

ANALYSIS

15 February 2013

EXTERNAL TRADE PRICE INDICES DEVELOPMENT IN Q4 2012 AND IN THE YEAR 2012

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

Export prices in **Q4 2012**, compared to **Q3 2012**, decreased by 0.1% (in Q3 2012 they decreased by 0.5%). **Import prices** decreased by 0.5% (in Q3 2012 they decreased by 0.7%).

In **export prices**, among the more important groups of goods, prices decreased in 'mineral fuels, lubricants and related materials' by 2.2%, 'manufactured goods classified chiefly by material' by 0.7%, and in 'machinery and transport equipment' by 0.2%. A rather significant increase in prices was recorded in 'food and live animals' by 2.1%, chemicals and related products' by 1.7%, and in 'miscellaneous manufactured articles' by 0.7%.

In **import prices** rather important price decreases were recorded in 'crude materials, inedible, except fuels' by 5.6%, 'mineral fuels, lubricants and related materials' by 1.6%, and 'machinery and transport equipment' by 0.7%. An increase in prices was recorded for 'food and live animals' by 2.9% and for 'chemicals and related products' by 0.9%.

The **terms of trade figures** in **Q4 2012**, compared to **Q3 2012**, reached 100.4% (in Q3 2012 they were 100.2%). Rather important positive values of terms of trade were reached in 'crude materials, inedible, except fuels' (105.4%), 'miscellaneous manufactured articles' (100.9%), and 'machinery and transport equipment' (100.5%). Among important groups of goods, negative values of terms of trade were reached in 'food and live animals' (99.2%), and in 'mineral fuels, lubricants and related materials' and 'manufactured goods classified chiefly by material' (both identically 99.4%).

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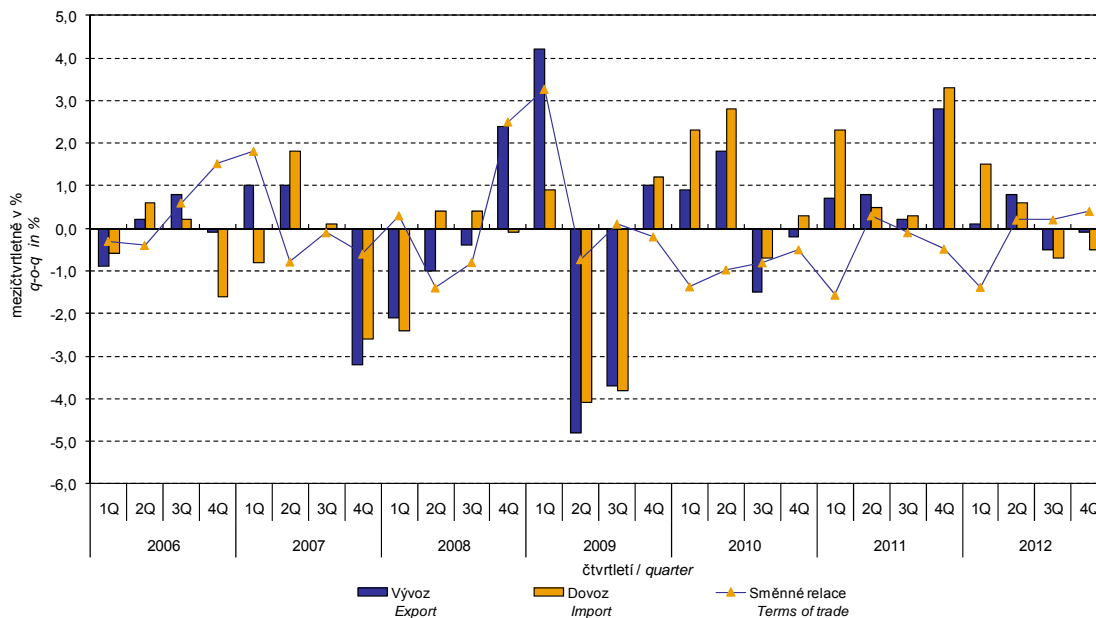
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Graf č. 1
Graph No. 1

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.

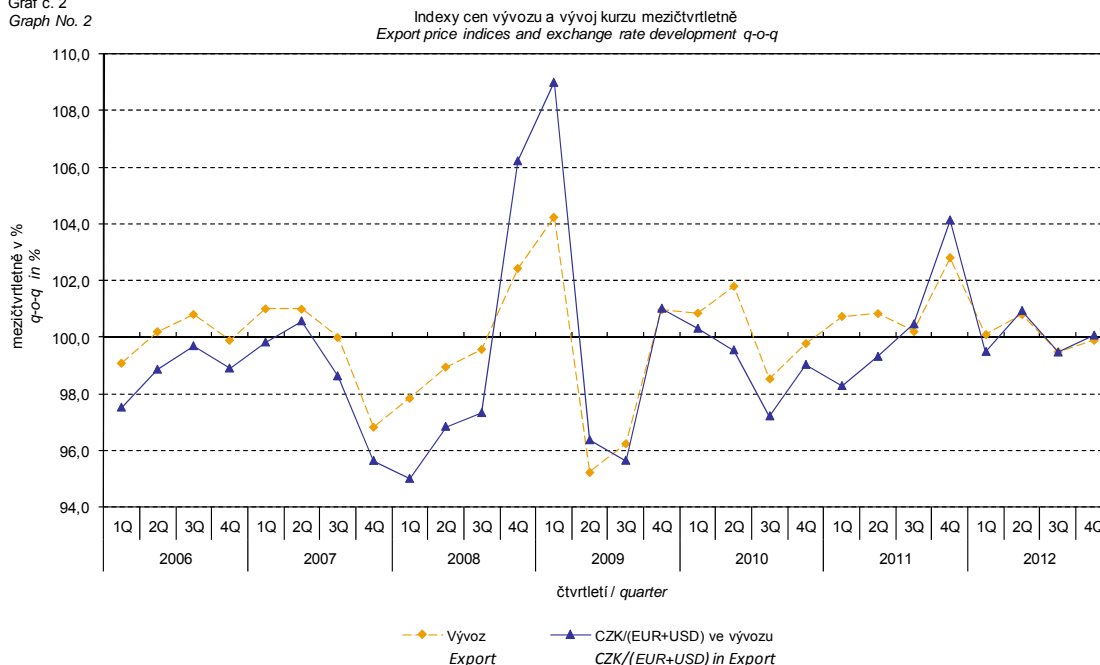
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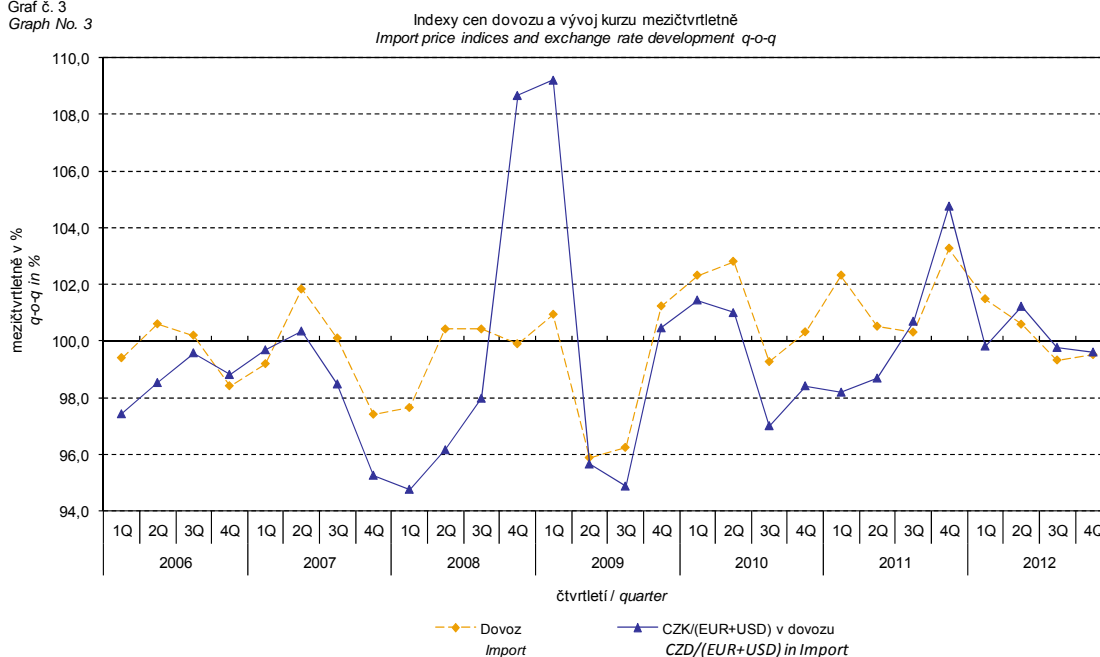
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Graf č. 2
Graph No. 2



Graf č. 3
Graph No. 3



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.

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

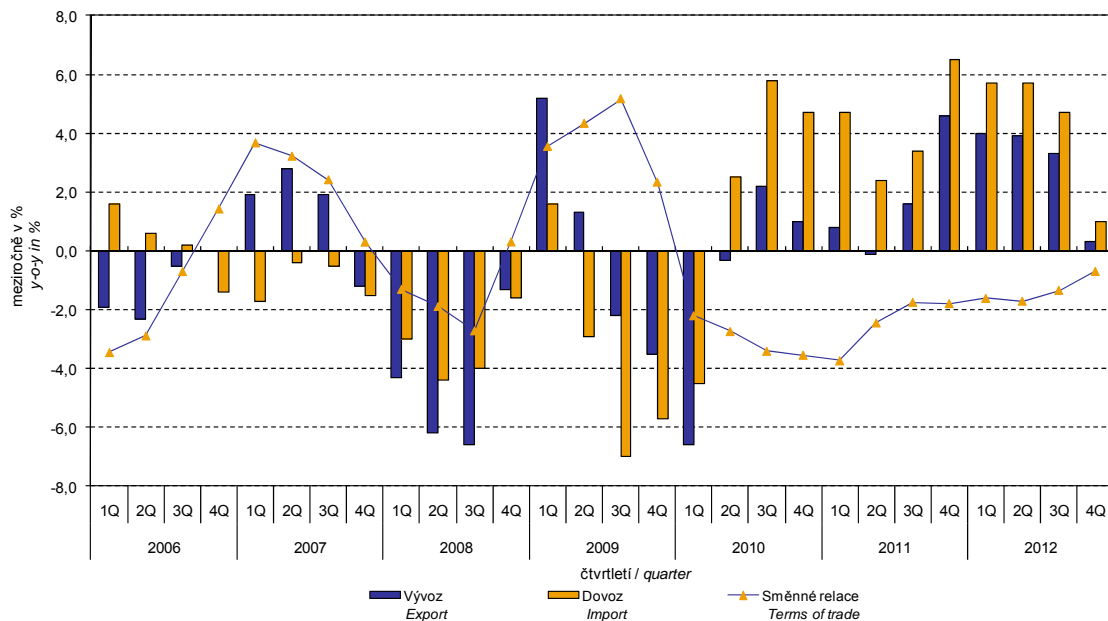
Export prices in **Q4 2012** increased by 0.3% (in Q3 2012 they rose by 3.3%). Among more important groups of goods, a growth was reported for prices of 'food and live animals' by 5.0%, 'chemicals and related products' by 4.1%, 'crude materials, inedible, except fuels' by 4.0%, 'miscellaneous manufactured articles' by 1.5%, and of 'machinery and transport equipment' by 0.3%. The biggest drop was recorded for prices of 'mineral fuels, lubricants and related materials' by 7.2% and of 'manufactured goods classified chiefly by material' by 0.9%.

Import prices in **Q4 2012** increased by 1.0% (in Q3 2012 they rose by 4.7%). A growth of prices among the more important groups was indicated for 'food and live animals' by 7.1%, 'mineral fuels, lubricants and related materials' by 5.3% (in Q3 2012 they rose by 14.7%) and for 'machinery and transport equipment' by 0.4%. There were drops in prices observed in 'crude materials, inedible, except fuels' by 10.1%, then in prices of 'manufactured goods classified chiefly by material' and in 'miscellaneous manufactured articles' identically by 0.8%.

Terms of trade in **Q4 2012** increased, year-on-year, to the value of 99.3% (by 0.6 percentage point (p.p.) more than in Q3 2012), yet nevertheless they had continued in showing negative values for the twelfth quarter – see Graph No. 4 below. Rather important negative values were recorded for 'mineral fuels, lubricants and related materials' (88.1%), 'food and live animals' (98.0%), and for 'machinery and transport equipment' (99.9%). Among more important groups, positive values of terms of trade were recorded in 'crude materials, inedible, except fuels' (115.7%), 'miscellaneous manufactured articles' (102.3%), and in 'chemicals and related products' (101.5%).

Graf č. 4
Graph No. 4

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



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Price development in 2012

On average over the whole year 2012 **export prices** increased by 2.9% (in 2011 they rose by 1.7%). **Import prices** grew by 4.2% (in 2011 they increased by 4.3%).

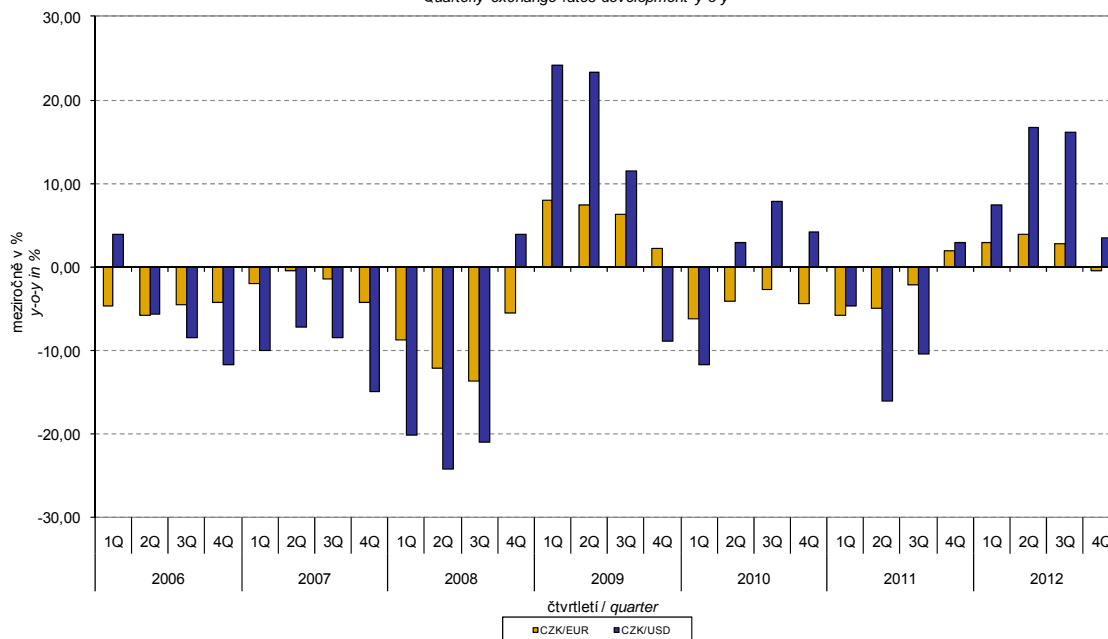
In **export prices** highest increases were noticed in groups of 'chemicals and related products' by 4.8%, 'miscellaneous manufactured articles' by 4.0%, 'food and live animals' by 3.9%, 'crude materials, inedible, except fuels' by 3.5%, and 'machinery and transport equipment' by 2.8%. Among the more important groups prices dropped most in 'mineral fuels, lubricants and related materials' by 2.4%.

In **import prices** important price increases were recorded in 'mineral fuels, lubricants and related materials' by 15.7% (in 2011 they rose by 24.4%), food and live animals' by 6.7%, 'chemicals and related products' by 3.6%, and in 'machinery and transport equipment' by 2.7%. The only group that saw a drop in prices was 'crude materials, inedible, except fuels' by 2.6%.

Terms of trade reached in total in 2012 the value of 98.8% (they were 97.5% in 2011) and this means they have been negative for the third year in a row.

Graf č. 5
Graph No. 5

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



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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 effects of exchange rate. 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 11, gives the **published and exchange rate adjusted breakdowns of increments** of export and import price indices, expanded to the most important two-digit code groups of the SITC 7. These breakdowns illustrate, in good manner, how many percentage points each of the groups “exchange rate contributed” to the index.

It holds in general that the effects of exchange rate decrease the value of price indices in external trade if CZK is strengthening to foreign currencies in total. Conversely, the effects of exchange rate push the price indices up if CZK is weakening to foreign currencies in total. It is obvious from following Graphs Nos. 6 and 7 how significant was the exchange rate impact on the value of export and import price indices.

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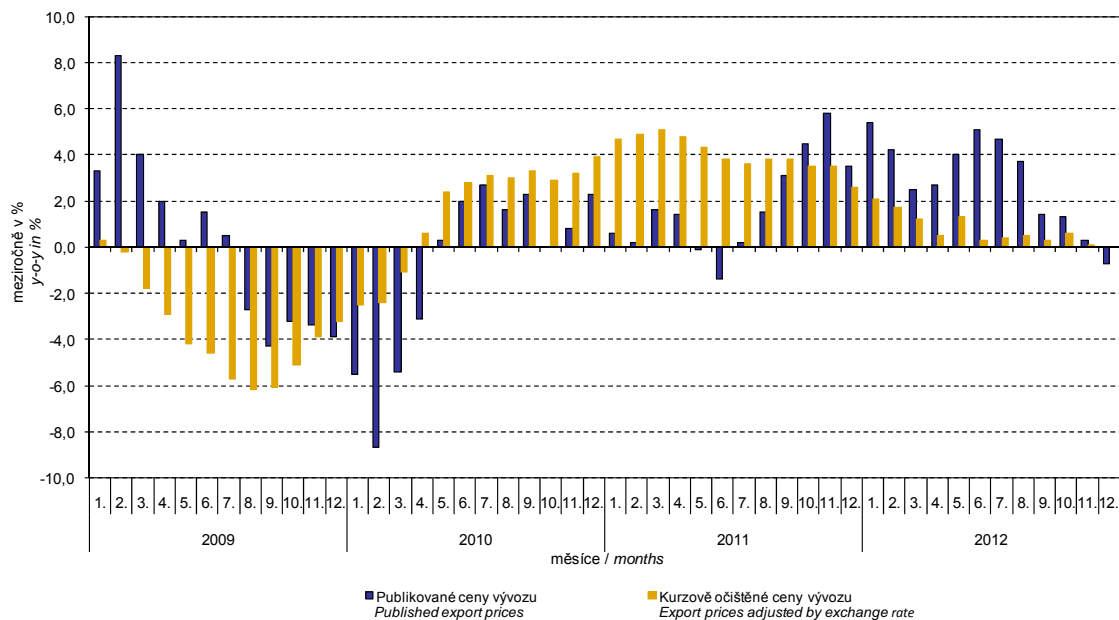
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Graf č. 6
Graph No. 6

Vývozní ceny meziročně
Export prices y-o-y



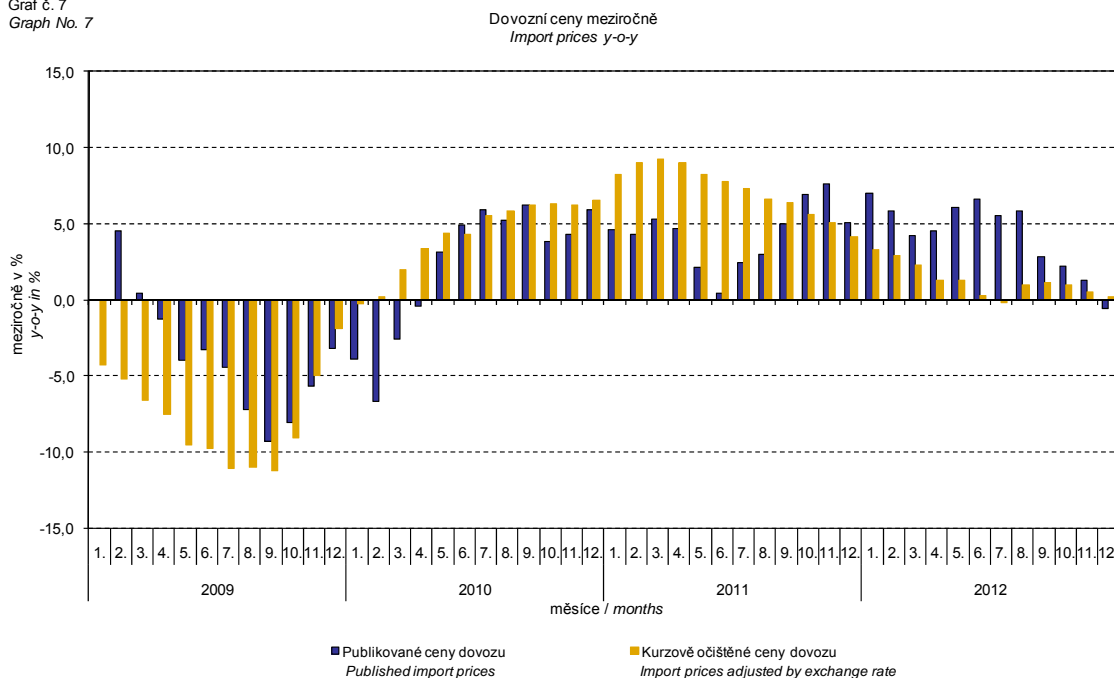
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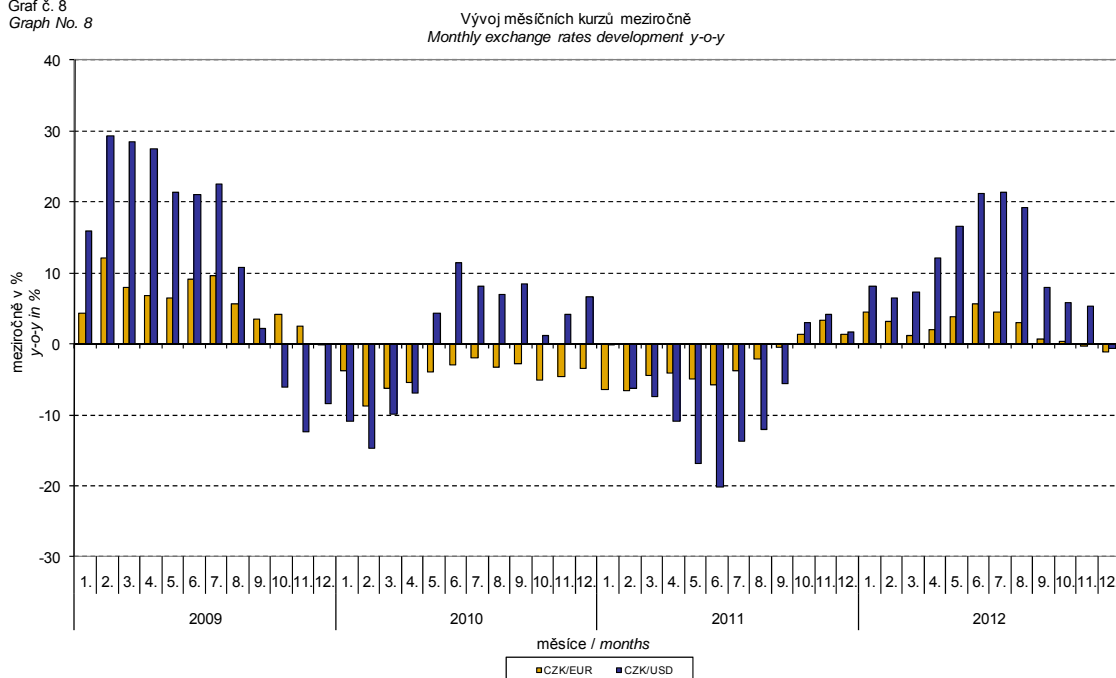
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Graf č. 7
Graph No. 7



Graf č. 8
Graph No. 8



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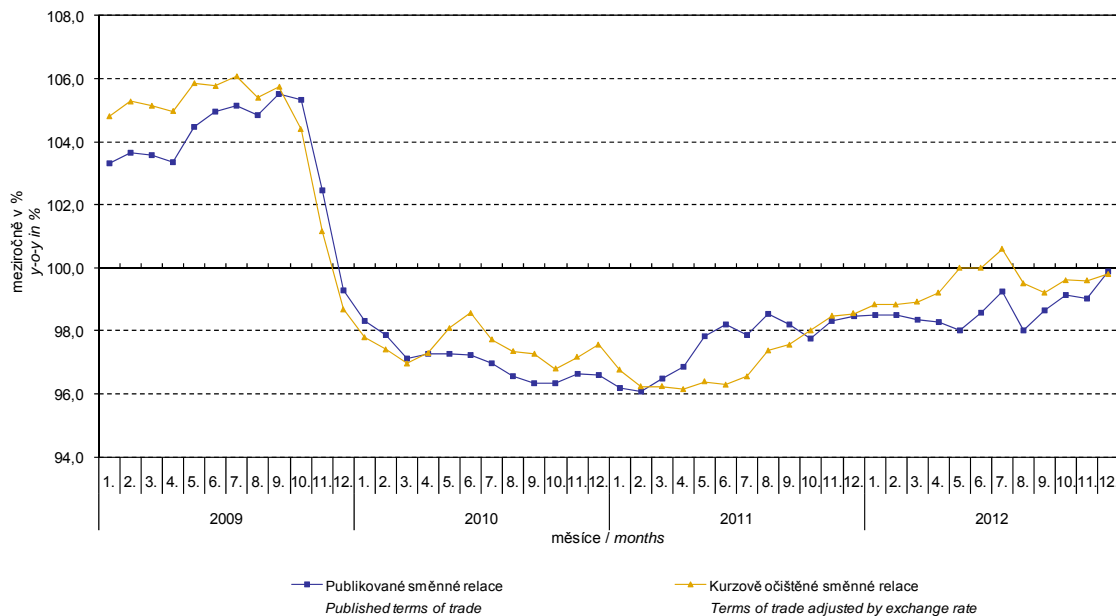
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Graf č. 9
Graph No. 9

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 the year-on-year terms of trade.

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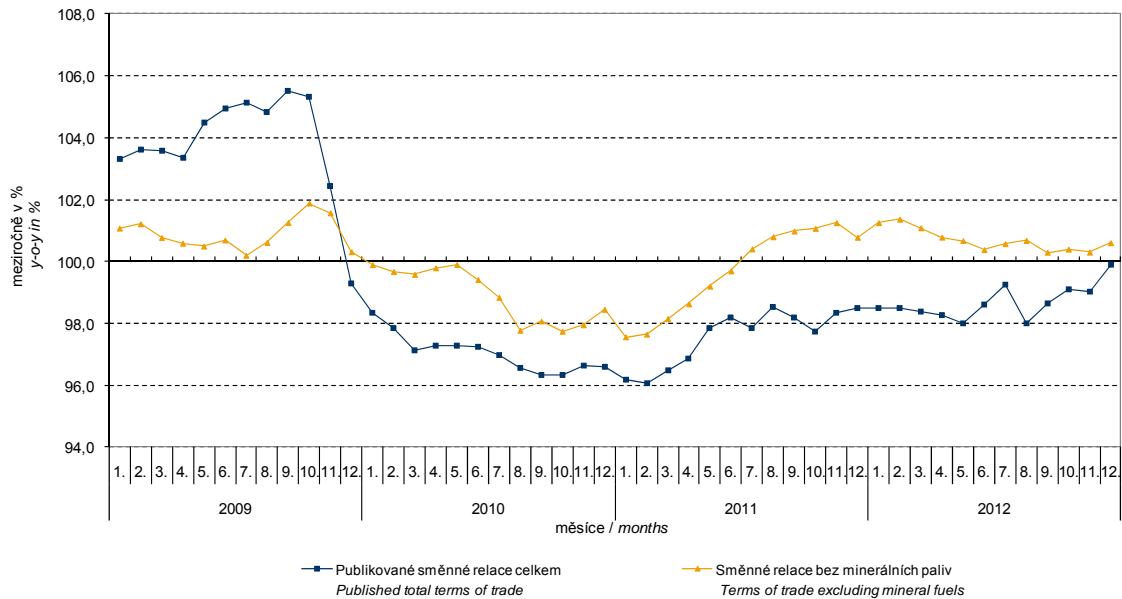
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Graph No. 10 demonstrates how the value of terms of trade would develop if the observed groups would not include that of 'mineral fuels, lubricants and related materials'.

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 since December 2009 'mineral fuels, lubricants and related materials' have 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 2012
Table 1: Breakdown of export and import price indices - published and adjusted by exchange rate influences for December 2012

SITC	Název Name	Publikované Published				Očištěné Adjusted			
		Meziměsíční M-o-m	Meziroční Year-on-year			Meziměsíční M-o-m	Meziroční Year-on-year		
		12/2012	10/2012	11/2012	12/2012	12/2012	10/2012	11/2012	12/2012
Rozklad přírůstků indexů vývozních cen <i>Breakdown of export price indices</i>									
	Celkem <i>Total</i>	-0,7	1,3	0,3	-0,7	-0,1	0,6	0,1	0,0
0	Potraviny a živá zvířata <i>Food and live animals</i>	0,0	0,2	0,2	0,2	0,0	0,1	0,2	0,1
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>	0,0	0,2	0,1	0,0	0,0	0,2	0,1	0,1
3	Minerální paliva, maziva a příbuzné materiály <i>Mineral fuels, lubricants and related materials</i>	-0,1	-0,2	-0,4	-0,4	-0,1	-0,2	-0,4	-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	0,2	0,3	0,3	0,0	0,2	0,3	0,4
6	Tržní výrobky tříděné hlavně podle materiálu <i>Manufactured goods classified chiefly by material</i>	-0,2	0,1	-0,3	-0,4	0,0	0,0	-0,3	-0,3
7	Stroje a dopravní prostředky - z toho: <i>Machinery and transport equipment - thereof:</i>	-0,3	0,6	0,2	-0,4	0,0	0,1	0,0	-0,1
74	Stroje a zařízení všeobecně užívané v průmyslu, j.n. <i>General industrial machinery and equipment, n.e.s.</i>	-0,1	0,0	0,0	-0,1	0,0	-0,1	0,0	-0,1
77	Elektrická zařízení, přístroje a spotřebiče, j.n. <i>Electrical machinery, apparatus and appliances, n.e.s.</i>	-0,1	0,1	0,0	-0,1	0,0	0,0	0,0	0,0
78	Silniční vozidla <i>Road vehicles (including air-cushion vehicles)</i>	-0,1	0,2	0,1	0,0	0,0	0,1	0,0	0,0
8	Průmyslové spotřební zboží <i>Miscellaneous manufactured articles</i>	-0,1	0,2	0,2	0,0	0,0	0,2	0,2	0,1
Rozklad přírůstků indexů dovozních cen <i>Breakdown of import price indices</i>									
	Celkem <i>Total</i>	-1,1	2,2	1,3	-0,6	-0,3	1,0	0,5	0,2
0	Potraviny a živá zvířata <i>Food and live animals</i>	0,0	0,3	0,4	0,3	0,0	0,3	0,3	0,3
1	Nápoje a tabák <i>Beverages and tobacco</i>	0,0	0,0	0,1	0,1	0,0	0,0	0,1	0,1
2	Suroviny nepoživatelné, s výjimkou paliv <i>Crude materials, inedible, except fuels</i>	-0,1	-0,2	-0,4	-0,5	0,0	-0,3	-0,4	-0,4
3	Minerální paliva, maziva a příbuzné materiály <i>Mineral fuels, lubricants and related materials</i>	-0,5	1,3	0,9	0,2	-0,2	0,7	0,4	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	0,3	0,3	0,2	0,0	0,3	0,2	0,3
6	Tržní výrobky tříděné hlavně podle materiálu <i>Manufactured goods classified chiefly by material</i>	-0,1	0,0	-0,2	-0,4	0,0	-0,1	-0,2	-0,2
7	Stroje a dopravní prostředky - z toho: <i>Machinery and transport equipment - thereof:</i>	-0,4	0,5	0,3	-0,4	-0,1	0,2	0,2	-0,1
74	Stroje a zařízení všeobecně užívané v průmyslu, j.n. <i>General industrial machinery and equipment, n.e.s.</i>	0,0	0,1	0,1	0,0	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	-0,1	-0,1	-0,1	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>	-0,1	0,2	0,2	0,0	0,0	0,1	0,1	0,1
78	Silniční vozidla <i>Road vehicles (including air-cushion vehicles)</i>	-0,1	0,1	0,0	-0,2	0,0	0,1	0,0	-0,1
8	Průmyslové spotřební zboží <i>Miscellaneous manufactured articles</i>	0,0	0,0	-0,1	-0,1	0,0	-0,1	-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 2012

Table 2: Export and import price indices in Q4 2012

SITC	Název Name	Stejně období předchozího roku = 100 Corresponding period of previous year = 100				
		3Q/2012	10/2012	11/2012	12/2012	4Q/2012
Indexy vývozních cen Export price indices						
	Celkem <i>Total</i>	103,3	101,3	100,3	99,3	100,3
0	Potraviny a živá zvířata <i>Food and live animals</i>	105,2	104,8	105,5	104,6	105,0
1	Nápoje a tabák <i>Beverages and tobacco</i>	105,3	103,3	102,2	101,3	102,3
2	Suroviny nepoživatelné, s výjimkou paliv <i>Crude materials, inedible, except fuels</i>	103,0	105,9	104,1	101,9	104,0
3	Minerální paliva, maziva a příbuzné materiály <i>Mineral fuels, lubricants and related materials</i>	97,4	95,4	90,9	92,1	92,8
4	Živočišné a rostlinné oleje <i>Animal and vegetable oils, fats and waxes</i>	98,2	97,6	96,7	99,8	98,0
5	Chemikálie a příbuzné výrobky <i>Chemicals and related products</i>	103,1	103,7	104,0	104,6	104,1
6	Tržní výrobky tříděné hlavně podle materiálu <i>Manufactured goods classified chiefly by material</i>	102,2	100,4	98,9	98,2	99,1
7	Stroje a dopravní prostředky <i>Machinery and transport equipment</i>	104,0	101,3	100,5	99,1	100,3
8	Průmyslové spotřební zboží <i>Miscellaneous manufactured articles</i>	104,3	102,6	101,7	100,4	101,5
Indexy dovozních cen Import price indices						
	Celkem <i>Total</i>	104,7	102,2	101,3	99,4	101,0
0	Potraviny a živá zvířata <i>Food and live animals</i>	109,2	106,6	108,0	106,6	107,1
1	Nápoje a tabák <i>Beverages and tobacco</i>	110,8	106,7	108,5	107,6	107,6
2	Suroviny nepoživatelné, s výjimkou paliv <i>Crude materials, inedible, except fuels</i>	96,3	93,4	89,3	87,1	89,9
3	Minerální paliva, maziva a příbuzné materiály <i>Mineral fuels, lubricants and related materials</i>	114,7	108,6	106,0	101,4	105,3
4	Živočišné a rostlinné oleje <i>Animal and vegetable oils, fats and waxes</i>	103,5	105,2	104,2	103,3	104,3
5	Chemikálie a příbuzné výrobky <i>Chemicals and related products</i>	103,3	103,1	102,6	102,1	102,6
6	Tržní výrobky tříděné hlavně podle materiálu <i>Manufactured goods classified chiefly by material</i>	100,4	100,2	99,2	98,3	99,2
7	Stroje a dopravní prostředky <i>Machinery and transport equipment</i>	104,2	101,5	100,9	98,8	100,4
8	Průmyslové spotřební zboží <i>Miscellaneous manufactured articles</i>	103,4	100,0	99,2	98,5	99,2

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