

ANALYSIS

15 February 2012

EXTERNAL TRADE PRICE INDICES DEVELOPMENT IN Q4 2011 AND IN THE YEAR 2011

Quarter-on-quarter (q-o-q) comparison:

Export prices in **Q4 2011**, compared to **Q3 2011**, increased by 2.8% (in Q3 2011 they increased by 0.2%). **Import prices** increased by 3.3% (in Q3 2011 they rose by 0.3%).

In **export prices**, among the more important groups of goods, prices increased in 'miscellaneous manufactured articles' by 3.6%, 'machinery and transport equipment' by 3.4%, and 'manufactured goods classified chiefly by material' by 2.4%. The only drop in prices was recorded in 'crude materials, inedible, except fuels' by 1.4%.

In **import prices** rather important price increases were recorded in 'mineral fuels, lubricants and related materials' by 7.1%, 'miscellaneous manufactured articles' by 3.9%, 'machinery and transport equipment' by 3.1%, 'chemicals and related products' by 1.6%, and 'manufactured goods classified chiefly by material' by 1.2%. There was no drop in prices observed in any of the important groups of goods.

The **terms of trade figures** in **Q4 2011** compared to **Q3 2011** fell to 99.5% (in Q3 2011 they were 99.9%). More important negative values of the terms of trade were recorded in 'mineral fuels, lubricants and related materials' (95.9%), 'crude materials, inedible, except fuels' and 'food and live animals' (identically 97.5%), and 'chemicals and related products' (99.1%). Among the rather important groups, the highest positive values of terms of trade were reached in 'manufactured goods classified chiefly by material' (101.2%), and in 'machinery and transport equipment' (100.3%).

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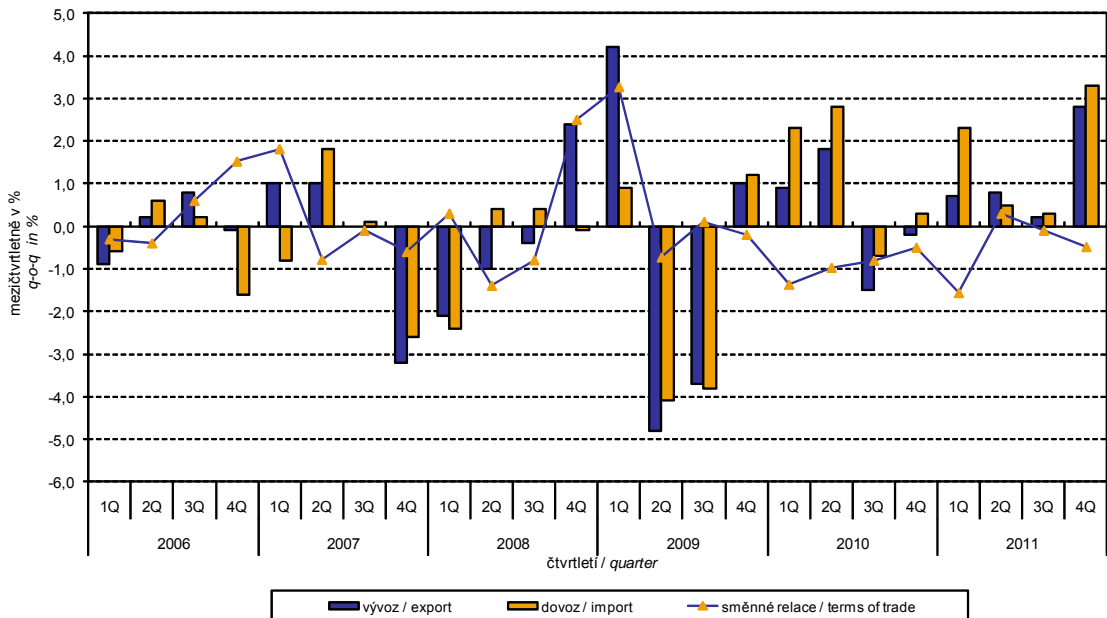
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Graf č. 1
Graph No. 1

Vývoj cen v zahraničním obchodě mezičtvrtletně
Price trends in external trade q-o-q



The external trade price development was also significantly affected by the CZK exchange rate to the major foreign currencies. The q-o-q exchange rate index includes two most important currencies from the Czech Republic's external trade point of view, i.e. EUR and USD. Q-o-q indices of the CZK exchange rate to these currencies were weighted by the weight, which pertains to those foreign currencies in the export price index and import price index, respectively.

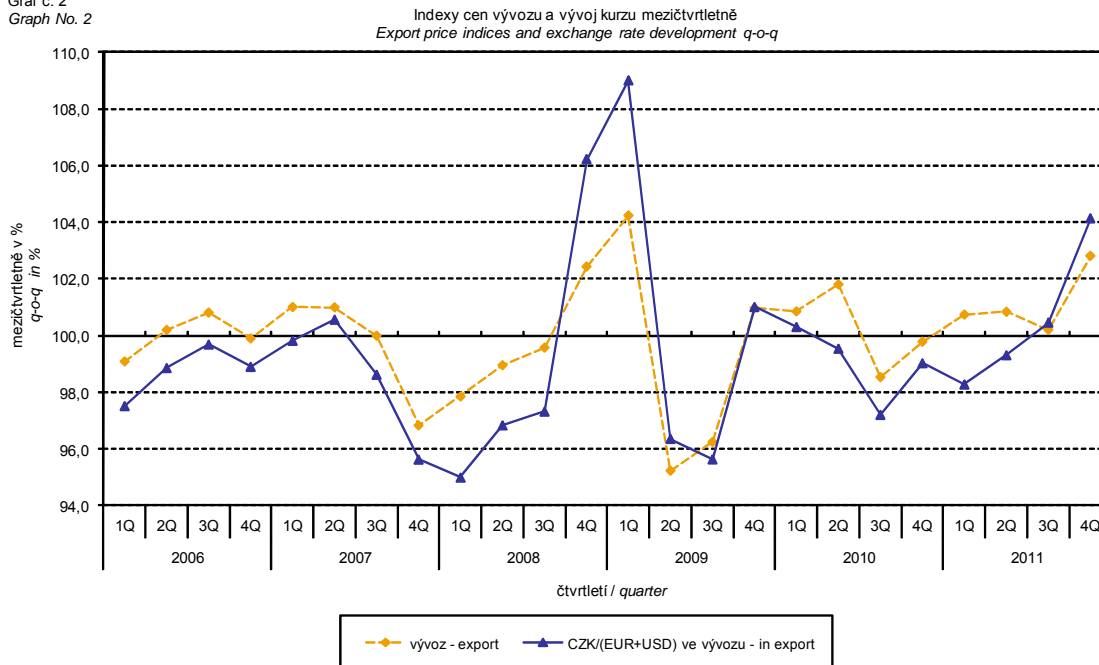
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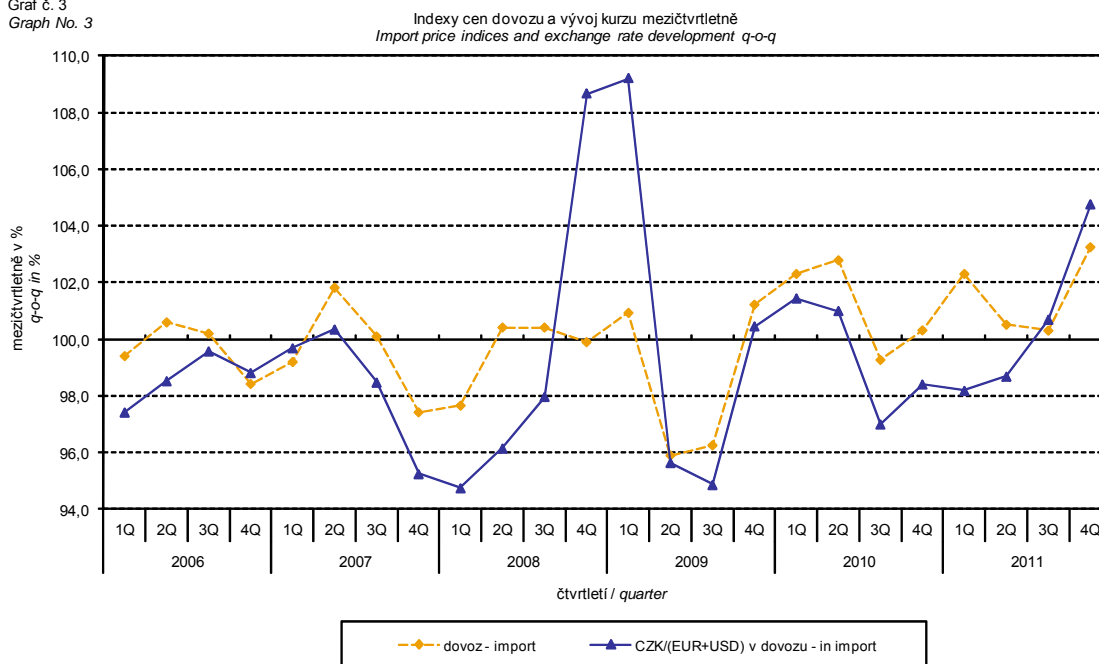
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Graf č. 2
Graph No. 2



Graf č. 3
Graph No. 3



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It can be seen from Graphs Nos. 2 and 3 above that in both cases of imports and exports external trade prices have a strong relation to exchange rate impacts. This relation could certainly be even stronger in the month-on-month (m-o-m) comparison; however, also in the q-o-q index it is relatively strong as the Graphs demonstrate. This conclusion is understandable because contracts with foreign entities are, as a rule, signed for a longer period of time and the longer the contract period is, the stronger the relation to exchange rates is.

Year-on-year (y-o-y) comparison:

Export prices in **Q4 2011** increased by 4.6% (in Q3 2011 they rose by 1.6%). More significant growth was reported for prices of 'mineral fuels, lubricants and related materials' by 10.8%, 'manufactured goods classified chiefly by material' and 'chemicals and related products' identically by 8.0%, 'miscellaneous manufactured articles' by 5.1%, and 'machinery and transport equipment' by 1.8%. There was no drop in prices observed in any of the groups monitored.

Import prices in **Q4 2011** increased by 6.5% (in Q3 2011 they rose by 3.4%). A growth of prices among the more important groups was indicated for 'mineral fuels, lubricants and related materials' by 30.8%, 'crude materials, inedible, except fuels' by 12.7%, 'chemicals and related products' by 6.1%, 'manufactured goods classified chiefly by material' by 4.2%, 'miscellaneous manufactured articles' by 3.1%, and 'machinery and transport equipment' by 0.5%. Prices of were the ones that dropped most by 1.5%. There was no drop in prices observed in any of the groups monitored.

Terms of trade in **Q4 2011** fell, year-on-year, to the value of 98.2% (by 0.1 percentage point (p.p.) less than in Q3 2011) and they continued in showing negative values for eight quarters – see Graph No. 4 below. Rather important negative values were recorded for 'mineral fuels, lubricants and related materials' (84.7%) and 'crude materials, inedible, except fuels' (93.3%). Among more important groups, positive values of terms of trade were recorded in 'manufactured goods classified chiefly by material' (103.6%), 'miscellaneous manufactured articles' (101.9%), and in 'machinery and transport equipment' (101.3%).

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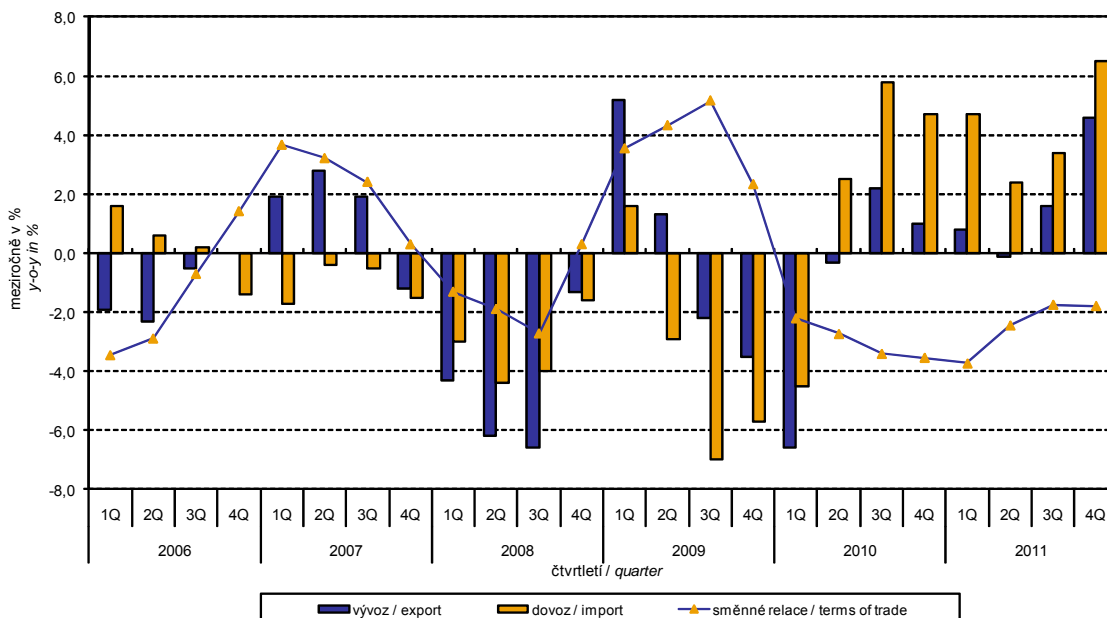
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Graf č. 4
Graph No. 4

Vývoj cen v zahraničním obchodě meziročně
Price trends in external trade y-o-y



Price development in 2011

On average over the whole year 2011 **export prices** increased by 1.7% (in 2010 they fell by 1.0%). **Import prices** grew by 4.3% (in 2010 they increased by 2.0%).

In **export prices** highest increases were noticed in groups of 'mineral fuels, lubricants and related materials' by 13.0%, 'crude materials, inedible, except fuels' by 10.5%, and 'chemicals and related products' by 7.4%. Among the more important groups it was solely 'machinery and transport equipment', which prices fell by 2.5%.

In **import prices** important price increases were recorded in 'mineral fuels, lubricants and related materials' by 24.4%, 'crude materials, inedible, except fuels' by 23.1%, 'manufactured goods classified chiefly by material' by 5.1%, and 'chemicals and related products' by 4.9%. Prices dropped in 'machinery and transport equipment' by 2.7% and 'miscellaneous manufactured articles' by 1.3%.

Terms of trade reached in total in 2011 the negative value of 97.5% (they were 97.1% in 2010).

It follows from the aforementioned, that external trade prices are exposed to many effects, among others, also to the CZK exchange rate to foreign currencies. This influence is important and often even the decisive one. It is most pronounced in the m-o-m expression; but it is also very significant in the quarter-on-quarter comparison and substantially affects the level of y-o-y external trade price indices. The development of quarterly exchange rates (y-o-y changes) is demonstrated in Graph No. 5.

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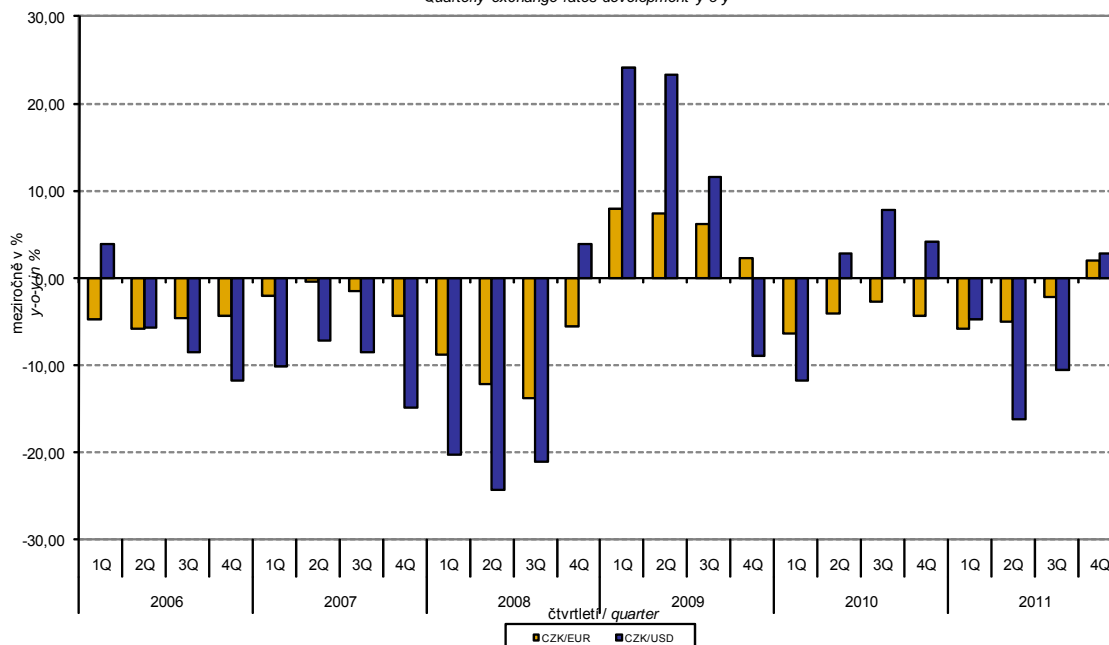
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Graf č. 5
Graph No. 5

Vývoj čtvrtletních kurzů meziročně
Quarterly exchange rates development y-o-y



External trade price indices adjusted y-o-y for exchange rate influence

The CZSO also carries out calculations of year-on-year external trade price indices adjusted for exchange rate influence. The method is prices in foreign currencies reported in the current month are **converted** into Czech crowns by the **exchange rate** of the same month **of the last year**. Then they are used for the weighted mean calculation along with prices reported in CZK. The year-on-year adjusted price index is then calculated the way that this exchange rate adjusted base price index is related to the non-adjusted base price index of the same month of the last year. **Differences among adjusted and non-adjusted price indices may be substantial.** They can be clearly seen in Graphs Nos. 6 and 7 for February 2009, for instance. The method employed does not enable, for many practical reasons, to carry out 100% exchange rate adjustment because all trade transactions concluded in foreign currencies are not reported in foreign currencies. This share is up to 30%. It follows from the aforementioned, that **at the full exchange rate adjustment differences** in between the price indices published and the exchange rate adjusted price indices would **be even larger**.

The aforementioned exchange rate adjusted indices can be used to form the exchange rate adjusted breakdown of price indices increments. Table 1, page 10, gives the **published and exchange rate adjusted breakdown of increments** of export and import price indices, expanded to the most important two-digit code groups of the SITC 7. This breakdown illustrates, in good manner, how many percentage points each of the groups “exchange rate contributed” to the index.

It holds in general that the exchange rate influence decreases the value of price indices in external trade if CZK is strengthening to foreign currencies in total. Conversely, the exchange rate influence pushes the price indices up if CZK is weakening to foreign currencies in total. It is

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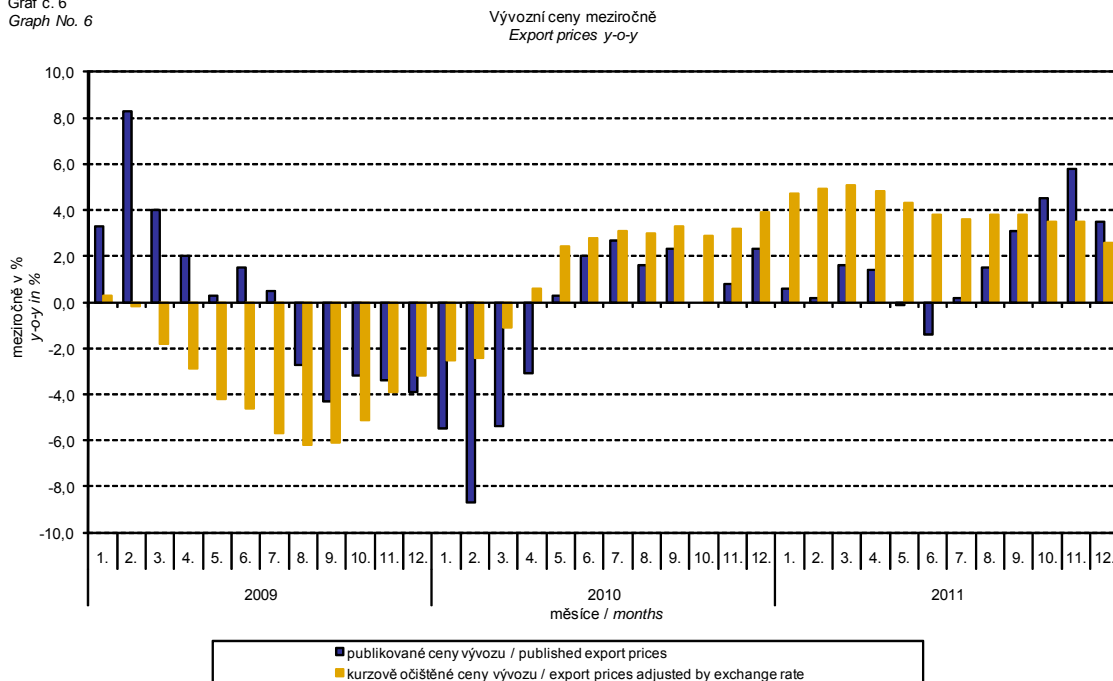
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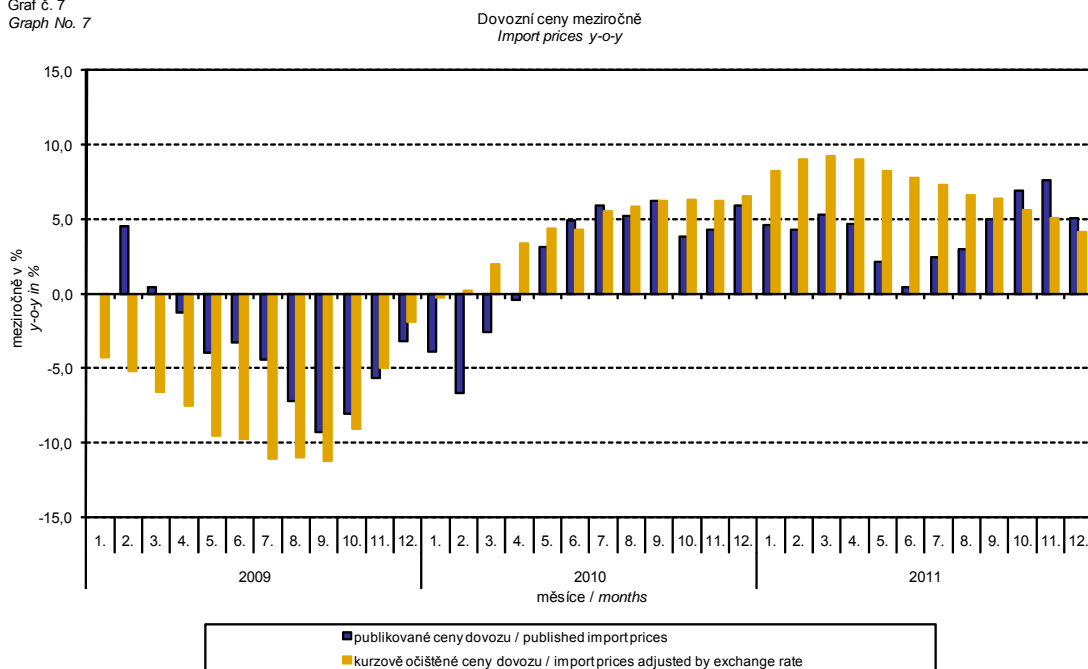
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clear from following Graphs Nos. 6 and 7 how significant was the exchange rate impact on the value of export and import price indices.

Graf č. 6
Graph No. 6



Graf č. 7
Graph No. 7



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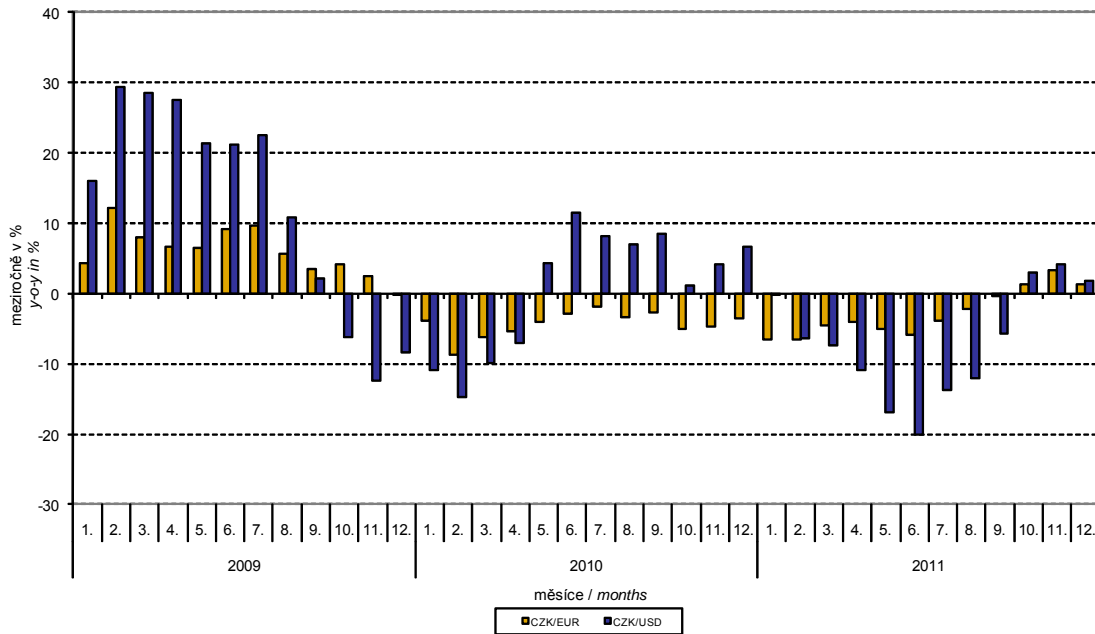
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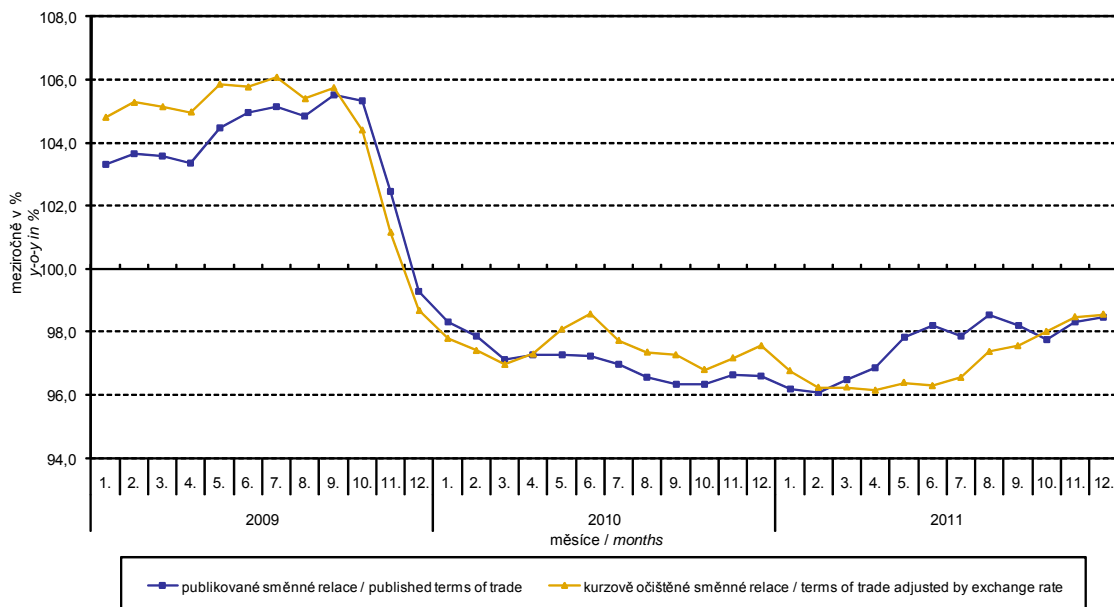
Graf č. 8
Graph No. 8

Vývoj měsíčních kurzů meziročně
Monthly exchange rates development y-o-y



Graf č. 9
Graph No. 9

Směnné relace meziročně
Terms of trade y-o-y



It can be seen from Graph No. 9 how the exchange rate influences the value of year-on-year terms of trade.

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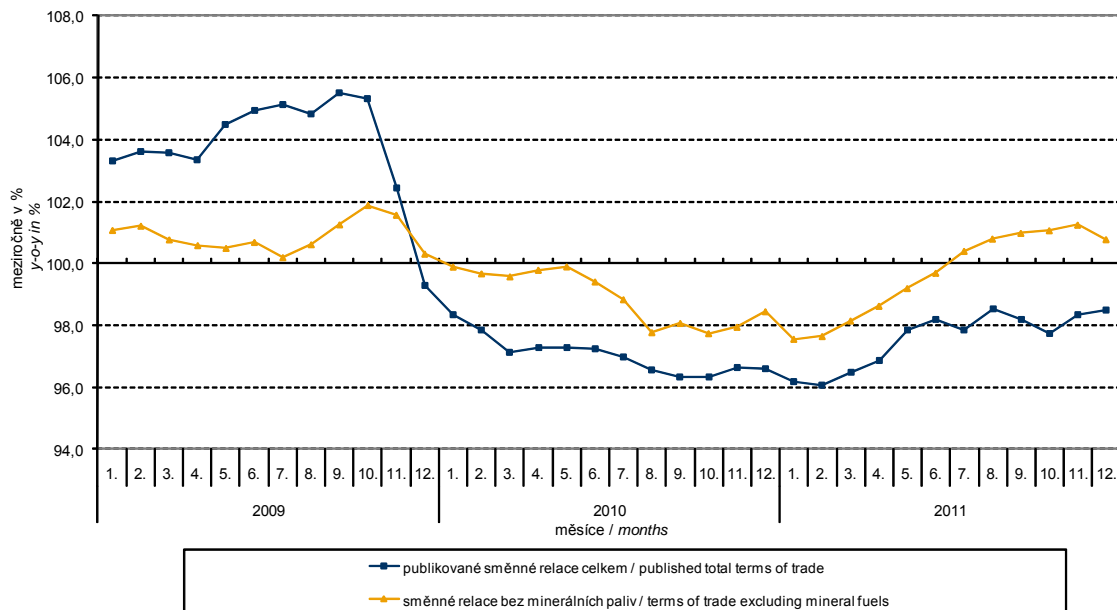
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Graph No. 10 demonstrates how the value of terms of trade would develop if the observed groups would not include that of 'mineral fuels, lubricants and related materials'.

Graf č.10
Graph No. 10

Publikované směnné relace a směnné relace s vyloučením minerálních paliv meziročně
Published terms of trade and terms of trade excluding mineral fuels y-o-y



It can be observed in Graph No. 10 that 'mineral fuels, lubricants and related materials' were increasing the overall value of y-o-y terms of trade in the period from January 2009 to November 2009. This is most seen right in Q2 and Q3 2009. In Q4 2009 the situation began to reverse and in December 2009 'mineral fuels, lubricants and related materials' had again a downward effect on the value of terms of trade. It is, of course, related to the world market price development, especially in crude oil. Import prices, which, compared to export prices, include a higher proportion of crude materials, respond in a more sensitive way to price turbulences and therefore when prices of crude materials go up, terms of trade, as a rule, go down and, conversely, when prices of crude materials fall, terms of trade grow.

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Tabulka 1: Rozklad přírůstků publikovaných a kurzově očištěných indexů cen vývozu a dovozu za prosinec 2011
Table 1: Breakdown of export and import price indices - published and adjusted by exchange rate influences for December 2011

SITC	Název Name	Publikované Published				Očištěné Adjusted			
		Meziměsíční M-o-m	Meziroční Year-on-year			Meziměsíční M-o-m	Meziroční Year-on-year		
			10/2011	11/2011	12/2011		12/2011	10/2011	11/2011
Rozklad přírůstků indexů vývozních cen <i>Breakdown of export price indices</i>									
	Celkem <i>Total</i>	0,3	4,5	5,8	3,5	-0,1	3,5	3,5	2,6
0	Potraviny a živá zvířata <i>Food and live animals</i>	0,0	0,2	0,3	0,2	0,0	0,2	0,2	0,2
1	Nápoje a tabák <i>Beverages and tobacco</i>	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
2	Suroviny nepoživatelné, s výjimkou paliv <i>Crude materials, inedible, except fuels</i>	0,1	0,2	0,2	0,1	0,1	0,2	0,2	0,1
3	Minerální paliva, maziva a příbuzné materiály <i>Mineral fuels, lubricants and related materials</i>	-0,2	0,5	0,6	0,3	-0,2	0,4	0,6	0,3
4	Živočišné a rostlinné oleje <i>Animal and vegetable oils, fats and waxes</i>	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
5	Chemikálie a příbuzné výrobky <i>Chemicals and related products</i>	0,0	0,6	0,6	0,3	-0,1	0,5	0,4	0,2
6	Tržní výrobky tříděné hlavně podle materiálu <i>Manufactured goods classified chiefly by material</i>	0,0	1,8	2,1	1,7	0,0	1,6	1,6	1,5
7	Stroje a dopravní prostředky - z toho: <i>Machinery and transport equipment - thereof:</i>	0,4	0,7	1,4	0,5	0,1	0,2	0,2	0,0
74	Stroje a zařízení všeobecně užívané v průmyslu, j.n. <i>General industrial machinery and equipment, n.e.s.</i>	0,1	0,2	0,1	0,0	0,0	0,1	-0,1	-0,1
77	Elektrická zařízení, přístroje a spotřebiče, j.n. <i>Electrical machinery, apparatus and appliances, n.e.s.</i>	0,0	0,1	0,3	-0,1	0,0	0,0	0,0	-0,2
78	Silniční vozidla <i>Road vehicles (including air-cushion vehicles)</i>	0,1	0,1	0,4	0,1	0,0	0,0	0,0	0,1
8	Průmyslové spotřební zboží <i>Miscellaneous manufactured articles</i>	0,0	0,5	0,6	0,4	0,0	0,4	0,3	0,3
Rozklad přírůstků indexů dovozních cen <i>Breakdown of import price indices</i>									
	Celkem <i>Total</i>	0,8	6,9	7,6	5,1	0,1	5,6	5,1	4,1
0	Potraviny a živá zvířata <i>Food and live animals</i>	0,1	0,2	0,2	0,1	0,1	0,2	0,1	0,1
1	Nápoje a tabák <i>Beverages and tobacco</i>	0,0	0,1	0,1	0,1	0,0	0,1	0,1	0,1
2	Suroviny nepoživatelné, s výjimkou paliv <i>Crude materials, inedible, except fuels</i>	0,0	0,4	0,5	0,4	0,0	0,3	0,5	0,4
3	Minerální paliva, maziva a příbuzné materiály <i>Mineral fuels, lubricants and related materials</i>	0,2	4,1	4,0	3,0	-0,1	3,8	3,6	2,8
4	Živočišné a rostlinné oleje <i>Animal and vegetable oils, fats and waxes</i>	0,0	0,1	0,1	0,0	0,0	0,1	0,0	0,0
5	Chemikálie a příbuzné výrobky <i>Chemicals and related products</i>	0,0	0,7	0,8	0,5	0,0	0,6	0,5	0,4
6	Tržní výrobky tříděné hlavně podle materiálu <i>Manufactured goods classified chiefly by material</i>	0,1	0,9	1,1	0,7	0,0	0,7	0,6	0,5
7	Stroje a dopravní prostředky - z toho: <i>Machinery and transport equipment - thereof:</i>	0,4	0,1	0,5	0,1	0,1	-0,4	-0,4	-0,3
74	Stroje a zařízení všeobecně užívané v průmyslu, j.n. <i>General industrial machinery and equipment, n.e.s.</i>	0,0	0,2	0,3	0,2	0,0	0,1	0,1	0,1
75	Kancelářské stroje a zař. k automat. zpracování dat <i>Office machines and automatic data-processing machines</i>	0,0	-0,3	-0,2	-0,3	0,0	-0,3	-0,3	-0,3
77	Elektrická zařízení, přístroje a spotřebiče, j.n. <i>Electrical machinery, apparatus and appliances, n.e.s.</i>	0,1	0,2	0,3	0,1	0,0	0,1	0,0	-0,1
78	Silniční vozidla <i>Road vehicles (including air-cushion vehicles)</i>	0,1	0,0	0,2	0,2	0,1	-0,1	0,0	0,1
8	Průmyslové spotřební zboží <i>Miscellaneous manufactured articles</i>	0,0	0,3	0,3	0,2	0,0	0,2	0,1	0,1

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Closing Table gives published external trade price indices **without adjustment**.

Tabulka 2: Indexy cen vývozu a dovozu ve 4. čtvrtletí 2011

Table 2: Export and Import Price Indices in Q4 2011

SITC	Název Name	Stejně období předchozího roku = 100 Corresponding period of previous year = 100				
		3Q/2011	10/2011	11/2011	12/2011	4Q/2011
Indexy vývozních cen Export Price Indices						
	Celkem <i>Total</i>	101,6	104,5	105,8	103,5	104,6
0	Potraviny a živá zvířata <i>Food and live animals</i>	105,4	106,3	107,3	104,8	106,1
1	Nápoje a tabák <i>Beverages and tobacco</i>	103,5	105,0	106,5	106,0	105,8
2	Suroviny nepoživatelné, s výjimkou paliv <i>Crude materials, inedible, except fuels</i>	108,5	105,8	106,2	103,7	105,2
3	Minerální paliva, maziva a příbuzné materiály <i>Mineral fuels, lubricants and related materials</i>	109,1	111,5	115,2	106,0	110,8
4	Živočišné a rostlinné oleje <i>Animal and vegetable oils, fats and waxes</i>	102,6	108,6	107,0	102,7	106,0
5	Chemikálie a příbuzné výrobky <i>Chemicals and related products</i>	108,3	110,1	109,0	105,0	108,0
6	Tržní výrobky tříděné hlavně podle materiálu <i>Manufactured goods classified chiefly by material</i>	105,5	107,6	109,1	107,4	108,0
7	Stroje a dopravní prostředky <i>Machinery and transport equipment</i>	97,7	101,5	102,8	101,0	101,8
8	Průmyslové spotřební zboží <i>Miscellaneous manufactured articles</i>	100,9	104,9	105,8	104,5	105,1
Indexy dovozních cen Import Price Indices						
	Celkem <i>Total</i>	103,4	106,9	107,6	105,1	106,5
0	Potraviny a živá zvířata <i>Food and live animals</i>	100,3	104,7	103,6	102,2	103,5
1	Nápoje a tabák <i>Beverages and tobacco</i>	107,7	111,1	111,9	112,5	111,8
2	Suroviny nepoživatelné, s výjimkou paliv <i>Crude materials, inedible, except fuels</i>	112,9	110,6	116,0	111,6	112,7
3	Minerální paliva, maziva a příbuzné materiály <i>Mineral fuels, lubricants and related materials</i>	126,0	136,1	133,9	123,3	130,8
4	Živočišné a rostlinné oleje <i>Animal and vegetable oils, fats and waxes</i>	129,4	123,0	120,3	113,6	118,8
5	Chemikálie a příbuzné výrobky <i>Chemicals and related products</i>	104,8	106,5	107,1	104,8	106,1
6	Tržní výrobky tříděné hlavně podle materiálu <i>Manufactured goods classified chiefly by material</i>	104,2	104,1	105,3	103,4	104,2
7	Stroje a dopravní prostředky <i>Machinery and transport equipment</i>	96,3	100,1	101,3	100,2	100,5
8	Průmyslové spotřební zboží <i>Miscellaneous manufactured articles</i>	98,3	103,2	103,9	102,3	103,1

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