

Methodology of the conversion of the time series

Conversion of time series of overall agricultural producer and market services price indices (the case without conversion bridges)

Coefficients (conversion bridges) applying to conversion between the time series of the price indices with a constant base before and after are not used. In the first revision publication for January 2007, the new time series of price indices calculated on the new weighting scheme is even published simultaneously with a backward validity for the period 'January 2005 to December 2006'. This new time series of indices has only one price base average y. 2005 = 100.

I. Conversion of the original indices, valid till y. 2006, to the new index base average y. 2005 = 100

The indices of original time series with the base December 1999 = 100, which refer to the period 1994 – 2006 (see publication 'CZSO – Prices' and 'Revision 2000 – time series converted by coefficients' for the period January 2001 – December 2006 and January 1994 – December 2000, respectively) will be transformed to the new base average y. 2005 = 100, valid since y. 2007, as follows:

1) The original price indices for the period January

$$\frac{\text{index for the selected period with the base December 1999 = 100 from original time series}}{\text{index for December 2005 to the base December 1999 = 100 from original time series}} \times \text{coeff} \times 100 \quad (1)$$

Example of calculation of index for November 2006 with the new base December 2005 = 100

- original index for November 2006 with the base December 1999 = 100: 117,1
- original index for December 2005 with the base December 1999 = 100: 114,1
- coefficient to the appropriate time series : 0,999

$$\text{Index with the new base} = \frac{117,1}{114,1} \times 0,999 \times 100 = 102,5$$

Final index is therefore comparable with newly published indices since year 2007 having the base December 2005 = 100.

- a) Conversion to the new index base average y. 2006 = 100 will CZSO calculate from time series of type (1) above. Index for any time period within January 2001 and December 2006 to the new index base average y. 2006 = 100 can be calculate from the previously published data as follows (for each month selected within 2001 – 2006):

$$\frac{\text{index for the selected month with the base December 1999 = 100 from the original time series}}{\text{index for an average of the year 2006 with the base Dec. 1999 = 100 from the original time series}} \times 100 \quad (2)$$

It is necessary to refer to the fact, that formula (2) gives the same results as the calculation from the series of type (1) only theoretically (if the calculations are done with un-rounded figures)

II. Conversion of the new indices, valid since y. 2007, to a) original base December 1999 = 100 and to b) original index base average 2000 = 100

- a) Continuation of the time series of price indices with the original base December 1999 = 100 (valid till y. 2006) will be ensured by linking of the new time series to the original time series as follows (for each month selected in 2007 or later period):

index for the period y. 2007 (8...) with the base December 1999 = 100 =

$$= \frac{\text{index for the period y. 2007 (8...) with the base December 2005 = 100 from the new time series}}{\text{coefficient}} \times$$

x index for December 2005 with the base December 1999 = 100 from the original time series / 100.

Example of calculation of index for January 2007 to the base December 1999 = 100:

- new index for January 2007 with the base December 2005 = 100: 103,7
- original index for December 2005 with the base December 1999 = 100: 114,1
- coefficient to the appropriate time series: 0,999

$$\frac{103,7}{0,999} \times \frac{114,1}{100} = 118,4$$

b) Similar procedure can be used also for conversion to the base average y. 2000 = 100:

index for the period y. 2007 (8...) with the base December 2000 = 100 =

$$= \frac{\text{index for appropriate period y. 2007 (8...) with the base December 2005 = 100 from the original time series}}{\text{coefficient}} \times$$

x index for December 2005 with the base average y. 2000 = 100 from the original time series / 100.

Note: Using of the coefficients implicitly transforms the linking period December 2005 to December 2006. In other words, a published development of the original time series till December 2006, which is linked by the development of indices derived from the new calculation scheme, is retained.