrical appliances for personal care, beauty products, jewellery, clocks, leather fancy goods, insurance (insurance connected with the dwelling, insurance connected with health, insurance connected with transport), social and financial services, administrative fees, legal services.

Divisions are further broken by groups (ECOICOP 3), classes (ECOICOP 4) and sub-groups (ECOICOP 5).

### **1.4** Selection of price representatives

Long-term experience proves that prices of products of certain homogeneous group manufactured from the same raw materials and materials with identical utility properties develop in high mutual correlation. This serves basis for the consumer basket principle of price representatives and its relation to the below described weighting scheme. Each price representative represents the same or very similar price development of that part of expenditures of the population which is assigned as weight to the representative.

As price representatives were chosen the products expressing with sufficient precision and reliability the average change of price level of all products and services included in the respective ECOICOP category for which they were chosen.

In the process of price representative selection their weight contribution to the structure of consumption was considered. Further, their stability in the market and its easy interchangeability in the future are considered.

The number of price representatives in consumer basket for the consumer price index calculation (cost of living) in 2024 was the following:

| Total  | 428     |
|--|---------|
| 1. Food and non-alcoholic beverages              | _*)     |
| 2. Alcoholic beverages and tobacco               | _*)     |
| 3. Clothing and footwear                         | 67      |
| 4. Housing, water, electricity, gas and other fu | iels 40 |
| 5. Furnishings, household equipment and          |         |
| routine household maintenance                    | 60      |
| 6. Health  | 13      |
| 7. Transport                                     | 57      |
| 8. Communication                                 | 7       |
| 9. Recreation and culture                        | 98      |
| 10. Education                                    | 12      |
| 11. Restaurants and hotels                       | 42      |
| 12. Miscellaneous goods and services             | 32      |

<sup>\*)</sup> full implementation of 'scanner data' (SD), see p. 8

Every year the consumer basket is updated which entails a slight modification of the number of price representatives.

The choice of representatives was done by the method of purposive sample enabling primarily to test the usefulness and uselessness of classification of present price representatives and preserve all representatives whose contribution to the consumption remains dominating.

With respect to local, time, and material differences in supply and demand the descriptions of representatives enable to settle the space, time and material discrepancy in supply and demand in form of specific varieties of goods and services paid for by the population. Variety of a price representative is an entirely concrete, in the reporting unit persistently surveyed product or service respecting specific terms of supply at the place of survey and complying with characteristics (general description) of price representative. The variety is specified by:

- trade mark or specific supplier of the product or service,
- specific weight or other quantitative parameter of the product,
- admissible quality deviation from the standard description of the consumer basket representative

### 1.5 Weighting scheme

In January 2024, the CZSO began to calculate the consumer price indices using updated weights based on the concept of the national final monetary consumption of households, i.e. there are not included in the consumption abroad and in kind consumption. Drugs, prostitution, gambling, life insurance and FISIM are not covered. The concept of imputed rent is different

from the national accounts. The source of weights from ECOICOP3 aggregations are quarterly national accounts data, reference years 2022–2023 and annual national accounts data, reference year 2022. The weights for elementary aggregates and detailed price representatives are updated using the 2022 Household Budget Survey extended by other available sources and surveys.

Besides the consumer price index for households in total, also consumer price indices (cost of living) of households of pensioners and households living in the Capital City of Prague are calculated.

The weighting scheme in the year 2024 for the consumer price index calculation for households in total is following:

| Divisions of ECOICOP  | Weight in 2022 per mille |
|---|--------------------------|
| 1. Food and non-alcoholic beverages                                   | 177.4                    |
| 2. Alcoholic beverages and tobacco                                    | 84.6                     |
| 3. Clothing and footwear  | 44.0                     |
| 4. Housing, water, electricity, gas and other fuels                   | 258.4                    |
| 5. Furnishings, household equipment and routine household maintenance | 58.0                     |
| 6. Health   | 27.9                     |
| 7. Transport  | 105.6                    |
| 8. Communication  | 29.4                     |
| 9. Recreation and culture   | 78.2                     |
| 10. Education   | 6.2                      |
| 11. Restaurants and hotels  | 64.8                     |
| 12. Miscellaneous goods and services                                  | 65.5                     |
| Total   | 1 000.0                  |

### 1.6 Sample of respondents

Reporting network is constituted by shops (including hypermarkets, supermarkets, chain stores), service shops and other institutions providing services (approx.  $8\,500$ ) – hereinafter only the "respondents."

Consumer prices are surveyed in 35 selected districts in the CR and in the Capital of Prague.

The Capital of Prague splits into 8 territories (strata), Brno into 3 strata, Plzeň and Liberec split into 2 strata. Maps of strata are deposited in the Regional Office of the CZSO in Hradec Králové (hereafter RO in Hradec Králové) and also with one of the respective employees of field survey department.

Majority of respondents are selected by the field survey department employees of the CZSO upon an agreement with the owner (authorised person) of a selected reporting unit of the reporting network. For centrally surveyed prices the selection of reporting units is done by staff of the Consumer Prices Statistics Section of the CZSO.

Respondents are important centres of sale or provision of services to the population in the district, i.e. the reporting network includes hypermarkets and supermarkets. Included are also Asian sellers in stone shops, however, not those in the open-air market places.

Selected reporting network for price survey is constant, changes take place only in the following cases:

Enlarging of the reporting network is possible only if a new respondent emerges in the district where it was not so far possible to survey the identified number of prices due to insufficient number of required reporting units.

Reduction of the reporting network is possible only if a selected respondent ceased to exist and there is no substitute respondent with the same choice of goods.

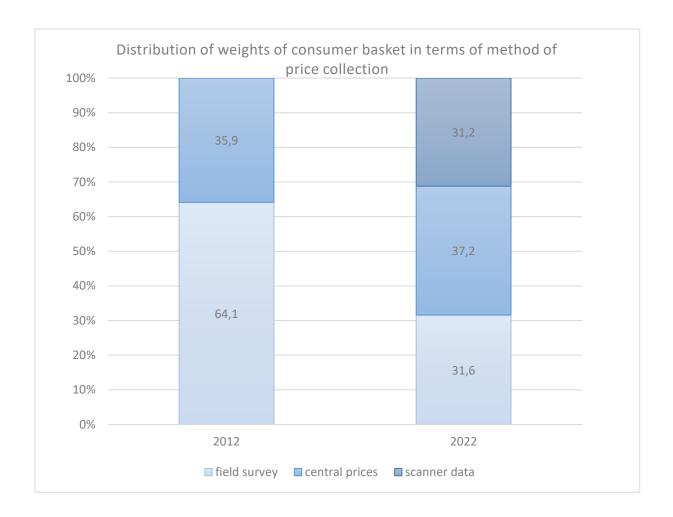
Replacement of the respondent shall be done as follows:

- a) a new respondent widely preferred by customers appeared in the district
- b) one of selected respondents is unable to perform its reporting duty (disappearance of the respondent, permanently changing choice of the offered products) or due to other reasons the respondent fails to serve the purpose. New respondent should be, if possible, at least similar (in the same locality, or in municipality of the same size).

For selected components of the consumer basket the choice of reporting units is optimised on the basis of data on household purchases in individual types of chain stores and in other shops. These data are obtained from external resources The use of these data enables to determine, just for orientation, the necessary number of prices surveyed in individual chain stores and other shops corresponding with shopping patterns of households. This enables to verify current selection of the reporting network as well as to adjust discrepancies by substitutions of individual types of shops.

### 1.7 Consumer price survey

Prices are surveyed on monthly basis, when contemporary we can distinguish three basic modes of price collection – field survey, central prices and scanner data (SD).



For approximately a third of the consumer basket the *local price survey* (field price survey) is applied by the field survey employees of the CZSO (total of 46 employees). During the price survey the field survey employees work according to the "Methodical instructions for survey, verification and presentation of data on consumer prices of goods" and services included in the consumer basket" and in compliance with conclusions of methodical instructions.

Prices of 14 food products (see Annex no. 2) are surveyed once on fixed dates at a direct visit to the reporting unit (usually on Tuesday, the second week of a month) and are published on Friday of the same week. Each field employee surveys two prices for these items.

For other representatives of the consumer basket, prices are collected between 1 and 20 days of the month in 1 up to 16 reporting units by municipality size – the biggest number of prices (16) is observed in the Capital of Prague. Each employee of the field survey department surveys on monthly basis prices of the representative usually with 1–2 respondents in compliance with variability of surveyed prices of a respective representative. As a base number of prices is considered 14 prices (1 price for region and 1 price in Prague), 21 prices (1 price for region and 8 prices in Prague), 55 prices (1 price per each interviewer of the field survey in district and 16 prices in Prague), 94 prices (2 prices per each interviewer of the field survey in district and 16 in Prague). Consumer basket represents approximately 30 000 prices to be surveyed monthly. Product specifications are determined centrally, they are unlimited and the field survey employee select the most frequently sold product within this specification in the selected reporting unit. Considering that descriptions for most of representatives include only

basic characteristics of surveyed goods and services each field survey department employee must select a specific variety of the representative.

The price representative variety represents entirely specific product or service surveyed with the respondent respecting specific conditions of supply at the place of survey and complying with characteristics (description) of the price representative (trade-mark or the product specific supplier, weight or other specific quantitative parameter of the product, admissible deviations from standard description, etc.) The detailed description has to be followed during the observation undertaken by the Field Survey Department employee in all price surveys until the product sells at the respondent's place.

The prices of products currently purchased (searched for) by the population are surveyed, i.e. products of usual finish, goods of domestic production as well as imported goods, products sold in large-size final sales in a selected shop (not second-hand or otherwise damaged goods or closing-down sales, either discount prices of products "2+1" are not subject to survey). This means that only the prices for prime quality goods are surveyed.

For some representatives the vendors use a catalogue sale, i.e. consumer buys the goods on the basis of catalogue offer and the vendor shall arrange for the delivery of the goods to the shop. The catalogue price can be included into the consumer price survey, unless another respondent is selected where the price can be easily traced.

The surveyed consumer prices are recorded by the field survey department employees in tablets. In the work with the appliances they proceed in compliance with the "Programme of mobile data collection of consumer prices."

Next part, more than a third, of consumer basket is constituted by *centrally surveyed prices* (e.g. same prices for the whole Czech Republic or average prices detectable from various reports, prices surveyed on the Internet) see Annex no. 1 and 5. These prices are observed and surveyed by employees of the Consumer Prices Statistics Section of the CZSO, the RO employees in Hradec Králové and employees of the Field Surveys Department Prague in respective general government institutions and respective organizations.

Last data source is scanner data (SD, data from retail chain cash registers). Their gradual implementation into the process of calculation of inflation rate began in 2019. Respondents are addressed individually, in waves so that the data sufficiently covers a certain segment of the retail market/consumer basket and can actually be fully utilized, especially with regard to the needs of price statistics (consumer price index).

```
1<sup>st</sup> wave - chains with a majority of food (2019-2020)
2<sup>nd</sup> wave - drugstore (2021)
3<sup>rd</sup> wave - pharmacies (2022)
4<sup>th</sup> wave - hobby markets (data testing is now underway)
```

The most significant traders on the market are selected for the given segment according to the size of their revenue. Specific chain names are not publicly available due to statistical confidentiality.

At the beginning, the prices from the field price survey for selected price representatives were being replaced by prices from the SD only partially, so called hybrid model – combination of SD and field survey at the level of price representative. With the increasing number of chains

that provide data on a regular basis, the share of prices collected by the field price survey decreased gradually, until SD fully replaced field price collection in these areas, so called full model, when item selection is not limited by the description of the price representative, but all significant items of the chain enter into calculation. Price indices at ECOICOP5 level are there as output.

Since January 2021 it concerned divisions of the ECOICOP

01 – Food and non-alcoholic beverages

02 – Alcoholic beverages, tobacco

together with groups

05.61 – Non-durable household goods

12.13 – Other appliances, articles and products for personal care

Since January 2022 moreover groups

06.11 – Pharmaceutical products

06.12 – Other medical products

06.139 – Other therapeutic appliances and equipment

09.342 – Products for pets

09.541 – Paper products

The SD of individual chains contain information on turnover and the total amount sold for all their stores in the Czech Republic for a given time period in detail at the item level.

- chains from the  $1^{st}$  to  $3^{rd}$  wave mostly send data for the  $1^{st}$ – $20^{th}$  calendar day of the given month, but there are exceptions here too; e.g. two chains send weekly data, as they had set unified data generation from abroad headquarters for all countries
- chains from the 4<sup>th</sup> wave send data for the 1<sup>st</sup>-15<sup>th</sup> calendar day of the given month, which is sufficient due to the smaller weight of the given segment in the consumer basket and lower price volatility.

By dividing the turnover and the quantity sold, we obtain the value for which the goods were actually sold, the so-called 'unit value', which is the basis for calculating price indices. Apart from the standard calculation, the average prices and net price development continue to be calculated using indexes for 91 selected representatives (Annex no. 3).

For selected representatives of the divisions of the ECOICOP (05 – Furnishings, household equipment and routine household maintenance, 09 – Recreation and culture,), hybrid model (combination of field survey and SD) is still used.

### 1.8 Data check

Surveyed prices from field survey are checked by the RO employees in Hradec Králové who verify the correctness of the surveyed prices compared to the last month prices and state whether or not the specific variants selected by the field survey employee correspond with the representative characteristics. In case of doubt they will contact by phone the field survey department employees and verify the prices. In exceptional cases they verify the surveyed price directly in the reporting unit. In addition, they perform scheduled control of the field survey department employees directly in the field. On these inspections records on defects, if any, are taken stating the date of their removal. The final check on surveyed prices and price indices calculated from them performs staff of the CZSO Consumer Prices Statistics Unit.

### 1.9 Calculation of the consumer price index

### A) Average price calculation, sub-indices

**Average price** of the representative for the CR is calculated as weighted arithmetic mean of prices for regions calculated by simple arithmetic mean. Average regional population in 2022 adjusted by regional retail turnover and expenditure on final individual consumption serves as weights.

An exception is the average price calculation for the Czech Republic in respect of the following representatives: rentals and services related to the use of dwelling in rental houses, payment for the use of co-operative dwellings and services related to the use of co-operative dwelling, spa treatment fully covered by patient, fuel, tow tickets, school fees at higher technical school, university admissions fee, school fee at private university, lunch in the canteen, accommodation in student hostel. Average price calculation for these items is described in chapter "Consumer price index by product groups".

In the consumer price calculations the use of **sub-indices** was newly introduced after the 2005 revision. These apply to base indices of some groups on the ECOICOP5 level which are calculated outside the consumer basket. They belong to the group of centrally observed prices (sub-indices are compiled by the Consumer Prices Statistics Section of the CZSO). This applies especially to the groups of goods and services with tariff prices (electricity, gas, railway transport, telecommunications, financial services) where exists wide range of frequently updated supply of products. For these items the method of selecting representatives applied for the consumer basket formation could result to certain index deterioration. To this end, the price development of these items is calculated independently either on the basis of entirely exhausted supply or from strongly prevailing supply of these products. Sub-indices are used in the formula for the overall consumer price index calculation and by their weight in the consumer basket (determined like for other items) they are aggregated to higher aggregates and the total. Besides the above groups the method of using of the sub-indices is applied e.g. for market rentals, imputed rentals, prescription medicines, over-the-counter medicines and other pharmaceuticals, passenger transport by air, letter handling services, other postal services and insurance. Description of individual sub-indices is provided in chapter "Consumer price index by product groups".

### B) Calculation of indices

For the consumer price index calculation by Laspeyres formula constants weights are used:

$$I = \frac{\sum \frac{p_1}{p_0} * p_0 q_0}{\sum p_0 q_0} * 100$$

I..... index for the reference period to base period (base index)

p<sub>1</sub>..... price of goods (services) in the reference period (current) period

p<sub>0</sub>.....price of goods (services) in base period

p<sub>0</sub>.q<sub>0</sub>.. constant weight – household expenditures on goods (services) in the base period

Starting from 2024, the price reference period of December 2021 for the price indices was changed to December 2023. Starting from January 2024, the indices, which were calculated using this base, are chained newly at all levels of the consumer basket to the index with the base average of 2015 = 100. A constant (index for December 2023 with the base average of 2015 = 100) is used to transfer the index with the base December 2023 = 100 into an index time series average of 2015 = 100. The index with the base average of 2015 = 100 is calculated by multiplication the constant by the index December 2023 = 100. Thereby, a continuation of the existing index time series average of 2015 = 100, from which indices to other bases are derived (previous month = 100, corresponding period of last year = 100 and annual rolling average, i.e. the average of index numbers over the last 12 months to the average for the previous 12 months) is ensured. It means that the indices previous month = 100, corresponding period of last year = 100 and the index with the base period average of 2015 = 100 are not produced by weighting and subsequent aggregation of individual representatives into individual levels of the ECOICOP classification (subgroup, class, group, division) and total.

### Ir15 – index average of 2015 = 100

$$Ir15 = \frac{I_t \cdot c}{100}$$

 $I_t$ ..... base index (December 2023 = 100) in month t c..... constant = index December 2023 = 100 to the base average of 2015 = 100

### Ip – preceding month index =100

$$Ip = \frac{Ir15_{t}}{Ir15_{t-1}} \cdot 100$$

Ir15<sub>t</sub> ... base index with the base period average of 2015 = 100 in month t Ir15<sub>t-1</sub> ... base index with the base period average of 2015 = 100 in month t - 1

### Is - index of the corresponding period of the preceding year =100

$$Is = \frac{Ir15_t}{Ir15_{t-12}} \cdot 100$$

Ir15<sub>t</sub>.....base index with the base period average of 2015 = 100 in month t Ir15<sub>t-12</sub>... base index with the base period average of 2015 = 100 in month t - 12

For all the above types of indices the **average indices** are calculated for certain period (quarter, year, average from the beginning of the year). These indices are calculated as follows:

- average m-o-m rate of growth for n months as geometric mean of m-o-m indices Ip for individual months  $t_1$  to  $t_n$ 

$$Ip_{(t_1...t_n)} = \sqrt[n]{\frac{Ip_{t_1}}{100} \cdot \frac{Ip_{t_2}}{100} \cdot \frac{Ip_{t_3}}{100} \cdot ... \cdot \frac{Ip_{t_n}}{100}} \cdot 100 \qquad \text{or}$$

$$Ip_{(t_1...t_n)} = \sqrt[n]{\frac{Ir15_{t_n}}{Ir15_{t_0}}} \cdot 100,$$

where  $Ir15_{tn}$  is base index with the base period average of 2015 = 100 in the month n,  $Ir15_{t0}$  is base index with the base period average of 2015 = 100 in the month preceding the month  $t_1$ 

- average index with the same time base calculated as a simple arithmetic mean of indices per individual months  $t_1$  to  $t_n$  (for instance from the beginning of the year):

base index December 2023 = 100 
$$I_{(t_1...t_n)} = \frac{I_{t_1} + I_{t_2} + I_{t_3} + ... + I_{t_n}}{n}$$
base index average of 2015 = 100 
$$Ir15_{(t_1...t_n)} = \frac{Ir15_{t_1} + Ir15_{t_2} + Ir15_{t_3} + ... + Ir15_{t_n}}{n}$$

- year-on-year index with a certain period (index with the base of the corresponding period of last year = 100; for instance for the quarter) as a proportion of total of base indices with the base average of 2015 = 100 for n months to total of base indices with the base average of 2015 = 100 for n-corresponding months of the previous year:

$$Is_{(t_1...t_n)} = \frac{Ir15_{t_1} + Ir15_{t_2} + Ir15_{t_3} + ... + Ir15_{t_n}}{Ir15_{t_1-12} + Ir15_{t_2-12} + Ir15_{t_3-12} + ... + Ir15_{t_n-12}} \cdot 100$$

### Ik - Ratio of rolling averages index

- Ratio of rolling averages index defined as a proportion of a summary of base indices with the base average of 2015 = 100 in the last 12 months to a summary of base indices with the base average of 2015 = 100 in the previous 12 months

Ratio of rolling averages index (Ik) in month t:

$$Ik_{t} = \frac{Ir15_{t} + Ir15_{t-1} + Ir15_{t-2} + \dots + Ir15_{t-11}}{Ir15_{t-12} + Ir15_{t-13} + Ir15_{t-14} + \dots + Ir15_{t-23}} \cdot 100$$

This index is a special case of a year-on-year index  $(Is_{(t_1...t_n)})$  with the period from January to December, i.e. the index equals always in December the year-on-year index for the whole year.

The development of consumer price indices shows the inflation rate during the period.

a) Inflation rate as an increase in **average annual CPI** characterizes the percentage change of the average price level of latest twelve months against the average level of previous twelve months

$$= Ik - 100$$

b) Inflation rate as an increase in CPI compared with the corresponding month of the preceding year characterizes the percentage change comparing the price level in the reference month of a given year with the corresponding month of the preceding year

$$= Is - 100$$

c) Inflation rate as an increase in CPI compared **with preceding month** indicates the percentage change in price level between the reference month and preceding month

$$= Ip - 100$$

d) Inflation rate as an increase in CPI compared with the base period (average of 2015 = 100) indicates change in price level between the reference month of a given year against average of 2015

$$= Ir15 - 100$$

### **BREAKDOWN** of changes in consumer price indices

Regularly are calculated also breakdowns of m-o-m and y-o-y changes in the consumer price indices expressing the contribution (in % or percentage points) of individual components of consumption basket to the aggregate index change.

The contribution of i-component of the consumer basket to the m-o-m consumer price index change in month t:

$$\frac{\left(p_{t,i} \cdot q_{0,i}\right) - \left(p_{t-1,i} \cdot q_{0,i}\right)}{\sum_{i=1}^{n} \left(p_{t-1,i} \cdot q_{0,i}\right)} \cdot 100$$

 $q_{0,i}$  ... constant quantity of component in base period

p<sub>t,i</sub> ... component price in months t

 $p_{t-1,i}$  component price in month t-1

The contribution of i-component of the consumer basket to the y-o-y consumer price index change in month t:

$$\frac{\left(p_{t,i} \cdot q_{0,i}\right) - \left(p_{t-12,i} \cdot q_{0,i}\right)}{\sum_{i=1}^{n} \left(p_{t-12,i} \cdot q_{0,i}\right)} \cdot 100$$

q<sub>0,i</sub> ..... constant quantity of i-component in base period

p<sub>t,i</sub> ......price of i-component in t-month

p<sub>t-12,i</sub> .... price of i-component in month t -12

### 1.10 Quality adjustment

Quality adjustment of the price index is performed when the product which was subject to price survey is replaced by another one. The change is due to the absence of the original product in the market or decreased demand. Then the representative in the consumer basket is replaced by a similar product or product in great demand. The other, much more frequent case of substitution, takes place when the product selected by the field survey department employee for the purpose of price survey (variety corresponding with the description) ceases to be sold in the selected shop or when the shop is liquidated. The filed survey department employee shall select (being advised by the shop staff that the absence is permanent) another similar product (complying with the description) or survey prices in other shop.

### A) Direct adjustment

*a) Direct comparison of prices (dealing with two comparable products)* 

New item as in collecting individual prices by price collectors and a change of the elementary aggregate is considered directly comparable, if:

- It is produced by the same manufacturer
- It is produced from the same materials and has the same or similar technical parameters which are important for customers (use value)
- Has the same measurement unit
- Has the same type of package
- The difference between the original and new items are not significant and may refer to the customer taste and their personal preferences, such as colour, design, shape, decorative elements, etc.

If the products are considered comparable in terms of quality, then the difference in their price shall fully reflect as price increase or decrease in the price index. Such method is used by the CZSO for the substitution of varieties within price index.

*b)* Expert estimate (dealing with 2 incomparable products)

However, in most cases the original and new products are of different quality and their prices cannot be compared directly. In such case it is necessary to adjust the price difference by quality change of a new and original product which means to express in figures which part of

price difference of both products is caused by the quality change and which part represents price increase or decrease.

Information can be arrived at as follows:

- by an expert estimate of the field survey employee in collaboration with the shop staff
- by an expert estimate of external experts
- by the use of hedonic regressive patterns

The CZSO uses especially services of external experts during the substitution of a representative in the consumer basket. The CZSO does not so far use the last alternative because hedonic pattern requires a large-size database with a wide scope of product characteristics, which demands significant expenses related to the creation and maintenance of such database.

### B) Imputation methods (dealing with 2 incomparable products)

### a/ OVERLAP method

The overlap method is used where it is possible to observe the price of both the original and new product in the same time period (month) which is determined as an overlap. In the overlap month the prices of both products are surveyed. Price development in this month is measured on the original product, next month on a new product using its price surveyed in the previous overlap month. The price difference of the original and new products will not feed into the price index. This method is used by the CZSO for the substitution of representatives in the consumer basket (especially in the price index revision when new components are imputed into the consumer basket).

### b/BRIDGE OVERLAP method

This method is used where it is impossible to survey the price of new and original component in one month. Price development of similar products which appeared in the reference as well as previous month will be assigned to the product newly included into the consumer basket. This method is used also in cases when it was impossible due to various reasons to survey the price of the component in both months (missing prices or, in contrast, newly appearing ones). The CZSO uses this method each month for adjusting of variants surveyed by the field survey employees and for adjusting of prices surveyed only in one month.

In substitutions of representatives the development of a similar representative or group of representatives can be used as a bridge. This method is used by the CZSO in substitution of representatives in the consumer basket (especially in the revision of price indices when new components are imputed into the consumer basket).

### C) Quality adjustment in the consumer price statistics in the CZSO practice

In price index quality adjustment the most serious problem is to decide to which extent the newly include product is comparable with the original one, i.e. when to use direct price comparison and when and by which method to make the quality adjustment of prices. To this end the CZSO uses above mentioned methods in the following procedures:

### *a)* Substitution of a variety by the field survey employee during the data collection:

The main arbiter for the assessment of comparability during the variety change is the field survey employee who knows best both types of product and is able to obtain information from the shop staff. If he/she considers the product comparable, the product price is marked by "v" code (similar product). If he/she considers the difference in quality important, the price is marked by "3" code (another variety). In both cases the arbiter shall specify the main characteristics of a new product in the note. This information is sent to RO in Hradec Králové where price verifiers on the basis of data in the note concerning current and previous months (or telephone questions) will verify the proposal of the field survey employee. The last supervision of substitutions and the "BRIDGE OVERLAP" method of adjustment is performed by employees of the Consumer Price Statistics Department.

Example: For "A" representative the following price groups were surveyed in month t-1 and month t:

|               | month t-1              | month t                | Comment             |
|---------------|------------------------|------------------------|---------------------|
| P1            | 100                    | 100                    |                     |
| P2            | 100                    | 110                    |                     |
| P3            | 90                     | 150                    | Other variety (3)   |
| P4            | 110                    | 120                    |                     |
| P5            | 120                    | 110                    | Other variety (3)   |
| P6            | 100                    | 120                    | Similar product (v) |
| P7            | 80                     | price was not surveyed | shop closing(3)     |
| P8            | 100                    | 100                    |                     |
| P9            | 80                     | 130                    | Other variety (3)   |
| P10           | price was not surveyed | 120                    | New shop (3)        |
| P11           | 120                    | 140                    | Other variety       |
| Average price | 100                    | 120                    |                     |

The quality not adjusted index  $_{\rm t}$  /  $_{\rm t-1}$  = 120/100 = 1,2

In quality adjustment using the BRIDGE OVERLAP method for the m-o-m measurement of "A" representative development only those prices were used which were comparable in both reported months.

|               | month t-1 | month t |                     |
|---------------|-----------|---------|---------------------|
| P1            | 100       | 100     |                     |
| P2            | 100       | 110     |                     |
| P4            | 110       | 120     |                     |
| P6            | 100       | 120     | Similar product (v) |
| P8            | 100       | 100     |                     |
| Average price | 102       | 110     |                     |

Index  $_{t}/_{t-1} = 110/102 = 1,08$ 

The quality adjusted price index is imputed to the "A" representative by means of the base period price change:

|        | Price in<br>base<br>period | IBAZ t-1 | IP t<br>unadjusted | IP <sub>t</sub> adjusted | IBAZ t | Price t | Price in base period t |
|--------|----------------------------|----------|--------------------|--------------------------|--------|---------|------------------------|
| REPR A | 80,00                      | 125.0    | 120,0              | 108,0                    | 135,0  | 120,00  | 88,89                  |

| Price in $BP_{t-1}$ – price in base period of "A" representative in month $t-1$           | 80,0      |
|---|-----------|
| IBAZ <sub>t-1</sub> base index of "A" representative in month t-1                         | 125,0     |
| IP <sub>t</sub> unadjusted – m-o-m index unadjusted                                       | 120,0     |
| IP <sub>t</sub> adjusted – m-o-m index – adjusted   | 108,0     |
| IBAZ <sub>t</sub> – base index of "A" representative in month t $125.0 * 108.0/100$       | = 135,0   |
| Price <sub>t</sub> – average price of "A" representative in month t                       | 120,0     |
| Price in BP <sub>t</sub> – base period price for "A" representative in month t 120,0/1,35 | 5 = 88,89 |
| or  |           |
| Price in PD hase period price for "A" representative in month 90.0*1.2/1.0                | 00 00 _ 0 |

Price in BP<sub>t</sub> – base period price for "A" representative in month  $_{t}$  80,0\*1,2/1,08 = 88,89

### b) substitution of a representative in consumer basket

Substitution of representatives in consumer basket takes place in the consumer price index revision continuously, as needed in the period between revisions. The substitution owes to a constant update of assortment in the market and to changing consumption patterns of the population. For products newly included into the consumer basket it is difficult (practically impossible) to back trace the price in base period since the product has not existed then. In such cases the new price representative follows the previous development of the original representative using the OVERLAP or BRIDGE OVERLAP method.

### Example:

"A" REPRESENTANTIVE will be replaced by "B" REPRESENTATIVE.

### - by the OVERLAP method

|        | Price<br>in BP | Price t-1 | IBAZ t-1 | Price t | IP t / t -1 |      | Price in BP t |
|--------|----------------|-----------|----------|---------|-------------|------|---------------|
| REPR A | 100            | 150       | 1,5      |         |             |      |               |
| REPR B |                | 300       |          | 330     | 1,1         | 1,65 | 200           |

### - by the BRIDGE OVERLAP method

|            | Price in BP t -1 | Price t-1 | IBAZ t-1 | Price t | IP t/t-1 | IBAZ t | Price in BP t |
|------------|------------------|-----------|----------|---------|----------|--------|---------------|
| Group of   |                  |           |          |         |          |        |               |
| REPRESENTA |                  |           | 1,5      |         | 1,1      | 1,65   |               |
| TIVES A    |                  |           |          |         |          |        |               |
| REPR B     |                  |           |          | 330     | 1,1      | 1,65   | 200           |

### c) quantity adjustment

Quantity adjustment refers to items whose price in the period t was surveyed for other unit of measurement than in the period t-1. Quality adjustment is performed by a linear conversion to the same unit of measurement. If (upon conversion to the same unit of measurement) the price is changed due to a different unit of measurement, the following procedure depends on whether or not:

- original package disappeared from the market (e.g. weight reduction of a chocolate bar from  $50\ \text{to}\ 40\ \text{g})$
- original package is not available in the shop store only in month t (e.g. washing powder of the weight of 1 kg is replaced by 3 kg package)

In the first case the price change is reflected in the index as a price increase or decrease. In the second case the products are considered incomparable and the quality adjustment procedure is the same as in the variety substitution. This means that the field survey employee will assign code 3 to the surveyed price (change of variety or weight in grams) and this price difference is not included into the index.

### 1.11 Method of the price estimate of seasonal goods

Prices of seasonal goods are collected in the season, in which they occur. In the survey are involved also prices after a discount from big sales. Starting from 2010, a price estimate in off-season is carried out as follows:

- in the first month in the off-season is the estimated price equalled a typical price recorded in the previous season
- starting from the second month, the estimated price is equalled a price, which was estimated in the previous month, adjusted by an average change of collected prices of all accessible products, which are involved in the same ECOICOP part "The entire season estimation" method.

# II. Consumer price index by groups of products

### 1. Food and non-alcoholic beverages

Since January 2021, division 01 – Food and non-alcoholic beverages is sufficiently covered by SD. It allowed to completely replace the field price collection by the SD in this area. All significant items enter into calculation with price indices at ECOICOP5 level only as output.

The exception is a few selected representatives (Annex no. 3), for which, apart from the standard calculation, average prices and their net price development are still calculated using indexes. SD is also a data source.

### Monthly one-time food average consumer price survey

It is separate survey, which covers 14 products, prices of which are still collected by field survey employees (Annex no. 2). These are surveyed once on fixed dates (usually on Tuesday, the second week of a month). The field survey employee collects 2 prices for these items. The prices obtained from this survey are indicative only and are not included in the calculation of the overall monthly consumer price index.

Initially this survey included 27 products, for which regional average prices were calculated. Each field survey employee surveyed 3 prices. Due to the implementation of SD into the calculation of the consumer price index, since January 2019 number of surveyed representatives was reduced to 14. At the same time the number of prices surveyed by each employee was reduced to 2 per representative. For the reduced sample of representatives only national average prices are published.

For seasonal products e.g. fruit and vegetables as basically equivalent are considered similar products (different varieties of apples, early and late potatoes, etc.). Ware potatoes are represented in the consumption basket by one component. Early and late potatoes are not assessed as different items in terms of quality. Collected are prices valid in the respective month. In April and May the prices of late potatoes are collected preferentially. If, in these months late potatoes are not yet available the prices of early potatoes are collected. In June, the prices of only early potatoes are collected. Transition from late potatoes price survey to early potatoes is not considered a change of variety.

### 2. Alcoholic beverages and tobacco

Since January 2021, division 02 – Alcoholic beverages, tobacco is sufficiently covered by SD. It allowed to completely replace the field price collection by the SD in this area. All significant items enter into calculation with price indices at ECOICOP5 level only as output.

The exception is a few selected representatives (Annex no. 3), for which, apart from the standard calculation, average prices and their net price development are still calculated using indexes. SD is also a data source.

### 3. Clothing and footwear

Rapid changes of components lead to quality adjustment. Variety is determined by the manufacturer, trademark and weight (packaging) or by composition of the material. Insignificant changes at the same manufacturer (trade mark) are not qualified as changes of quality i.e. other variety. This applies e.g. to a change of cut, design, shape, change in compliance with fashion trends. Sometimes it is difficult to determine whether or not the changes are important or unimportant. In such case the field survey employees provide detail description of changes in the note. The RO employees in Hradec Králové and the CZSO Consumer Prices Statistics Unit will assess whether or not a new variety is in question.

### 4. Housing, water, electricity, gas and other fuels

Housing represents in the consumer basket the biggest proportion (25.8%). Of this rentals including imputed (hypothetic) rentals of owners amounted to 13.7%, electricity and heat, gas and other fuels 8.8%. Items with regulated prices (water supply, sewage collection, electricity, gas, heat for heating and hot water preparation) make 9.0%.

### Rentals paid for the flat

It includes actual rentals paid by tenants in rented dwellings and monthly payments in cooperative flats and flats in private ownership in the Association of flat owners.

Rentals paid for the flat in rented dwellings represent monthly rentals for 1m<sup>2</sup> excluding charges for water supply, sewage collection, heat and hot water supply, charges for refuse collection and excluding charges for services related to the use of dwelling. This is arranged for by the field survey employees with the owners of dwellings or caretakers in approximately 150 municipalities which are divided into 6 groups by size.

up to 4 999 inhabitants from 5 000 to 9 999 inhabitants from 10 000 to 49 999 inhabitants from 50 000 to 99 999 inhabitants 100 000 and more inhabitants Capital of Prague

Approximately 3 300 prices are collected per 5 representatives in total. Per each representative of rentals 500–700 prices in average are observed. Prices of rentals, for which regulation finished in 2010, for which regulation finished in 2012 and agreed rentals, which were not regulated, are collected. Calculation of indices – average price for a municipality size group, which is calculated as a simple arithmetic mean, is weighted by the contribution of the number of rented dwellings in given groups of municipalities by size to the total number of rented dwellings in 2021.

Payments in dwellings of housing co-operatives or in dwellings in private ownership in the Association of flat owners represent monthly payments for the use of co-operative dwelling or dwellings in private ownership in the Association of flat owners excl. water supply and sewage collection charges, excluding heat and hot water supply charges, excluding refusal collection charges and excluding payment for services related to the use of the dwelling. The payments are surveyed by the field survey employees in housing co-operatives or at caretakers in the same categories of municipalities as in case of net rentals. Total of (3 representatives) 2 000 prices are collected.

Calculation of indices – average prices of the group of municipalities by size, which are calculated as simple arithmetic mean, are weighted by shares of number of co-operative dwellings in given groups of municipalities by size in the total number of co-operative dwellings in 2021.

### Imputed rentals of owner-occupiers (owner occupied housing costs)

Index calculation is based on the concept of international statistics *Owner Occupied Housing Price Index*, which came from the acquisition approach for measuring owners

expenditure on their dwellings. Price statistics therefore monitors current cost of owner-occupied housing, which is viewed analogously as durable goods.

In accordance with this, the index "Imputed rentals of owner-occupiers (Owner occupied costs)" includes the following price indices (relative weights in brackets):

### increasing of owners housing stock:

- market prices of new flats and family houses, sold as a final product, i.e. no self-help houses, excluding land prices (15.7%)
- individual construction (all types of self-help) of new family houses (29.9%)
- renovation and rebuilding of family houses (20.1%)
- renovation of residential buildings (measured indirectly through payments to repair funds in communities of owners; 11.8%)

### maintenance of owners housing stock:

- reconstruction and maintenance of dwellings and family houses (20.0%)
  - related services and taxes paid by households:
- payment for real estate brokerage (2.5%); taxes

In the calculation of price index of <u>imputed rentals for Prague</u>, the same definition with these alternative weights is used:

- market prices of new flats and family houses, sold as a final product, i.e. no self-help houses, excluding land prices (40.6%)
- self-help new family houses all types (6.2%)
- renovation and rebuilding of family houses (5.1%)
- renovation of residential buildings (20.2%)
- reconstruction and maintenance of dwellings and family houses (19.8%)
- payment for real estate brokerage (8.1%);

The sources of the price indices calculation are detailed indices of construction work (including material and margins of construction companies), material inputs price indices for construction (specifically for residential buildings), price indices of new flats and family houses (price surveys at developers) and survey of payments for real estate brokerage. The main source of weights are the national accounts statistics data in 2022, which are modified by the estimate of expenditure in 2023.

### Note to calculation

Unlike the quarterly OOHPI, only preliminary data are available to some extent at the time of calculating the monthly imputed rentals. In order to minimize the distortion of the long-term time series, the **year-on-year price index is primarily calculated** and the base series of price indices (quarterly and monthly indices) is derived from it. The **current month-on-month** 

**index** is **secondarily derived** from it, which therefore implicitly includes the **correction of the previous result**, or the **impact of changes in relative weights** when they are updated.

### Note Real estate prices in CPI

New flats and family houses in imputed rentals do not contain:

- purchases of non-residents (national concept of consumer price index CPI)
- purchases of sectors other than households (because CPI is limited only to household consumption)
- purchases of households for other purpose than housing (because then it is investment, which does not produce Owner Occupied Housing; if it is hired by another household, these payments appear in group E04.11 Actual rentals paid by tenants
- prices of related land (non-produced non-consumed assets)
- purchases of residential estates from other households (older flats and family houses) –
  these estates create <u>large majority of transactions on flat estate market</u>; these are not
  included in the index, because they are transactions inside household sector, which is
  understood as consolidated as a whole, based on CPI definition;

Note: Price index of older and family houses is covered by House Price Index.

See also *House Price Index* at link https://www.czso.cz/csu/czso/real-estate-prices

#### where

- 1. Owner Occupied Housing Price Index
- 2. House Price Index

are closer described and published.

#### Market rentals

Sub-index Market rentals arranged by real estate office – is observed by means of reports compiled by selected real estate office. The calculation includes 750 prices. About 27 000 price data from the survey on offer prices on the Internet, which covers mainly individual landlords, are also used.

### Payments for services related with the use of dwelling

Payments for services related with the use of dwelling are surveyed by field survey employees in the same reporting units as in case of net rentals and payments for the use of a cooperative dwelling. Average prices for the CR are calculated equally as for net rentals and payments for the use of co-operative dwelling.

### **Electricity**

Electricity sub-index is calculated on the basis of complete offer of all electricity charges – i.e. all products of power electricity – prices per 1 MWh of all distribution rates, constant monthly charges and payments for other services (price of system services, price for the support of electricity purchase and price for accounting activity of the OTE company) of companies supplying electricity to households (E.On, a.s., Pražská energetika, a.s., ČEZ, a.s., Centropol Energy, a.s. (since 2013)). Weights are revenues in 2023 from all rates plus price contributions to the electricity market for all power-producing companies. The calculation includes approximately 530 prices.

### Gas

Gas sub-index is calculated on the basis of a complete offer (review) of all payments in all consumption zones for households by Innogy Energy, s.r.o. (former RWE Energie, s.r.o.), Pražské plynárenské a.s., E.ON, a.s. and ČEZ, a.s. (since 2013) companies. In these zones the prices cover the prices of gas including distribution charges and constant monthly charges which include monthly payment for supplied capacity and constant charge for gas supply. Weights are revenues in 2023 from all rates and price shares in the electricity market of all gas companies. 80 prices are entered into calculation.

### Water supply and sewage collection

Water supply and sewage collection are surveyed from 22 reporting units. Average price is calculated as weighted arithmetic mean of reported prices where weights are revenues of individual water-supplying companies in 2022. Average price (incl. VAT) for individual companies is partly taken from statistics of prices in industry and foreign trade.

### Breakdown of weights in Housing, water, electricity, gas and other fuels

| ECOICOP | Title  | Constant<br>weights of<br>2022 per mille |
|---------|--|--|
| E00     | TOTAL  | 1000.000000                              |
| E04     | HOUSING, WATER, ELECTRICITY, GAS AND OTHER FUELS   | 258.393791                               |
| E04.1   | Actual rentals for housing   | 33.184542                                |
| E04.2   | Imputed rentals of owner-occupiers   | 103.372152                               |
|         | of which:  |  |
|         | market prices of new flats and family houses, sold as a final product, i.e. no self-help houses, excluding land prices | 16.229428                                |
|         | self-help family houses  | 30.908273                                |
|         | renovation and rebuilding of family houses   | 20.777803                                |
|         | renovation of residential buildings measured indirectly through payments to fund repairs in communities of owners      | 12.197914                                |
|         | reconstruction and maintenance of dwellings and family houses  | 20.674430                                |
|         | payment for real estate brokerage  | 2.584304                                 |
| E04.3   | Maintenance and repair of the dwelling   | 13.604629                                |
| E04.31  | Materials for the maintenance and repair of the dwelling   | 7.695222                                 |
| E04.32  | Services for the maintenance and repair of the dwelling  | 5.909407                                 |
| E04.4   | Water supply and miscellaneous services relating to the dwelling   | 20.451848                                |
| E04.41  | Water supply   | 6.947256                                 |
| E04.42  | Refuse collection  | 3.581703                                 |
| E04.43  | Sewage collection  | 4.714085                                 |
| E04.44  | Other services relating to the dwelling n.e.c.   | 5.208804                                 |
| E04.5   | Electricity, gas and other fuels   | 87.780620                                |
| E04.51  | Electricity  | 44.265709                                |
| E04.52  | Gas  | 19.560803                                |
| E04.53  | Liquid fuels   | 0.038138                                 |
| E04.54  | Solid fuels  | 9.235129                                 |
| E04.55  | Heat energy  | 14.680841                                |

### 5. Furnishings, household equipment and routine household maintenance

Consumer prices of all items of this division are surveyed by the field survey employees once per month in specialized shops and store chains.

### 6. Health

In the Czech Republic majority of out-patient medical and hospital services are paid from obligatory health insurance. Drugs and medical products prescribed by doctor can be covered from health insurance either fully, or partially or not at all. This means that a patient can partially or fully cover selected drugs or medical products (prescribed by doctor). Patients pay full price

of pharmaceutical and medical products sold without prescription. The CPI calculation deals with prices or additional payments paid directly by patients, payments of health insurance companies are not included.

### Pharmaceutical products

Medicines are broken by medicines prescribed and over-the-counter medicines. The first group contains medicines, which must be prescribed by doctor and, at the same time, they are fully and partially paid by patients. The other group refers to over-the-counter medicines at full price. The weights of groups are based on household budget statistics, adjusted by national accounts statistics. About 50 000 different medicaments are registered in the CR, which makes more difficult to choice concrete price representatives in connection with their relatively low weight in the consumer basket. Therefore, a sub-index of both groups was introduced starting from 2011.

# Sub-index "Prescription medicines" Sub-index "Over-the-counter medicines and other pharmaceuticals"

From January 2022, initial field price survey of prices or amounts paid by patients for prescription medicines and over-the-counter medicines fully replaced by SD. Except for this, each month the index of prices and amounts paid by patients is calculated on a set of 2 500 most distributed drugs in terms of the number of packages and a set of 2 500 drugs in terms of their value, which are provided to the CZSO by the State Institute for Drug Control. Although the calculated indices have only an indicative character, they can be taken into account in determining the development of drug prices.

Beginning from January 2008 a new regulatory charge per each medicine prescribed on one prescription in the amount CZK 30 was included into the group medicines prescribed by doctor. Since January 2012 there was a change in the regulatory charge in the amount CZK 30 per one prescription. This fee was cancelled since January 2015.

### **Out-patient medical services**

Out-patient medical services cover all kinds of out-patient medical services provided both by general practitioners and specialists. In the CR medical services are provided by state, regional and private establishments and are covered mainly by health insurance companies.

Beginning from January 2008 new fees per visit to a doctor (CZK 30) and per using a medical emergency facility (CZK 90) were included into this group. The regulatory fee per visit to a doctor was cancelled since January 2015.

### Out-patient dental services

Out-patient dental services – basic dental services are covered by health insurance companies. In dental care however there exist a number of above-standard services which must be financially contributed to by patients. The biggest expenditures represent prices of dental products made of different materials and consequently of different prices which have to be paid for patients. The whole group includes three types of dental treatment. Beginning from January 2008 a new regulatory fee in the amount of CZK 30 per visit to a dentist was included into this group. This fee was cancelled since January 2015.

### Hospital services

Hospital services are mostly covered by health insurance companies. Above-standard services offered by hospitals include accommodation (single room) and equipment of the room (e.g. television, telephone). These payments are not included in the division 'health' but in the accommodation or in the telephone and telefax services. The only representative in this group is, therefore, spa services fully covered by patients (weight 2.4 per mille). Field survey employees carry out the survey of prices in selected spa resorts. Average price in the CR is calculated as weighed mean of regional prices (calculated as simple arithmetic mean of surveyed prices in the region) where weights are numbers of patients (private patients) in each region.

Beginning from January 2008 a new regulatory fee CZK 60 per day spent in hospital was included into this group. Beginning from 1 December 2011 this fee increased to CZK 100 per 1 day. The fee per stay in hospital was cancelled since January 2014.

### 7. Transport

#### New motor cars

Beginning from January 2024, price development is measured by sub-index 'New motor cars'. The previous field survey, which took place once a month in specialized stores in all regional towns, was replaced by the central collection of prices from official price lists. The data from the Central Vehicle Register in the Czech Republic was used to select and determine the weights of individual new car brands. In the first step, the 'most popular brands' of new cars among Czech households are selected, measured by expenditure on the purchases (approx. 20 brands, e.g. Hyundai), then the most common models of given brand (approx. 50 models, e.g. Hyundai i30). For each model, the prices of the available versions and motorizations in combination with the level of equipment are surveyed (over 200 prices per month, e.g. Hyundai i30 Kombi 1.0 T-GDI Comfort Family).

### Second-hand motor cars

Beginning from July 2022, price development is measured by sub-index "Second-hand motor cars". The sample was compiled on the basis of the data and statistics from the Central Vehicle Register. In the first step, "the most popular brands" (measured by expenditure on the purchases) of second-hand cars among Czech households (e.g. Škoda) are selected, then most common models of given brand (e.g. Škoda Superb) together with its usual age (nowadays 3, 5, 7, 9 and 10 years old cars are selected). For each model in combination with the age, specific car motorizations are selected (e.g. Škoda Superb, 3 years old, 2.0 TDI DSG Style), which entered the market given years ago as new. Prices of these motorizations (approximately 125 prices monthly in total) are obtained from the "Autovista" company, which observes the price range in the used cars market in the Czech Republic in cooperation with dealers, car shops and experts in individual regions. The prices are based on market survey and statistical assessment of reports on the realized car sale on the territory of the CR and represent the prognosis of the car value development in the respective month. Prices are mean values adjusted for regional effects and apply to cars in a condition meeting the 2<sup>nd</sup> or 1<sup>st</sup> class (good and very good condition), number of km corresponds with the value in respective km category and have only standard equipment supplied by manufacturer.

#### Fuel

Fuel – prices of fuel are obtained from weekly reports prepared by 12 main fuel distributors in the CR. Each of them informs of average prices of fuel valid on every Monday (from all its pumps over the CR). The list of surveyed fuel is given in Annex no. 4 – Items of weekly survey of consumer fuel prices.

Average price for the CR for respective week of each fuel is calculated as weighted mean of prices reported by distribution companies where weights are represented by quantity of respective fuel sold by respective company. Average monthly price of individual fuel is calculated as simple arithmetic mean of weekly prices.

### Passenger transport by railway

Sub-index "Passenger transport by railway" – prices of fares are collected centrally from the price lists of the Czech Railways. They are uniform throughout the territory of the CR and are regulated by the state. Basic fare actually means standard fare from which other reduced tariffs are derived by percentage rate (special tickets for children, students, seniors, tickets for the disabled; client's fare, return tickets, tickets for groups, season tickets, CD kilometre bank etc). With respect to a wide scope of fare and tariff prices the price development in the transport by rail is measured by sub-index enabling to observe the price development of similar structure. Weights of individual items covered by sub-index were fixed on the basis of information supplied by the Czech Railways. The total of 3 000 tariff prices is involved in the calculation. Over time the price observation in trains of the company REGIOJET and ARRIVA was included in the Sub-index "Passenger transport by railway".

### Passenger transport by bus

Passenger urban transport by bus – public transport provided by buses and trolley-buses only. Prices are surveyed by the field survey employees in selected cities. Collected are prices of individual tickets, season tickets incl. reduced fare for pensioners, pupils and students.

Passenger intercity transport by bus – long-distance bus transport is in the CR operated by number of private companies. Prices of individual tickets for various distances, season tickets, reduced fare for pensioners, children, pupils and students are collected.

### Passenger transport by air

Sub-index "Passenger transport by air" – since the year 2012 the price index of transport by air is made by the price index of international passenger transport by air, which is assumed in the CZSO Industry Prices Statistics and external trade Unit and by the price index collected on the Internet. The first index covers the air-ticket price development from Prague to approximately 30 different countries world-wide provided by air companies on the statement "CENY ZO 3-12". The weight of this index in the index of air transport is 33.3%. The second index is calculated from prices of several air companies in three different destinations offered on the Internet three, two, one month and one week prior to departure. The weight of this index in the index of air transport is 66.7%.

### Combined passenger transport

Combined passenger transport includes the city mass transport fare development (transport by road and rail) provided by buses, trolley-buses, trams, underground, trains (integrated transport systems). Prices are collected by the field survey employees in selected

cities. Collected are prices of individual tickets, season tickets incl. cheap tickets for pensioners, pupils and students.

### Passenger transport by taxi

Passenger taxi includes transport of persons by taxi. Prices are collected by the field survey employees in selected cities. Surveyed are prices of precisely specified drives (type of car, distance, terrain). The price includes a single entry fee.

### Freight taxi

Freight taxi includes transport of goods by a taxi service. Prices are collected by the field survey employees in selected cities. Surveyed are prices of precisely specified drive (type of car, distance, terrain, waiting time). The price includes also a single entry fee.

### 8. Communication

### Postal services

Postal services provided by Czech Post are nation-wide. As central prices they are surveyed in Price Journals issued by the Ministry of Finance of the CR and on web sites of the Czech Post by the department of consumer price statistics of the CZSO Prague. Since 2019, prices of letter handling services and other postal services are monitored in the form of 2 sub-indices. The distribution of weights among individual sub-index components was determined on the basis of 2022 Household Budget Survey, National Accounts for 2022, revenues for individual items and data of the Czech Telecommunication Office and the Czech Post. Since January 2022, services of internet mall parcel deliveries are included in price index of other postal services.

### Telephone and telefax equipment

Telephone and telefax equipment – prices of mobile telephones are surveyed by the field survey department employees in selected shops and on the internet.

### Telephone and telefax services

Telephone and telefax services – processing of telecommunication services in the consumer price index has to cope with problems caused by dynamic development of technologies and increasing competition of the fixed lines and mobile phones operators at the Czech market. Individual operators often change the offer of tariffs and price programs and related introduction of new services or discounts. Hence it is difficult to obtain most of important information necessary for calculation of the public telecommunication service price index. Beginning from 2018, following the introduction of the ECOCOP classification, prices of fixed-line telephone services, mobile phone services and Internet connection services are monitored separately in the form of 3 sub-indices. The sub-indices contain prices of selected services of telephone operators related to the operation of fixed networks, mobile networks and the internet (incl. cable connection). Distribution of weights among sub-indices was made on the basis of family statistics of 2022, national accounts statistics of 2022, revenues for individual items and data from the Czech Telecommunication Office. The calculation includes approximately 40 prices.

### 9. Recreation and culture

#### **Books**

Books are divided into 6 main groups — children's literature, imaginative national literature (by domestic writers), world imaginative literature, pocket dictionary, encyclopaedias and text-books. For children's literature and imaginative literature in view of their diversity each field survey employee collects at one reporting unit average prices of three best sellers in the respective month. Prices of representatives of children's literature and imaginative literature are surveyed on the Internet.

The price of *ski lift ticket* is calculated as simple arithmetic mean of surveyed prices.

### Package holidays

Since May 2020, package holidays are surveyed as sub-indices "Inland organized package holidays and tours" and "Organized holidays and tours abroad". Distributing of weights between these sub-indices was based on household budget survey and national accounts in 2022.

The choice of representatives and determination of weights in each sub-index was based on detailed breakdown of household expenditures of the household budget survey, statistics of tourism and services and other available sources. The total of 1 price representative for domestic holiday (constant weight of 3.5 per mille) was selected and 11 representatives for measurement of holiday abroad price development (constant weight of 15.2 per mille). Each price representative is characterised by the country of stay, duration of stay, kind of transport, meals, accommodation, number of persons. Weights of all price representatives are identical in all months irrespective of different demand in e.g. summer and winter months.

Sub-index "Inland organized package holidays and tours" is surveyed centrally by statistical office staff from the websites of three selected travel agencies. The number of prises collected in selected travel agencies corresponds to the specific offer of the relevant travel agency on the market. Approximately 30 prices are entered into the calculation.

Sub-index "Organized holidays and tours abroad"

Sight-seeing and hiking trips are surveyed monthly by the field survey employee in selected travel bureaus and agencies. The total of 57 prices are collected per trip each month. Prices are surveyed over the year. Current price for specific trip/date in a given month is surveyed. It is generally accepted that for trips realized at the turn of two months the price is calculated from the month when the trip begins. In December the average price does not include Christmas, either the New Year Eve or the New Year dates due to a different quality (Christmas and the New Year's Eve surcharges cannot be eliminated for some trips.).

Stays at the sea-side and stays in Slovakia are surveyed by the statistical office employees centrally from web pages of eight selected travel bureaus. Number of prices surveyed in selected travel bureaus is for individual trips different and corresponds with specific offer of the respective travel bureau at the market. In the summer months (from June to September), about 300 prices including trips to 9 countries enter the calculation. It is about 120 trip prices for 3 countries from October to May.

For trips taking place throughout the year the prices valid in month when the holiday is drawn not the prices valid when the holiday is booked or paid for are used for the calculation.

In case of season trips organised from June to September the prices valid in months when the holiday is taken are used. In other months (from October to May) price development of these trips is calculated on the basis of surveyed prices of the abroad trips realised throughout the year. To follow the September price development given in the offer for 2023 and June in offer for 2024 only prices of specific resorts and hotels available in both catalogues are used. Prices of recreational trips include discounts for early purchase and other extra announced discounts.

### 10. Education

The consumer basket includes only paid educational services provided by private schools at all levels of education or payments related to education at state schools (e.g. admission fee, school fee if standard duration of studies is exceeded) and fees in nursery schools. Consumer basket also contains the out-of-school paid education such as languages and technical courses. This division does not include text-books, teaching aids, school meals and accommodation, transport to school which are included in other divisions of consumer basket.

Prices of school fees at higher technical school and at private university and the university admissions fee belong among centrally observed prices. Calculation of average price for the Czech Republic for the representative "School fee at higher technical school" and "School fee at private university" is based on simple arithmetic mean of school fees at selected higher technical schools (universities). In case of the admission university fee the average price is calculated as weighted arithmetic mean of admissions fees of individual universities. Weights are represented by numbers of received applications.

### 11. Restaurants and hotels

Prices of representatives classified into catering services are collected by the field survey employees in addition to the item *hamburger BIG MAC – fast food*, which is surveyed centrally.

Price of *catering services of canteens* includes only the amount paid by a boarder (contribution paid by the employer is not specified) in canteen.

For representatives in relation to *accommodation services*, the prices paid by domestic consumer are surveyed.

Starting from January 2020, the prices for price representatives "hotel\*\*\* – sale via Internet" and "hotel\*\*\* – sale via Internet" are surveyed centrally.

In calculation of an average price for the representative "Meal in university canteen" the base is the average price per regions calculated by simple arithmetic mean and weighted by the number of university students (residents) in individual regions. Similar procedure is applied in calculation of an average price for accommodation at hall of residence where the average price for regions calculated by simple arithmetic mean serve the base. These prices are then weighted by the number of accommodated students (residents) at hall of residence in individual regions.

### 12. Miscellaneous goods and services

In division 'Miscellaneous goods and services' surveyed are prices of *personal care* (service of hairdressing salons, electrical appliances for personal care – hair dryers, shaving machines and chemist's goods), *personal effects and accessories* (jewellery, watches, travel goods, prams, car seats), *social protection, insurance, financial services and other services not stated elsewhere* (administrative fees, legal services,...).

### Social protection

The *social protection* group is divided into three sub-groups. The sub-group of *child care services* is represented by the price representative "Payment for children nursery", for which payment for children groups (nursery), where founder (provider) is not organizational unit of the state or partially state budget-funded organisation, with capacity of 12 children, is surveyed. The payment is monthly for all week attendance (at least 6 hours a day) for a child from second up to third birthday. The sub-group of *retirement homes for elderly persons and residences for disabled persons* is represented by the price representative "Accommodation in retirement homes", where prices for accommodation, meals and other services provided during a yearlong stay in retirement house, i.e. monthly fee per head are monitored. The sub-group of *services to maintain people in their private homes* is represented by the price representative "Door-step lunch delivery" including prices for door-step delivery, or lunch delivery provided by assistance service (resulting price is per act and does not include the price of lunch). Payments for social services are legally covered by regulations of the Ministry of Labour and Social Affairs and are surveyed by the field survey employees.

### **Insurance**

Insurance group is broken by housing insurance, health insurance and travel insurance and ranks among the centrally observed prices. Besides the elementary aggregate "SUBI – Obligatory insurance of motor vehicles" monthly obtained are prices from statistical reports prepared by four most important insurance companies represented at the Czech markets. Starting from 2017, their development is observed within the sub-indices "Household insurance", "Accident and other personal insurance" and "Motor vehicle insurance". Average prices for individual representatives enter to these sub-indices. They are calculated as a weighted arithmetic mean of insurance prices when concluding new contracts by selected insurance companies. Weights are represented by annual aggregate premiums written in 2023. The exact characteristics of model cases selected representatives of insurance individuals are included in the statement.

Insurance payment (prices) for liability insurance for damage caused by vehicles are observed from 2014 in the *sub-index "compulsory insurance of motor vehicles"* and that in six major insurance companies that offer third party insurance. Collected are annual basic rates excl. bonuses for insurance contracts on passenger cars up to 3 500 kg with piston swept volume above 1 000 ccm to 1 350 ccm including. Different conditions of insurance companies are reflected such as accident rate in certain regions, big cities, smaller municipalities, car age, driver age etc.

#### Financial services

Price development of *financial services* is observed within the "Financial services" subindex which is compiled from prices of services provided by banks and post offices. These prices are valid nation-wide and hence they are surveyed centrally. Changes in prices are obtained from e.g. web sites of selected financial institutions or from price journals.

At selected financial institution the sub-index covers charges for selected services related to the current account maintenance and transactions on this account and financial services provided by post offices which include the charge for postal order "A" (charge for sending the amount from CZK 1 to 5 000) and charge for cash payment SIPO (Cumulated Utility Payments by population) paid at the counter of the Czech Post and cash on delivery charge. Distribution of weights between individual parts of sub-index is determined on the basis of family statistics and national accounts statistics for 2022. Weights for postal order A and SIPO are determined by combination with the data on revenues. The calculation includes approximately 150 prices.

### Other services, not elsewhere cited

The group of *Other services, not elsewhere cited*, covers administrative fees, legal services and funeral services. Prices of representatives standing for administrative, judicial, notarial fees are collected centrally on the basis of selected legal regulations. Local charge (charge for a dog) is collected by the field survey employees in local survey. The *fee for cremation* is also surveyed by field survey employees.

### III. Satellite indices

# 1. Consumer price index (cost of living) of households of pensioners and in the capital of Prague

Besides the weighting scheme of an average household schemes for the consumer price index (cost of living) calculation was prepared. The new weighting scheme refers to:

### 1.1 Households of pensioners

Households of pensioners – the weighting scheme was constructed on the basis of expenditure structure of households of pensioners. For the purposes of the household budget statistics they have been defined as households without economically active members, i.e. households with the head, who receives any type of pension except the orphan pension or who was at pensionable age not entitled to any kind of pension and who does not work at all or has only a limited range of work activities and also any other member of the household did not work.

### 1.2 Households living in the capital of Prague

Households living in the capital of Prague – the weighting scheme was constructed on the basis of expenditure structure of households living in Prague. Average prices or representatives are calculated as simple arithmetic mean from prices surveyed in the capital of Prague. For some representatives, the average consumer prices for the Czech Republic are taken account (e.g. therapeutic stays at a spa, ski lift ticket, catering services in the university canteen, accommodation services of universities).

Difference in weighting schemes between individual groups of households ensues from different economic and living conditions, which are reflected in more or less differentiated structures of household expenditures. Weighting schemes for households of pensioners do not include imputed rentals.

### 2. Harmonised index of consumer prices (HICP)

Harmonised indices of consumer prices appeared as a response to the need to create comparable consumer price indices in order to measure inflation trends of the EU member states as criterion of joining the monetary union. However, it is not assumed that HICP would replace national consumer price indices. However, many technical aspects of the HICP calculation are applied also for the national indices. It would not be cost-effective to have one set of rules for selection to the consumer price national indices and the other for HICP.

In the Czech Republic within the consumer price index revision in 2000 the construction of weighting scheme for the harmonised index of consumer prices was performed in compliance with the EU regulations. In January 2001 the calculation of HICP was introduced in the CR.

Between the structure of the consumer basket of the national consumer price index for the CR and the structure of consumer basket of HICP there exist certain differences. HICP weights include revenues from purchases of non-residents on the territory of the Czech Republic, but it does not include imputed rentals in contrast to the nation index of consumer prices, where revenues from purchases of non-residents are not included, but imputed rentals is considered.

Harmonised index of consumer prices uses chain weights, which are annually modified as of December. The source of updating is the national accounts data (final financial consumption of households, domestic approach) of the previous year. Base price period is the 2015 average.

### 3. Net inflation

In the CZSO concept, net inflation is calculated for incomplete consumer basket, which does not include components with regulated prices and components with prices affected by other administrative measures.

Published net inflation is expressed by aggregate consumer price index excl. goods and services with administrative prices to base periods December 2021 = 100, previous month = 100 and the same period of last year = 100.

### 4. Core inflation

As the concept of core inflation can be explained and calculated in different ways and there is no single generally accepted definition, the CZSO has chosen one of its possible calculations for its publication. In this concept, the effect of tax adjustments, the effect of changes in regulated prices and other administrative measures will be deducted from the overall month-on-month growth in the consumer price index, and the remaining index growth is decomposed to seasonal and non-seasonal effects using Demetra SW.

### 5. Specific consumer price indices

For analytical purposes in compliance with the EU countries aggregate consumer price indices are calculated monthly excluding certain important groups of goods and services and independent indices for excluded groups. This applies to the following indices:

- aggregate consumer price index excl. seasonal goods (vegetables, potatoes, fruit, fish)
- consumer price index for seasonal goods
- aggregate consumer price index excl. food and non-alcoholic beverages
- aggregate consumer price index excl. fuel oils, fuel and engine oils
- consumer price index for fuel oils, fuel and engine oils
- aggregate consumer price index excl. package holiday
- aggregate consumer price index excl. goods and services with administrative prices
- consumer price index for goods and services with administrative prices
- aggregate consumer price index excl. imputed rentals
- consumer price index for goods in total
- consumer price index for services

### IV. Presentation of data

Aggregate consumer price index (for households total) broken according to ECOICOP classification is published as "Press Release" usually on the 10<sup>th</sup> calendar day following the end of reporting months at <a href="http://www.czso.cz/">http://www.czso.cz/</a> and in the <a href="https://www.czso.cz/">CZSO Public database</a>. The following day the publication "Consumer Price Indices – Basic Information" is published.

The publication "Consumer Price Indices (cost of living) – Detailed Information" providing data for the whole previous year is published on yearly basis on the 25<sup>th</sup> January.

Publications are released according to the <u>Catalogue of Products</u> published on web sites of the CZSO.

Publications with the consumer price indices:

*Monthly:* 

Consumer Price Indices – Basic information (code 012018-24)

Quarterly:

Indicators of Social and Economic Development of the Czech Republic (code 320202-24)

Yearly:

Consumer price index – Detailed information (code 012019-24)

Statistical Yearbook of the Czech Republic (code 320198-24)

Statistical Yearbook ... regions (code 330xxx-24)

Czech Republic in Figures (code 320203-24)

Czech Republic in international comparison (selected data) (code 370002-24)

List of time series with consumer price indices:

Weekly:

Average prices survey of selected products – fuels and oil products (code 012026-24)

*Monthly:* 

Consumer Price Indices – Cost-of-Living (code 012021-24)

Average prices survey of selected products – food and beverages (code 012025-24)

Quarterly:

Consumer Price Indices – Cost-of-Living (code 012022-24)

List of analyses with consumer price indices:

Quarterly:

Development of Consumer Price Indices (code 012020-24)

List of new releases with consumer price indices:

Monthly:

Consumer Price Indices – Inflation (code 012024-24)

List of "Open data" containing consumer price indices:

*Monthly:* 

Consumer Price Indices – Inflation (code 010022-24)

The selected outputs from the consumer price area published in the CZSO public database: <a href="https://vdb.czso.cz/vdbvo2/faces/en/index.jsf?page=statistiky#katalog=31779">https://vdb.czso.cz/vdbvo2/faces/en/index.jsf?page=statistiky#katalog=31779</a>

Animated charts:

https://www.czso.cz/csu/czso/animated\_charts\_inflation\_consumer\_prices

Text not edited for language.

# **Centrally surveyed items:**

| Repr. No.: | Name of representative                                       | Unit of measurement |
|------------|--|---------------------|
| E04.110.02 | SUBI MARKET RENTALS MEDIATED BY REAL ESTATE OFFICE           |                     |
| E04.210.01 | SUBI IMPUTED RENTALS OF OWNER-OCCUPIERS                      |                     |
| E04.410.01 | WATER SUPPLY   | 1 m <sup>3</sup>    |
| E04.430.01 | SEWAGE COLLECTION  | 1 m <sup>3</sup>    |
| E04.510.01 | SUBI ELECTRICITY   |                     |
| E04.521.01 | SUBI NATURAL GAS   |                     |
| E06.131.03 | SOFT CONTACT LENSES - sale via internet                      | 6 pieces            |
| E06.211.02 | FEE PER USING A MEDICAL EMERGENCY                            | 1 fee               |
| E07.111.66 | SUBI NEW MOTOR CARS  |                     |
| E07.112.30 | SUBI SECOND-HAND MOTOR CARS                                  |                     |
| E07.211.03 | SUMMER TIRE 205/55 R16 (91) V - sale via Internet            | 4 pieces            |
| E07.211.05 | WINTER TIRE 205/55 R16 (91) H - sale via Internet            | 4 pieces            |
| E07.221.01 | DIESEL FUEL  | 1 litre             |
| E07.222.01 | PETROL UNLEADED 95   | 1 litre             |
| E07.222.02 | PETROL SUPER PLUS 98   | 1 litre             |
| E07.223.01 | GAS LPG  | 1 litre             |
| E07.242.02 | MOTORWAY TOLL STICKER  | yearly fee          |
| E07.311.01 | SUBI PASSENGER TRANSPORT BY RAIL                             |                     |
| E07.321.15 | SUBI DISCOUNTED FARES IN PASSENGER TRANSPORT BY BUS          |                     |
| E07.321.16 | SUBI FARES IN PASSENGER TRANSPORT BY BUS                     |                     |
| E07.332.01 | SUBI PASSENGER TRANSPORT BY AIR                              |                     |
| E08.101.02 | SUBI LETTER HANDLING SERVICES                                |                     |
| E08.109.03 | SUBI OTHER POSTAL SERVICES                                   |                     |
| E08.202.02 | MOBILE PHONE - EQUIPMENT - sale via Internet                 | 1 piece             |
| E08.301.01 | SUBI WIRED TELEPHONE SERVICES                                |                     |
| E08.302.01 | SUBI WIRELESS TELEPHONE SERVICES                             |                     |
| E08.303.01 | SUBI INTERNET ACCESS PROVISION SERVICES                      |                     |
| E09.112.04 | TELEVISION SET - COLOUR, WITH LCD SCREEN - sale via Internet | 1 piece             |
| E09.131.03 | NOTEBOOK - sale via Internet                                 | 1 piece             |
| E09.423.01 | MONTHLY CHARGE FOR RADIO LICENCE                             | monthly             |
| E09.423.02 | MONTHLY CHARGE FOR TV LICENCE                                | monthly             |
| E09.521.01 | MLADÁ FRONTA DNES (daily)                                    | monthly             |
| E09.521.02 | BLESK  | monthly             |
| E09.521.03 | PRAVO (daily)  | monthly             |
| E09.521.04 | LIDOVE NOVINY (daily)  | monthly             |
| E09.521.05 | REGIONAL DAILY   | monthly             |
| E09.522.01 | ABC  | 1 piece             |
| E09.522.02 | CHIP   | 1 piece             |
| E09.522.03 | STORY  | 1 piece             |
| E09.522.04 | TV MAGAZÍN   | 1 piece             |
| E09.522.05 | VLASTA   | 1 piece             |
| E09.522.06 | KVETY  | 1 piece             |
| E09.522.07 | REFLEX   | 1 piece             |
| E09.522.08 | TELEVIZE - WEEKLY  | 1 piece             |
| E09.601.04 | SUBI INLAND ORGANIZED PACKAGE HOLIDAYS AND TOURS             |                     |
| E09.602.18 | SUBI ORGANIZED PACKAGE HOLIDAYS AND TOURS<br>ABROAD          |                     |

| Repr. No.: | Name of representative                      | Unit of measurement |
|------------|---|---------------------|
| E10.400.01 | HIGHER TECHNICAL SCHOOL FEE                 | yearly              |
| E10.400.02 | UNIVERSITY ADMISSIONS FEE                   | fee                 |
| E10.400.04 | TUITION AT A PRIVATE COLLEGE                | 6 months            |
| E11.112.03 | HAMBURGER BIG MAC - FAST FOOD               | 1 piece             |
| E11.201.04 | HOTEL*** - sale via Internet                | 1 service           |
| E11.201.05 | HOTEL**** - sale via Internet               | 1 service           |
| E12.520.05 | SUBI HOUSEHOLD INSURANCE                    |                     |
| E12.532.03 | SUBI ACCIDENT AND OTHER PERSONAL INSURANCE  |                     |
| E12.541.03 | SUBI COMPULSORY INSURANCE OF MOTOR VEHICLES |                     |
| E12.541.05 | SUBI MOTOR VEHICLE INSURANCE                |                     |
| E12.621.01 | SUBI FINANCIAL SERVICES                     |                     |
| E12.701.02 | ISSUE A PASSPORT                            | fee                 |
| E12.701.04 | SIGNATURE CERTIFICATION                     | fee                 |
| E12.702.01 | FILING FEE FOR A DEVORCE PETITION           | fee                 |
| E12.702.02 | TESTAMENT DRAFT                             | fee                 |

## Items of single monthly survey of food average consumer prices:

| Repr. no.: | Name of representative            | Unit of measurement |
|------------|-----------------------------------|---------------------|
| E01.112.01 | WHEAT FLOUR                       | 1 kg                |
| E01.113.01 | CARAWAY-FLAVOURED BREAD           | 1 kg                |
| E01.113.03 | WHITE WHEAT BREAD                 | 1 kg                |
| E01.122.06 | LOIN OF PORK                      | 1 kg                |
| E01.142.01 | HALF-CREAM MILK PASTEURIZED       | 1 litre             |
| E01.144.01 | WHITE YOUGHURT, FAT CONTENT: LOW  | 150 g               |
| E01.145.01 | CHEESE "EIDAM"                    | 1 kg                |
| E01.147.01 | FRESH EGGS                        | 10 pieces           |
| E01.151.01 | BUTTER                            | 1 kg                |
| E01.161.04 | TABLE APPLES                      | 1 kg                |
| E01.174.01 | POTATOES                          | 1 kg                |
| E01.181.01 | GRANULATED SUGAR                  | 1 kg                |
| E02.132.01 | BOTTLED BEER, 3.4–4.3% OF ALCOHOL | 0.5 litre           |
| E01.131.99 | CARP, LIVE                        | 1 kg                |

Note: Representative E01.131.99 Carp, live is surveyed only from 1st to 31st December

# Items of consumer prices outside standard calculation:

| Repr. no.: | Name of representative                         | Unit of measurement |
|------------|--|---------------------|
| E01.111.01 | LONG-GRAIN RICE                                | 1 kg                |
| E01.112.01 | WHEAT FLOUR                                    | 1 kg                |
| E01.113.01 | CARAWAY-FLAVOURED BREAD                        | 1 kg                |
| E01.113.03 | WHITE WHEAT BREAD                              | 1 kg                |
| E01.114.02 | BUTTER CAKE FROM RAISED PASTE                  | 1 kg                |
| E01.114.06 | BISCUIT WITH FILLING                           | 1 kg                |
| E01.114.09 | SPONGE-BISCUIT (FOR CHILDREN)                  | 100 g               |
| E01.116.02 | PASTA, WITH EGGS                               | 1 kg                |
| E01.121.01 | BONELESS RUMP ROAST                            | 1 kg                |
| E01.121.02 | BONELESS SHOULDER POT-ROAST                    | 1 kg                |
| E01.121.03 | FORESHANK (BONE-IN)                            | 1 kg                |
| E01.122.02 | BONELESS SIRLOIN ROAST                         | 1 kg                |
| E01.122.03 | SIRLOIN CHOP                                   | 1 kg                |
| E01.122.04 | BONELESS BLADE ROAST                           | 1 kg                |
| E01.122.05 | BELLY-PORK                                     | 1 kg                |
| E01.122.06 | LOIN OF PORK                                   | 1 kg                |
| E01.124.01 | CHICKEN  | 1 kg                |
| E01.124.02 | CHICKEN, BREAST                                | 1 kg                |
| E01.124.03 | CHICKEN, LEGS                                  | 1 kg                |
| E01.124.05 | DRAWN DUCK                                     | 1 kg                |
| E01.124.06 | TURKEY, BREAST                                 | 1 kg                |
| E01.125.01 | RABBIT   | 1 kg                |
| E01.127.02 | FRANKFURTERS                                   | 1 kg                |
| E01.127.04 | HAM SALAMI                                     | 1 kg                |
| E01.127.05 | SAUSAGE (PEPPER)                               | 1 kg                |
| E01.127.06 | SALAMI, POLICAN                                | 1 kg                |
| E01.127.07 | HAM (PORK)                                     | 1 kg                |
| E01.131.02 | SALMON FILLET                                  | 1 kg                |
| E01.131.03 | CARP CHILLED                                   | 1 kg                |
| E01.132.01 | FROZEN FILLET OF SEA FISH                      | 1 kg                |
| E01.132.02 | TROUT  | 1 kg                |
| E01.141.01 | MILK, LONG LIFE, FULL-CREAM (FAT CONTENT 3.5%) | 11                  |
| E01.142.01 | HALF-CREAM MILK PASTEURIZED                    | 11                  |
| E01.142.02 | UHT SEMI-SKIMMED MILK                          | 11                  |
| E01.143.01 | EVAPORATED MILK WITHOUT SUGAR                  | 500 g               |
| E01.144.01 | WHITE YOUGHURT, FAT CONTENT: LOW               | 150 g               |
| E01.144.02 | FRUIT YOGHURT                                  | 150 g               |
| E01.145.01 | CHEESE "EIDAM"                                 | 1 kg                |
| E01.145.02 | CHEESE, TYPE CAMEMBERT                         | 1 kg                |
| E01.145.03 | PROCESSED CHEESE (NOT FLAVOURED)               | 1 kg                |
| E01.145.05 | COTTAGE CHEESE (LUCINA)                        | 1 kg                |

| Repr. no.: | Name of representative              | Unit of measurement |
|------------|-------------------------------------|---------------------|
| E01.145.06 | MELLOW CHEESE (NIVA)                | 1 kg                |
| E01.145.07 | CHEESE GOUDA                        | 1 kg                |
| E01.145.08 | CURD CHEESE, LOW FAT, NOT FLAVOURED | 1 kg                |
| E01.146.02 | CREAM, SWEET                        | 11                  |
| E01.146.04 | SPREADS (LOW FAT BUTTER)            | 1 kg                |
| E01.146.05 | FERMENTED MILK-BASED PRODUCTS       | 1 kg                |
| E01.147.01 | FRESH EGGS                          | 10 ks               |
| E01.151.01 | BUTTER                              | 1 kg                |
| E01.152.01 | VEGETABLE FAT                       | 1 kg                |
| E01.154.01 | VEGETABLE OIL                       | 11                  |
| E01.155.01 | PORK LARD                           | 1 kg                |
| E01.161.01 | ORANGES                             | 1 kg                |
| E01.161.02 | LEMONS                              | 1 kg                |
| E01.161.03 | BANANAS                             | 1 kg                |
| E01.161.04 | TABLE APPLES                        | 1 kg                |
| E01.161.06 | GRAPES                              | 1 kg                |
| E01.171.01 | TOMATOES                            | 1 kg                |
| E01.171.02 | CUCUMBER                            | 1 kg                |
| E01.171.03 | GREEN PEPPERS                       | 1 kg                |
| E01.171.04 | WHITE CABBAGE                       | 1 kg                |
| E01.171.05 | CAULIFLOWER, WHITE                  | 1 kg                |
| E01.171.06 | CARROTS                             | 1 kg                |
| E01.171.07 | CELERIAC                            | 1 kg                |
| E01.171.08 | YELLOW ONIONS                       | 1 kg                |
| E01.171.10 | GARLIC (DRY)                        | 1 kg                |
| E01.171.11 | BROCCOLI                            | 1 ks                |
| E01.171.12 | ICEBERG LETUCE SALAD                | 1 ks                |
| E01.173.01 | CABBAGE, JAR                        | 1 kg                |
| E01.174.01 | POTATOES                            | 1 kg                |
| E01.181.01 | GRANULATED SUGAR                    | 1 kg                |
| E01.181.02 | CONFECTIONER'S SUGAR                | 1 kg                |
| E01.182.02 | HONEY                               | 1 kg                |
| E01.183.01 | CHOCOLATE, MILK                     | 100 g               |
| E01.193.01 | BABY FOOD                           | 220 g               |
| E01.193.02 | POWDERED MILK, FOR BABIES           | 500 g               |
| E01.211.03 | INSTANT COFFEE                      | 100 g               |
| E01.211.05 | ROAST COFFEE BEANS                  | 100 g               |
| E01.212.01 | BLACK TEA, BAGS                     | 100 g               |
| E01.213.01 | COCOA POWDER                        | 100 g               |
| E01.221.02 | SPRING WATER                        | 11                  |
| E01.222.04 | SOFT DRINK WITH FRUTI FLAVOUR       | 11                  |
| E02.111.01 | INLAND DARK SPIRIT (FORMERLY RUM)   | 11                  |
| E02.111.01 | VODKA (FINE)                        | 11                  |
| E02.121.02 | QUALITY-GRADE RED WINE              | 0.75 l              |
| E02.132.01 | BOTTLED BEER, 3.4–4.3% OF ALCOHOL   | 0.5 l               |

| Repr. no.: | Name of representative | Unit of measurement |
|------------|------------------------|---------------------|
| E12.132.01 | TOILET SOAP            | 100 g               |
| E12.132.02 | TOILET PAPER           | 1 ks                |
| E12.132.05 | TOOTHPASTE             | 100 ml              |
| E12.132.07 | HAIR SHAMPOO           | 400 ml              |
| E12.132.08 | SHOWER GEL             | 300 ml              |

# Items of weekly survey of consumer fuel prices:

| Repr. no.: | Name of representative | Measurement unit |
|------------|------------------------|------------------|
| E07.221.01 | DIESEL OIL             | 1 litre          |
| E07.222.01 | PETROL NATURAL 95      | 1 litre          |
| E07.222.02 | PETROL SUPER 98 PLUS   | 1 litre          |
| E07.223.01 | GAS LPG                | 1 litre          |

# Items of consumer prices surveyed on the Internet:

| Repr. no.: | Name of representative  | Measurement unit |
|------------|---|------------------|
| E03.121.14 | MEN'S SKIING STRETCH PANTS - sale via Internet                | 1 piece          |
| E03.211.05 | MEN'S FOOTWEAR FOR LEISURE WEAR (LEATHER) - sale via Internet | 1 pair           |
| E05.111.13 | POCKET SPRING MATTRESS - sale via Internet                    | 1 piece          |
| E05.119.03 | BABY'S CRIB - sale via internet                               | 1 piece          |
| E05.202.07 | BED LINEN - sale via Internet                                 | 1 set            |
| E05.311.03 | ELECTRIC REFRIGERATOR WITH-FREEZER - sale via Internet        | 1 piece          |
| E05.311.04 | ELECTRIC FREEZER - sale via Internet                          | 1 piece          |
| E05.312.03 | AUTOMATIC DRUM-TYPE WASHING MACHINE - sale via Internet       | 1 piece          |
| E05.312.04 | DISHWASHER - sale via Internet                                | 1 piece          |
| E05.313.03 | COOKER – ELECTRIC/GAS - sale via Internet                     | 1 piece          |
| E05.313.04 | MICROWAVE OVEN - sale via Internet                            | 1 piece          |
| E05.315.04 | ELECTRIC FLOOR VACUUM CLEANER - sale via Internet             | 1 piece          |
| E05.321.03 | ELECTRIC HAND BLENDER - sale via Internet                     | 1 piece          |
| E05.322.02 | ELECTRIC KETTLE - sale via Internet                           | 1 piece          |
| E05.323.02 | ELECTRIC IRON - sale via Internet                             | 1 piece          |
| E06.131.03 | SOFT CONTACT LENSES - sale via Internet                       | 6 pieces         |
| E07.211.03 | SOMMER TIRE 205/55 R16 (91) V - sale via Internet             | 4 pieces         |
| E07.211.05 | WINTER TIRE 205/55 R16 (91) H - sale via Internet             | 4 pieces         |
| E07.321.16 | SUBI FARES IN PASSENGER TRANSPORT BY BUS                      | ·                |
| E07.332.01 | SUBI PASSENGER TRANSPORT BY AIR                               |                  |
| E08.202.02 | MOBILE PHONE - EQUIPMENT - sale via Internet                  | 1 piece          |
| E09.112.04 | TELEVISION SET - COLOUR, WITH LCD SCREEN - sale via Internet  | 1 piece          |
| E09.113.03 | MP3/MP4 PLAYER - sale via Internet                            | 1 piece          |
| E09.121.02 | DIGITAL CAMERA - sale via Internet                            | 1 piece          |
| E09.131.03 | NOTEBOOK - sale via Internet                                  | 1 piece          |
| E09.131.04 | TABLET - sale via Internet                                    | 1 piece          |
| E09.132.03 | MULTIFUNCTION PRINTER - sale via Internet                     | 1 piece          |
| E09.132.04 | MONITOR - sale via Internet                                   | 1 piece          |
| E09.149.02 | MEMORY CARD - sale via Internet                               | 1 piece          |
| E09.149.03 | FLASH DISC - sale via Internet                                | 1 piece          |
| E09.311.05 | GAME FOR GAME CONSOLE - sale via internet                     | 1 piece          |
| E09.312.09 | BUILDING SET (TYPE LEGO) - sale via internet                  | 1 piece          |
| E09.511.04 | CHILDREN'S BOOK (AGE 9 YEARS AND LESS) - sale via internet    | 1 piece          |
| E09.511.05 | BELLE-LETTRES BY DOMESTIC AUTHOR - sale via internet          | 1 piece          |
| E09.511.06 | BELLE-LETTRES BY WORLDWIDE KNOWN AUTHOR - sale via internet   | 1 piece          |
| E11.201.04 | HOTEL*** - sale via Internet                                  | 1 service        |
| E11.201.05 | HOTEL**** - sale via Internet                                 | 1 service        |
| E12.121.04 | HAIR DRYER - sale via internet                                | 1 piece          |
| E12.121.05 | ELECTRIC RAZOR - sale via internet                            | 1 piece          |
| E12.121.06 | ELECTRIC TOOTHBRUSH - sale via internet                       | 1 piece          |

| Repr. no.: | Name of representative            | Measurement unit |
|------------|-----------------------------------|------------------|
| E12.322.03 | BABY CARRIAGE - sale via Internet | 1 piece          |
| E12.322.04 | BABY CAR SEAT - sale via Internet | 1 piece          |