

METHODOLOGICAL SHEET

REAL EFFECTIVE EXCHANGE RATE OF THE KORUNA DEFLATED BY PRICE INDICES

I. Definition and content

The real effective exchange rate of the koruna (REER) is one of the indicators of the international competitiveness of a country and generally understood to mean various levels of relative prices or costs expressed in a certain currency. In this respect, REER values above 100 signify a downward trend in the country's competitiveness relative to the base period, whereas an REER below 100 means rising competitiveness of the country relative to the base period.

The weighted geometric average of the ratio of the nominal exchange rate index to the prices indices is used to compute the REER, with the weights given by the shares of the nation's largest trading partners in trade turnover.

The framework of the real effective exchange rate of the koruna employs the consumer prices and industrial producer prices of 12 countries out of eurozone plus all eurozone countries. For the calculation of the eurozone countries are identified as a single currency and cost area. The number of eurozone countries corresponds to the actual state. The structure of the countries and their weights are identical to those used to calculate the nominal effective exchange rate of the koruna (NEER). In the first variant, the weights relate to the overall trade turnover, whereas in the second variant the weights relate only to the turnover in SITC groups 5–8.

The base of the time series is the average of 2020.

II. Sources and methodology of ascertainment

For the calculation of the real effective exchange rate are used deflators price indices obtained for all countries from ECB statistics. CPI and PPI indices are converted into 2020 base. Where industrial producer prices are not available, consumer prices are used.

The nominal exchange rate indices are taken from the CNB's own NEER calculations.

III. Breakdown

For both, the first and second variants, the monthly and yearly REER indices are calculated in industrial producer prices and in consumer prices on a 2020 average basis.

IV. Method of calculation

Weights of monetary areas calculated by share of total trade turnover of the Czech Republic

Monetary area	in % 2020
1 eurozone	63,6
2 Poland	8,5
3 China	7,7
4 Hungary	3,4
5 United Kingdom	3,2
6 USA	2,9
7 Russian Federation	2,6
8 Romania	1,7
9 Switzerland	1,6
10 Korea	1,4
11 Sweden	1,4
12 Japan	1,2
13 Denmark	0,8
Total	100,0

Weights of monetary areas calculated by share of total trade turnover of the Czech Republic for SITC groups 5-8

Monetary area	in % 2020
1 eurozone	63,8
2 Poland	8,3
3 China	8,0
4 Hungary	3,4
5 United Kingdom	3,3
6 USA	2,9
7 Russian Federation	1,9
8 Romania	1,7
9 Switzerland	1,6
10 Korea	1,5
11 Sweden	1,5
12 Japan	1,3
13 Denmark	0,8
Total	100,0

Formula for the calculation of the real effective exchange rate index:

$$REER_t = 100 \times \prod_{i=1}^n \left(\frac{S_{it}^*}{P_{it}^*} \right)^{w_i^*}$$

where

S_{it}^* - basic index of the domestic currency to the currency of the i-th trading partner in period t

P_{it}^* - ratio of the basic price index of the i-th trading partner in period t to the basic price index of the Czech Republic in period t, the base year being the same as for the calculation of S_i^*

w_i^* - standardised weights of the currency of the i-th trading partner

V. Changes in methodology and content

As of February 2022 the time series base is changed to the average of 2020. Next change in the basis to the average of 2025 will be made in 2027 together with the change in weights of foreign trade used in NEER.

VI. Reporting entities

None