

## 4. Price development

Even despite a relatively unfavourable situation in the CR economy in 2012, the prices grew. The increase was caused both by the growth of import prices and the increase of VAT in January of this year. Prices for consumers increase the most for years 2009-2012. As a consequence of adverse climatic conditions and continuing lowering of animal production in agriculture eventuated further growth of prices of this industry. Growth of imports prices increased the prices of industrial production. On the contrary, the adverse situation in construction produced further decrease of construction works prices, mild lowering was also observed in market services. Also thanks to a weaker crown against both the two major world currencies in comparison to year 2011, the prices of exports and imports markedly increased, domestic economy however still faced losses flowing from the adverse development of terms of trade.

Aggregate price level in the economy in 2012 again increased

Following two years of fall (2010 by 1.6 %, 2011 by 0.9 %) the general prices grew in 2012 from the point of view of implicit GDP deflator by 1.4 %. In the context of years 2003-2012 the increase of the price level was above average (average growth by 1.1 %). With respect to the development in the pre-crisis period – in 2007 in the amount of 3.3 %, in 2008 1.9 %, even in 2009 the price level still grew by a notable rate of growth of 2.3 % - it was still however a relatively weak growth.

Pressure on the fall of the price level from the side of foreign trade subsided, domestic economy however still showed losses from the terms of trade effect

In the view of individual deflators of the expenditure items the growth was observed especially for exports and imports. Exports deflator pointed to the growth of price level of 3.1 % (the highest dynamics since year 1997), for imports even by 3.6 % (the fastest growth since 2000). Evident higher increase of the imports prices signifies a worsening terms of trade. However, what was important, the drop of terms of trade flowing from these deflators showed a slowdown and the pressure on the overall price level lowering was in 2012 lower compared to the preceding two years. Domestic economy thus gradually decreased the loss resulting from the terms of trade effect – nevertheless a profit was last reached in 2009.

Within the final consumption expenditure frame, the price level grew the fastest for households, the slowest for the non-profit institutions

Deflator of total final consumption expenditure in 2012 signalled an increase in the price level by 2.1 %. The highest rate of growth recorded the price level for final consumption expenditure of households (2.3 %), the lowest the prices of final consumption expenditure of non-profit institutions (0.7 %). Deflator of final consumption expenditure of government institutions amounted to 1.6 %. Price level of consumption expenditure thus in all three institutional sectors, which consume in the economy, grew. It was not prevented even by the suppressed consumption of the household and government institutions sectors. Main role in the price increase in 2012 played most likely the rise of VAT and continuing increase of the import prices.

Following two years fall the price level grew also in the context of gross capital formation...

Deflator of the gross capital formation added among the individual aggregates the lowest, but still positive value of 0.5 %. Following a two years fall of prices of gross capital formation (2010 -0.6 %, in 2011 -1.1 %) their mild growth again contributed to the growth of the overall price level in the economy.

...the same was valid for investment

Very similarly oscillated also the prices of gross fixed capital formation – in 2010 they fell by 0.5 %, in 2011 by 1.2 %. In 2012 their price level increased by 0.5 %. On the repeated growth of prices of gross fixed capital formation most likely participated the changing structure of this component. If we assume, that large investment of the government sector are relatively cheaper compared to the investment of other sectors, then with their limitation on the part of government institutions occurred falls of the share of investment of government institutions on total investment in the economy, whose price subsequently increased.

Table No. 3 **Deflators** (y/y in %)

	GDP	FCE	GCF	Exports	Imports
2008	1,9	4,4	0,1	-4,5	-3,1
2009	2,3	1,3	0,9	0,3	-1,7
2010	-1,6	-0,2	-0,6	-1,3	0,6
2011	-0,9	0,6	-1,1	0,8	2,5
2012	1,4	2,1	0,5	3,1	3,6

Source: CZSO

## 4.1. Consumer prices

Consumer price index grew in years 2003-2012 continuously

Consumer price index (CPI) in years 2003 to 2012 displayed relatively stable growth by an average year-on-year rate of growth of 2.4 %. Still, the development of CPI can be in this period divided in two parts according to the rates of growth dynamics. The first is a gradual increase in the rate of growth beginning year 2003 until 2008, influenced especially by a high economic performance positively affected by the accession to the European Union, fall of the rate of unemployment linked to the growth of nominal wages and subsequent growth of consumer demand for goods and services – strong demand then pushed on the price increases. In 2008 the increase of VAT also affected the inflation.

After lowering of the rate of growth of consumer prices in 2009 the growth again gained pace...

As a consequence of significant increase of the rate of unemployment in 2009 (from 4.4 % to 6.7 % according to the ILO methodology) following the economic slowdown, the demand for goods and services fell. Year-on-year change of CPI plunged to mere 1 %. To this decrease contributed also a lowering of the imports prices, which also consequently manifested in the prices for consumers. Nevertheless, in years 2010-2012 the rates of growth of consumer prices for the reason of gradual increase of the imports prices regained pace (even despite remaining unemployment). Period 2009-2012 thus can be with respect to a gradual growth of prices for consumers labelled as the second cycle.

...in 2012 the rate of growth of consumer prices compared to 2011 nearly doubled

In 2012 eventuated an above average growth of the consumer prices, specifically by 3.3 %. The rate of growth thus showed acceleration already third year in a row and in comparison to year 2011 nearly doubled (growth in 2011 reached 1.9 %). Still the prices in 2012 increased much less than in 2008 (by 6.3 %).

Significant share on inflation had the increase of the lower VAT already in January 2012

To the high growth of consumer prices in 2012 contributed also the increase of the lower VAT rate from 10 % to 14 % valid from January 2012. This change had an immediate impact on the price level of goods and services for consumers – consumer price index increased in January 2012 against December 2011 significantly by 1.8 %. It is obvious that this growth was affected also by other factors, such as season. Still it can be assumed that the impact of VAT rate increase was high – it confirms also the analysis of the consumer price index addition, when the tax amendments themselves caused an increase of prices compared to the previous month by 1.1 %.

Apart from VAT change also other artificial interventions stood behind the CPI dynamics in 2012...

In the view of individual product groups in the consumer basket grew the fastest in 2012 the prices for goods included in the division health by 9.4 %, which was influenced by exclusion of a number of medication from the list of those paid for by the insurance companies. The rate of growth of prices of food and non-alcoholic beverages (+7.0 %) recorded acceleration in the past 3 years, prices of possessions within housing, water, energy and fuels (+ 5.0 %) grow practically continuously. It seems that the prices of these products convert to the level common in the EU.

...divisions such as clothing and footwear or post and telecommunication put the brakes on the year-on-year inflation...

On the contrary, inflation was pressed down by the decrease of prices in the division of clothing and footwear (-3.0 %), whose prices were falling already thirteenth year in a row – on the price fall participated apart from a considerable competition most likely also the fact, that this goods is for a high part produced in countries with low cost of labour. Prices of post and telecommunication were decreasing (-2.4 %) for the reason of long-time strengthening competition also on the market of telephone services and appliances (prices of post and telecommunication were falling already fifth year in a row). Prices of furnishing, households equipment and maintenance decreased year-on-year by 1.1 %.

...as well as the recreation and culture

Fourth year in a row was also observed the fall of prices in the area of recreation and culture (-0.2 %) – specifically the prices were by 8.1 % lowered for „technology used in recreation“ (for instance cameras, video cameras etc.), but also for other products of long-term consumption for recreation and culture

(-2.1 %). The fall of prices in this area was most likely influenced by the decreased demand from consumers, who already owned the stated products and in the adverse period did not find it necessary to purchase new appliances.

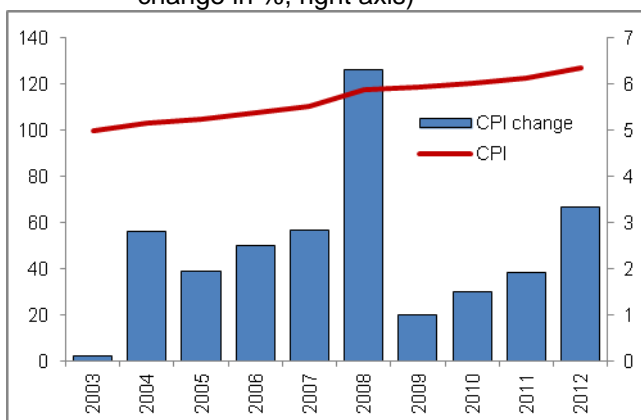
Harmonised index of consumer prices (HICP) increased in the CR during period 2003-2012 by 25.2 %, which placed the CR on the ninth position from the point of view of stability of prices in the whole EU. With respect to the growth of HICP in the EU by 26.6 % it was a placing mildly above average. Considerable growth of HICP in 2012 by 3.5 % however moved the Czech Republic to the fifth worst position. Comparable dynamics reached the prices in Slovakia and Poland, where the growth amounted to 3.7 %, or Romania with an increase of prices by 3.4 %.

In the long-term view the price stability of the CR was above-average, growth of price in 2012 was however the fifth highest among the EU countries

Price development of individual segments of the harmonised index of consumer prices was in the CR markedly different from the EU

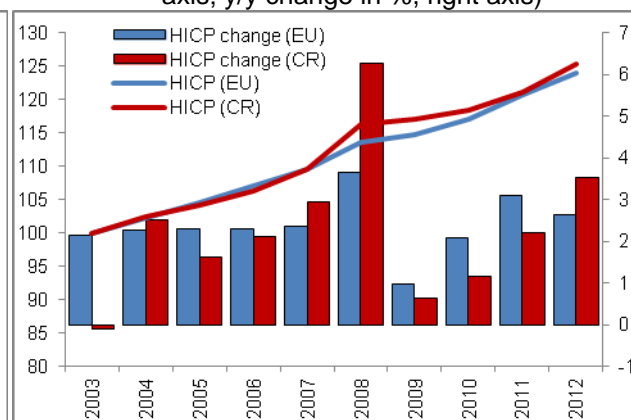
Given the structure of HICP growth existed between the development of prices in the CR and EU considerable differences. While in the CR in years 2003-2012 markedly grew the prices of expenditure on health (on average by 6.3 %) or housing, water, energies and fuels (on average by 5.6 %), in the EU the average growth of prices corresponded only by 2.6 % and 3.9 % respectively. So it is obvious, that in these areas the CR converted to the average price level in the EU. On the contrary, while prices of other groups of products in the EU grew, in the CR they on average decreased – clothing and footwear -3.3 %, in the EU prices stagnated; prices of furnishing, households equipment and maintenance in the CR were declining on average by 1.1 %, in the EU they were on the contrary increasing by 1.3 %.

Chart 54 **CPI in the CR (2003=100, left axis; y/y change in %, right axis)**



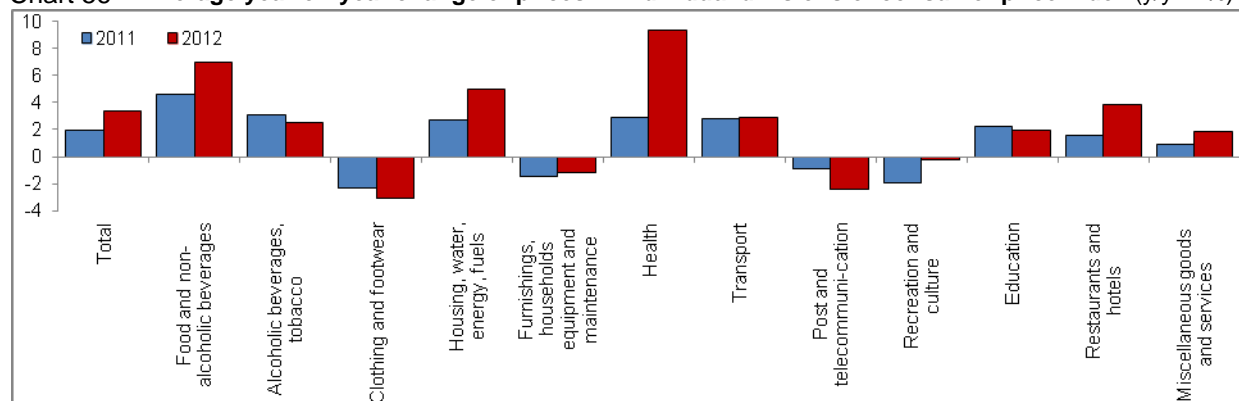
Source: CZSO

Chart 55 **HICP in the CR and EU (2003=100, left axis; y/y change in %, right axis)**



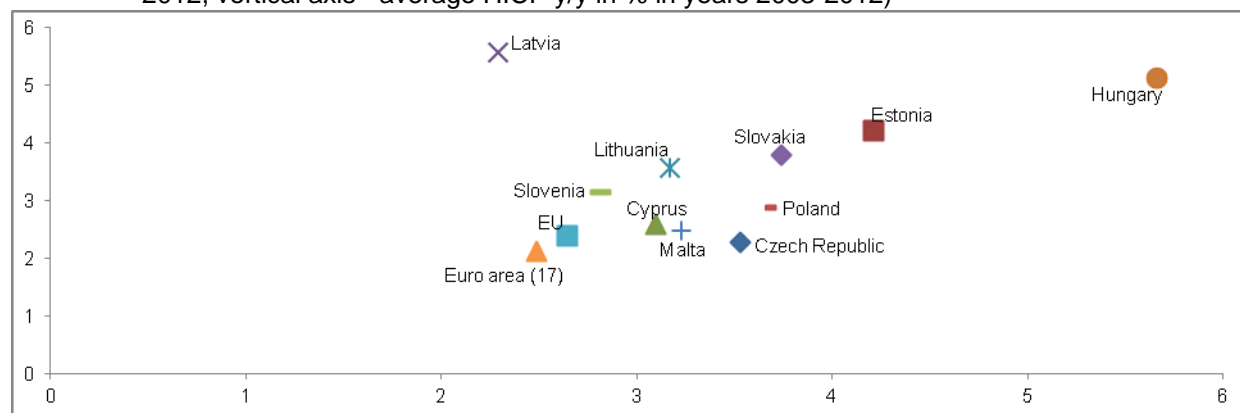
Source: Eurostat

Chart 56 **Average year-on-year change of prices in individual divisions of consumer price index (y/y in %)**



Source: CZSO

Chart 57 **HICP growth in countries accessing the EU in 2004** (horizontal axis - HICP y/y in % in 2012, vertical axis - average HICP y/y in % in years 2003-2012)



Source: Eurostat

## 4.2. Producer prices

Prices of agricultural producers grew already third year in a row, year-on-year increase in 2012 however markedly shrank

Prices of agricultural producers grew in years 2006 till 2012 by relatively high year-on-year rate of growth on average by 3.9 %, while these rates of growth showed very high variability. Marked changes in the prices of agricultural products have their justification especially in the prices of crop production – prices change as a result of varying harvests in individual years. Year 2012 was characterised by mildly below-average year-on-year growth of prices of agricultural producers by 3.8 % - after considerable growth in 2011 (by 21.2 %) given mostly by high prices on the world commodity markets thus the rate of growth was slowing down, however it remained positive already third year in a row.

Source of price growth in agriculture was in 2012 especially the animal production (+5.4 %)

In half of 2012 eventuated in the world for the reason of insufficient harvest a repeated increase of prices, for example the price of wheat increased from approximately 600 USD above 900 USD. Adverse climatic conditions decreased the harvest in the CR as well – still the prices of cereals increased by a notably lower proportion 4.4 %, compared to the world markets. Due to the opposite development of prices in the vegetable segment (-10.6 %) and potatoes (-20.5 %) the prices of aggregate crop production increased only by 2.7 %. Increase of the agricultural producer price index was pushed mostly by the area of animal production (+5.4 %) – it can be assumed, that the growth of prices was affected by a growing demand for quality products on the part of consumers, but also the effort to support local producers. On the other hand the domestic animal production has been falling already for a long-term, which led to the limitation of domestic supply.

Let us compare the stabilization of prices in individual areas of agricultural production. If the price of cereals increased in 2011 by 47.1 %, in 2012 already only by mentioned 4.4 %. The growth of prices of industrial crops also slowed down – from 32.8 % (the high growth of prices of industrial crops in 2011 was influenced mostly by rape) to 6.0 %.

Eggs – extreme growth of prices by tenths of percentage as a result of the EU legislative change

Among extreme price fluctuations in 2012 of individual agricultural products we can name for instance an increase of price of eggs by 53.6 %, which had its foundation in the EU directive related to the more stricter conditions for the breeding of hens. It is also worth to mention the development of prices of potatoes, which grew in 2011 by 3.6 %, in 2012 however slumped by 20.5 % and thus contributed to the lowering of the rate of growth of the crop production. The fall of prices in 2012 was most likely affected also by the high harvest in 2011 and subsequent sale of remaining potatoes for lower prices in 2012.

Growth of prices slowed down also in the industry –

Industrial producer price index recorded from year 2003 till 2012 a growing trend

in years 2003-2012 below-average development, slowdown also with respect to 2011

with an average rate of growth of 2.4 % - compared to the prices of agricultural production a markedly lower variation of year-on-year changes. Year 2012 was in the context of development of this price index mildly below-average, since the increase of prices arrived at 2.1 %. As a fall of rate of growth of prices in the industrial producer sector can be year 2012 understood in comparison to the previous year, when the prices increased by notable 5.6 %.

Highest increase of prices in the area of water supply; sewerage, waste management...

Given the individual areas, the prices grew for water supply; sewerage, waste management (by 8.1 %) - these prices increase continuously and in the long-term have a considerable effect on the prices for consumers. Prices in this industry grow for the reason of the effort to protect the environment and thus the necessity to modernise the sewage disposal plants as well as the fact, that this industry is strongly monopolistic. Further the growth of prices in 2012 was affected by the products and services in the manufacturing industry (+2.3 %), which following a marked slump in 2009 (-5.6 %) grew already third year in a row – to this increase contributed long-term growing import prices of products used as an input for further production. Prices increased also in the energy industry, concretely by 1.7 %. Prices in the energy industry grew already for the second year, despite the fact that the prices of electricity on the world market were gradually falling since the second half of 2011.

...prices fell in the mining and quarrying

On the contrary, the growth of the industrial producer index was pushed down by the development of prices in mining and quarrying, which following the growth in 2011 (+6.9 %) in 2012 year-on-year fell by 1.9 %. Price lowering was however significantly lower compared to 2009 (-3.9 %). The drop of prices was most likely influenced by the weaker demand for materials for further processing. Interesting fact was, that in 2012 the fastest grew the prices of crude petroleum and natural gas, specifically by 14.8 %. On this development participated the weaker crown (especially against USD) in 2012 compared to 2011 (producers could increase prices on the domestic market, since it was possible to sell abroad relatively at a higher price). On the contrary prices of black and brown coal and lignite fell (by 5.2 %), one of the main inputs for further production in industry.

Overheating of the construction sector in strong years had consequences also in 2012...

Lowering of prices in the construction industry since 2010 inclusive can be ascribed to a very strong demand for products of this branch (especially as a result of acquiring of own housing) in the pre-crisis period. Beginning year 2002 till year 2007 the gross value added in the construction continuously grew<sup>1</sup> (with the exception of a very mild drop by 0.4 % in 2005), which subsequently led to the overheating of the market. In 2008 the gross value added in construction as a result of market saturation slumped for the first time, specifically by 0.9 %, however year-on-year fall continued also in 2009. The growth of gross value added in the amount of 5.3 % in 2010 was quickly nullified by the fall in the subsequent years (-5.2 % and -5.4 %).

...prices of construction works were falling already third year in a row, their fall was however still steeper

To this adverse development corresponded also the prices, which were year-on-year falling. The rate of fall however kept deepening – in 2010 the prices in construction fell by 0.3 %, in 2011 by 0.4 %, in 2012 already by seven tenth of percentage.

In 2012 fell the prices of all registered construction works

If in 2011 out of construction works the prices were raised only for long-distance electricity lines (+0.4 %) and public entertainment buildings (+0.1 %), in 2012 prices of all construction works were reduced. The highest decrease of prices faced bridges and elevated highways (-1.7 %) – it is obvious, that as a result of ongoing fiscal restriction the large construction orders were being limited and this type of construction works belongs here. On the contrary, the lowest decrease of prices was found for local water pipelines (-0.2 %) – the cause can be most likely seen in the necessity of continuous renovation of the state of water pipeline regardless of the state of the economy and thus also a lower decline of demand.

Further lowering of prices of construction works is possible only with immense

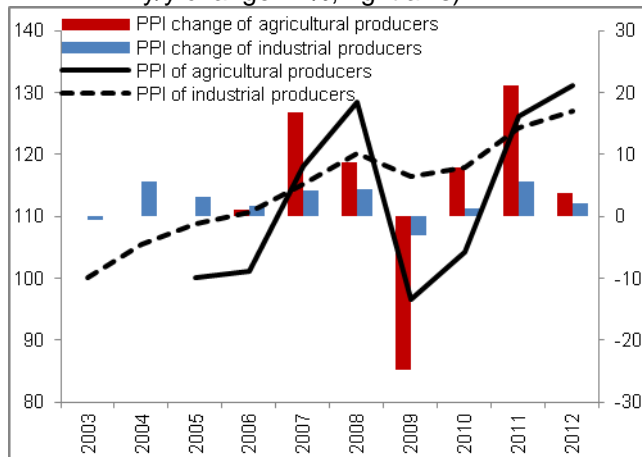
Important finding – an unfavourable one – is, that also the prices declined in reaction to the market situation of all types of construction works, their fall was not

<sup>1</sup> In constant prices (unless stated otherwise).

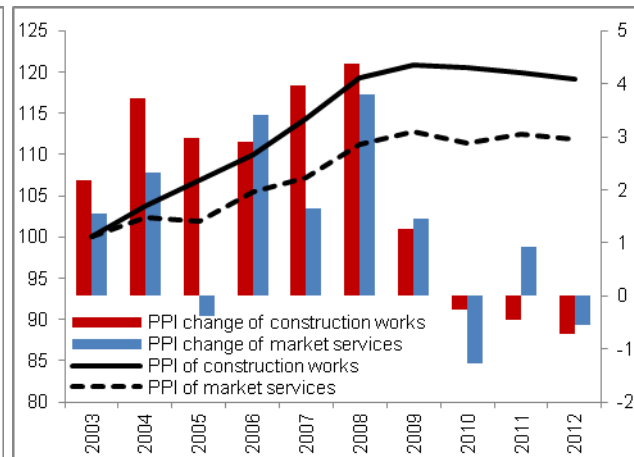
difficulties

marked – most prices were reduced by less than one percentage point. It proves that the prices of the construction sector production are already very low and further very difficult adaptation of prices to a potential lower demand.

**Chart 58 Prices of agricultural and industrial producers (2003=100 indus. producers, l. axis; 2005=100 agric. producers, l. axis; y/y change in %, right axis)**



**Chart 59 Prices of construction works and market services (2003=100, l. axis; y/y change in %, right axis)**



Source: CZSO

Mild year-on-year decrease of prices was after a year's pause apparent also in market services...

Prices of market services following a mild year-on-year increase in 2011 (by 0.9 %) again decreased, specifically by 0.6 %. Still it represented a decrease roughly halved in comparison to year 2010.

...weak demand lowered prices of services in the area of employment and advertising services...

The most significantly decreased the prices for water transportation (by 9.5 %), which were after considerable growth in 2011 (by 49.2 %) slightly corrected by this decrease. Out of market services were further falling the prices of services in the area of employment (-7.5 %) or prices of advertising and market research services (by 3.1 %). It is apparent, that these types of market services are in times of economic slowdown required on the part of firms less- companies reduce costs and search employees on their own and restrict also the expenses for advertising. Lower demand then reduces prices of these services. The reduction of prices occurred as a result of low construction activity also in architectural and engineering services (by 2.6 %).

...however it missed the prices of financial services, which seem to be rather resilient towards the fluctuations of the economic performance

Out of market services on the contrary were raised the prices of financial services apart from insurance industry and pension financing (by 2.4 %), that is especially banks. Prices of their services seem to be immune towards the external influences, since they grow practical constantly regardless of the state of the economy. It is likely that even despite considerable competition between financial institutions thus arises the increase of margins (assuming constant costs per unit of production, which can be considered in this sector).

Advertising in TV and radio causes long-time and significant seasonal fluctuation of prices of market services

Interesting is also the notable seasonal nature of prices of market services, which fall regularly in summer months (especially in June and July) and in winter months (mostly in November, December and January) – in other months they display a tendency to grow. This seasonal nature of the index of prices of market services is fundamentally influenced by the area of advertising agencies selling time on TV or in radio. The reason can be seen in lower viewer ratings in summer and winter months.

### 4.3. Prices in the foreign trade

Prices in the foreign trade in 2012 grew very notably – export prices however still lagged behind import prices

Dynamic development continued for the prices of foreign trade. In 2012 increased the export prices by 2.8 %, import by 4.3 %. Export prices increased second year in a row, prices of imports already third year. Export prices however still lagged behind import prices. Export price index rose in 2012 the fastest since year 2004, import prices grew by comparable rates of growth to year 2011.

With respect to year 2011 CZK depreciated against EUR and caused especially the rise of export prices. CZK depreciated also against USD, which strongly affected the prices of import mineral fuels and lubricants

Rate of CZK against EUR mildly devalued in Q4 2011, in 2012 it kept its value slightly above 25 CZK/EUR (rate was in 2012 on average by 2.2 % weaker than in 2011). This development on the foreign exchange market supported especially the growth of prices of Czech Republic exports, for the reason that large part of production ends in EMU – to euro area was exported in 2012 64 % of total value of exported goods, the proportion of imports from the euro area constituted only 51 % of total volume of imported goods. Rate of CZK weakened also against USD – it was on average in 2012 by 10.7 % weaker than in 2011. Weakening of CZK against USD pushed especially on the growth of import prices with the emphasis on the prices of mineral fuels and lubricants.

Export prices of beverages and tobacco grew in year 2012 already fourth year in a row, more significant price growth was observed also for chemicals and miscellaneous manufactured articles

Above average growth achieved the export prices in the area of beverages and tobacco (5.1 %), which were put up by still strong demand – prices of this good have grown already fourth year in a row. Increase of prices was observed also for chemicals (by 4.8 %) and miscellaneous manufactured articles (4.0 %). On the contrary a fall was faced by mineral fuels and lubricants (-2.5 %) – the fall was assisted by declining prices of electricity on the world market. Prices of the most significant by volume machinery and transport equipment after two-year fall in 2012 again increased (+2.8 %) – this price development favourably affected also the domestic segment of motor vehicle industry.

Significant growth continued for the import prices of mineral fuels and lubricants...

Continued double digit rise of the import prices of mineral fuels and lubricants (by 15.7 %), concretely for an already third year in a row. The decrease was not realised even with the help of temporary slump of prices of crude petroleum in the half of 2012 from the values of 126 USD/barrel to 89 USD/barrel – the prices were pushed up by weaker CZK against USD.

...the only group facing decrease of import prices were crude materials except fuels

Import prices of beverages and tobacco (9.9 %) and food and live animals (6.7 %) were significantly raised up. After two-years fall in years 2010 and 2011 grew also the import prices of machinery and transport equipment (2.7 %) and miscellaneous manufactured articles (2.6 %). Reasons for growth of import prices can be seen in high prices of crude petroleum, which are reflected in the prices of nearly all products. Their increase was also contributed by weak exchange rate of crown. Weak demand pressed against the rise of prices (not only domestic, but especially demand of large economies) – its decrease however did not manage to fully manifest in the import prices. The only group of products, whose prices in 2012 fell, were crude materials except fuels (-2.5 %) – the factor of weakened demand most likely prevailed.

Terms of trade fell already third year in a row

For the reason of higher growth of import prices fell in year 2012 the terms of trade – by 1.4 %. Worsening of the terms of trade thus continued already third year in a row and the last year, when they improved, remained year 2009 (+3.9 %). One of the main roles in this development played the prices of crude petroleum, which were since the dramatic fall in the second half of 2008 from value above 140 USD/barrel to 40 USD/barrel going up. As the CR is a net importer of crude petroleum, its gradual increase of its price was reflected on the part of import prices. Still the rate of fall of terms of trade gradually slowed down (2010 -3.0 %, 2011 -2.3 %), nevertheless it remained negative.

Chart 60 Terms of trade, export and import prices (2003=100, left axis; growth of prices and change in terms of trade y/y in %, right axis)

