

## Methodical Notes

Industrial producer price indices cover the prices of products produced in the branches B to E of CZ-NACE. The publication contains price indices for divisions and groups of CZ-CPA, aggregated into subsections and sections of 'Classification of Products by Activity' (CZ-CPA 2008) and industry total. For some aggregations no indices are presented in order to protect the individual character of the data. Industry total means the sum of B, C, D and E sections. The classification of products in its current version, valid since 1<sup>st</sup> January 2008, is prepared on the basis of the European standard of CPA 2008 (Classification of Products by Activity).

Since January 2009 are price indices aggregated, calculated and published by CZ-CPA 2008. The transition from former classification CZ-CPA 2003 to new classification CZ-CPA 2008 had been preparing during the year 2008.

The calculation of indices by CZ-CPA 2003 was ended by December 2008.

Recalculation of price indices for the previous periods was made until the year 1991 with. Ratios of weights between new and old classification on the level of 4-digit classes of CZ-CPA were used to the recalculation.

According to the individual weighting schemes were successively recalculated periods 2007 and 2008 (2005 domestic sales, base December 2005 = 100), period 2001-2006 (1999 domestic sales, base December 1999 = 100) and period 1995-2000 (1993 sales, base December 1993 = 100).

For the period 1991-1994 we used the nearest weight structure (1993 sales with the base December 1993 = 100), due to the problems, how to obtain the weight structure for the period 1991-1994 and the high work difficulty, in comparison to the reached results.

The method was always same, for example, the conversion of indices for the year 2000 to the new classification meant to recalculate indices on the structure 1993 (base December 1993 = 100) on the level 4-digit class of CZ-CPA, to aggregate to the higher aggregations, to create the conversion bridges between weighting schemes 1993 and 1999 and between 1999 and 2005 and recalculate to the new base December 2005 = 100.

The procedure was different for the periods 2007 and 2008. It would be possible fluently to continue from the calculation according to the 4-digit classes of CZ-CPA to the calculation according to the representatives (at first time for January 2009), then it was necessary make a calculation according to the both methods in December 2008 and on their bases to determine the conversion bridges.

The differences following from this ratios were equally divided to 24 months of the previous 2 years under one weighting schemes. The differences larger than 1 percentage point were only in the low number of 4-digit classes of CZ-CPA.

The base period for the calculation of industrial producer price indices is still December 2005 = 100 and from its derived 2005 average = 100 and the weight structure is still based on the structure of domestic sales of the year 2005.

The price indices calculations are based on the prices of selective files of representatives and selected reporting units by aggregating simple price indices into an aggregate using a modified Laspeyres formula. The calculation uses constant weights.

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

where:

$p_1$  the reference period price,

$p_0$  the basic period price (December 2005),

$p_0 q_0$  the constant weight – value indicator, in terms of per mill (2005 domestic sales).

Industrial producer price index is still calculated monthly using the prices reported by the national statistical questionnaire Industry Prices 1-12. The questionnaire is filled out by selected organizations (about 1200) for selected representatives (about 4700). The prices reported are domestic prices agreed between supplier and customer for domestic market products (excluding VAT, excise tax and transport and incidental costs). The

period for price observation was extended and the prices between the first to eighteenth calendar day of the reference month are included (formerly the tenth to twelfth calendar day).

The weights in the revised industrial producer price indices were determined using the year 2005 domestic sales structure given by P 5-01 questionnaires (at CZ-CPA 4-digit level), by Industry 2-01 questionnaires (at CZ-CPA 6-digit level and individual representatives) and further by Prices Industry 1-12 (at CZ-CPA 6-digit level and individual representatives).

The new industrial producer price indices are calculated and published to following bases: December 2005 = 100 (base index), 2005 average = 100 (derived base index), previous period = 100, corresponding period of the preceding year = 100. Besides, the ratio of rolling averages index (ratio of average of last 12 months' indices to average of previous 12 months' indices, calculated from the indices to December 2005 = 100 base) is published.

During the first half-year 2006 an internal audit of industrial producer price index had taken place with the participation of public experts. The aim of the audit was to consider whether the current practice of index assembling and presentation corresponds to EU rules and the needs of users. Reservations were made primarily to an excessive width of the selective file and to an unacceptable loading of the reporting units. The results of the audit were implemented within the Revision 2005 by excluding aggregations in accord with the relevant EU rule (as amended by EC Council Regulation 1165/98) and also by excluding all insignificant groups (with a share smaller than 5% at higher aggregations). The number of reporting units was reduced, the number of price representatives was reduced and the number of aggregations was reduced.

Industrial producer price indices by Main Industrial Groupings (MIGs) were published since January 2003 to December 2008, too. Their content defined by the Commission Regulation (EC) No 586/2001 of 26 March 2001 on implementing the Council Regulation (EC) No 1165/98 concerning short-term statistics. In June 2007 by the Commission Regulation (EC) No 656/2007 got to the change of the content of the individual industrial groupings. The first calculation in accord with the new regulation was made in January 2009. The recalculation of time series was made to the year 2000 with.

### **Average prices of natural gas, electricity and oil products**

Since the year 2002 are published **average prices of natural gas and electricity**. These price are also provided to Statistical office of European Communities (Eurostat).

To the end of the year 2007 were published average prices for the individual standard consumers. Prices were valid at 1<sup>st</sup> January and 1<sup>st</sup> July of the observed year. Standard consumers are defined in the council directive 90/377/EEC of 29 June 1990 concerning a Community procedure to improve the transparency of gas and electricity prices charged to industrial end-users. Since the year 2005 the publication of these prices was enlarged, always at 1<sup>st</sup> day of calendar quarter.

At 1<sup>st</sup> January 2008 the council directive 90/377/EEC was amended by the directive 2008/92/EC of the European Parliament and of the Council of 22 October 2008 concerning a Community procedure to improve the transparency of gas and electricity prices charged to industrial end-users. The standard consumers were replaced by the standard consumption bands and average prices at 1<sup>st</sup> day of current quarter were replaced by the average prices for the previous quarter, or half-year.

Prices according to the former methodology were surveyed at 1<sup>st</sup> October 2007 for the last time and published in the publication for November 2007. Prices according to the new methodology were calculated for Q3 and Q4 2007 for the first time and published in the publication for January 2008. Both types of calculation are overlapping for Q3 and Q4 2007. Prices for Q2 2007 according to the former methodology do not follow up with prices for Q3 2007 according to the new methodology.

**Prices of natural gas** are surveyed by the national statistical questionnaire Cený E 6-04. Average prices of natural gas for consumption band total are calculated as a weighted arithmetic average of prices recorded by the most important traders with natural gas and the weights are market shares in the individual bands. Reported prices are prices agreed between trader and his final domestic consumer.

**Prices of electricity** are surveyed by the national statistical questionnaire Cený Elek 1-12. The most important traders reports prices charged to the selected final domestic consumers in this questionnaire. Final consumers are selected from the all voltage networks. Prices of energy and prices of electricity total (including: energy, transmission, system and distribution) are reported.

Average prices of electricity for individual consumption band are calculated as weighted arithmetic average from the prices of individual final consumers covering whole required spectrum of consumption.

**Quarterly average prices of electricity and natural gas for industry total** are also published. For the Czech Republic, as a member state of OECD, are these prices provided to International Energy Agency (IEA). Average quarterly prices are calculated as a weighted arithmetic average from average prices of individual consumption bands and their share on the yearly consumption.

Since January 2003 the delivered **prices of oil products** to households and industry have been released monthly. The methods of average price surveys are based on the Council Decision 1999/280/EC regarding a Community procedure for information and consultation on crude oil supply costs and the consumer prices of petroleum products and on the Commission Decision 1999/566/EC.

The **prices of oil products** are collected monthly by the national statistical survey Prices E3-12. The recorded prices are the most frequently charged delivered prices excluding transport costs, inclusive of VAT and excise tax and net of VAT and excise tax, agreed between supplier and customer inland at the 15th calendar day of the month. The „supplier“ means producer or distributor of domestically produced or imported oil products. The „customer“ means end user, characterized by the size of an offtake. In high sulphur fuel oil it means by deliveries of less than 2000 tonnes per month or less than 24000 tonnes per year for industry. In heating gas oils it means by individual deliveries of 2000 to 5000 litres for households and less than 2000 litres for industry.