

## ANALYSIS

15 August 2013

# EXTERNAL TRADE PRICE INDICES DEVELOPMENT IN Q2 2013

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

**Export prices** in **Q2 2013**, compared to **Q1 2013**, increased by 0.4% (in Q1 2013 they increased by 0.8%). **Import prices** grew by 0.1% (in Q1 2013 they increased by 0.3%).

In **export prices**, among the more important groups of goods, prices increased most in 'miscellaneous manufactured articles' by 1.0%, 'manufactured goods classified chiefly by material' by 0.7%, and in 'machinery and transport equipment' by 0.6%. The highest decrease was recorded in prices of 'crude materials, inedible, except fuels' by 2.0%, then in prices of 'mineral fuels, lubricants and related materials' by 1.5%, and in prices of 'chemicals and related products' by 1.0%.

In **import prices** rather important price increases were recorded for 'crude materials, inedible, except fuels' by 2.7%, 'miscellaneous manufactured articles' by 1.1%, and for 'machinery and transport equipment' by 0.8%. On the contrary, more significant price decreases were observed in 'mineral fuels, lubricants and related materials' by 3.3% and in 'chemicals and related products' by 0.2%.

The **terms of trade figures** in **Q2 2013**, compared to **Q1 2013**, reached 100.3% (in Q1 2013 they were 100.5%). Rather important positive values of terms of trade were reached in 'mineral fuels, lubricants and related materials' (101.9%) and in 'manufactured goods classified chiefly by material' (100.5%). Among important groups of goods, lowest negative values of terms of trade were reached in 'crude materials, inedible, except fuels' (95.4%), 'chemicals and related products' (99.2%), 'food and live animals' (99.4%), and in 'machinery and transport equipment' (99.8%).

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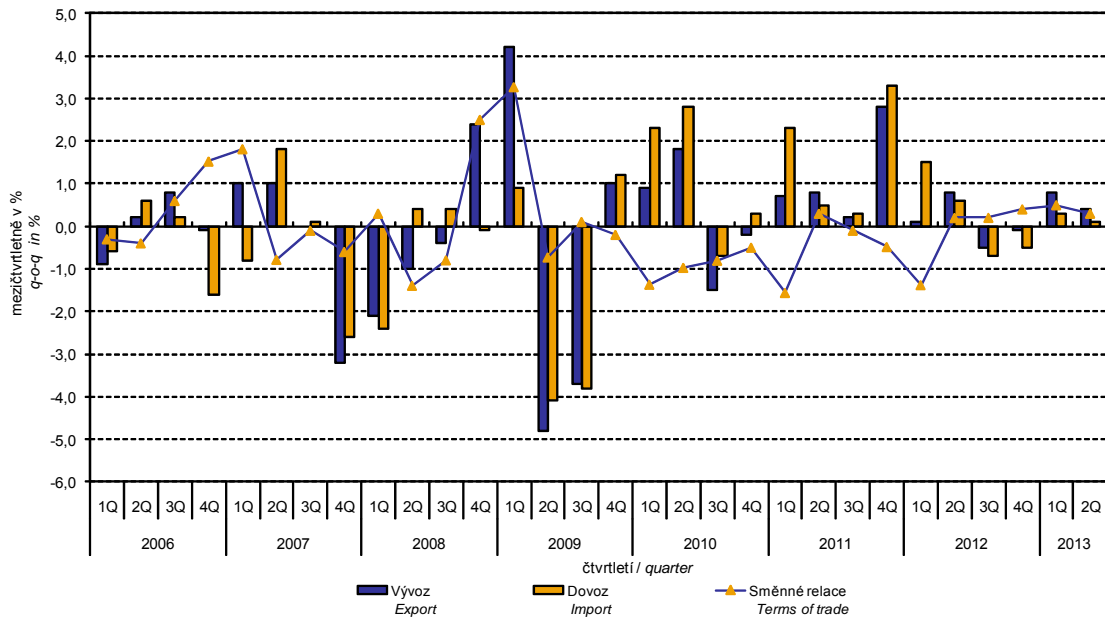
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## ANALYSIS

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.

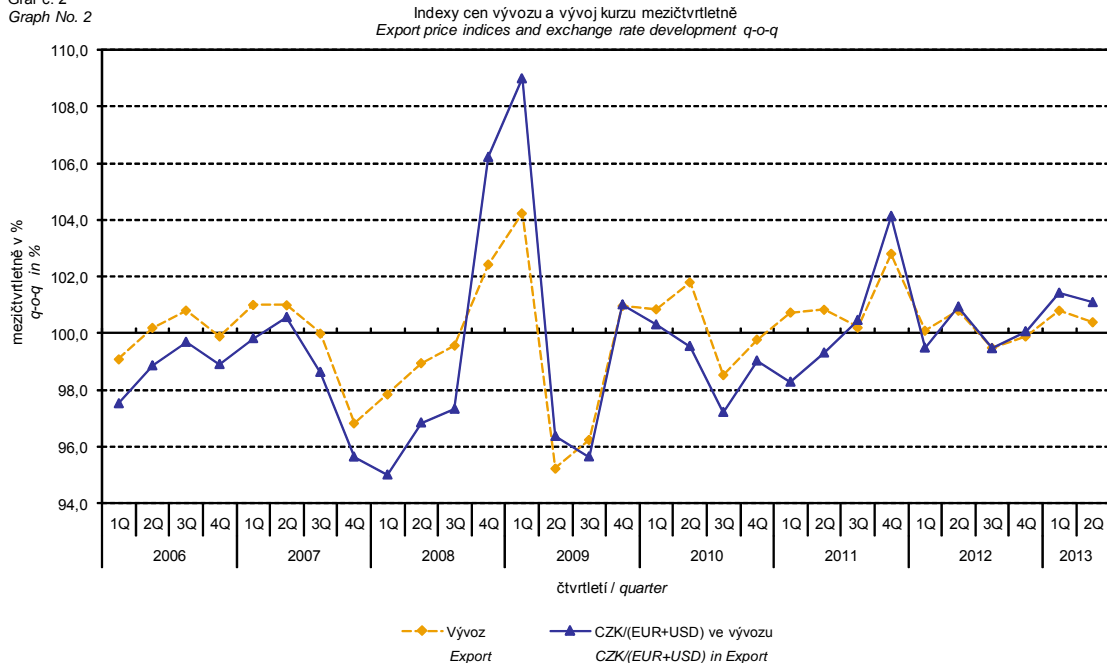
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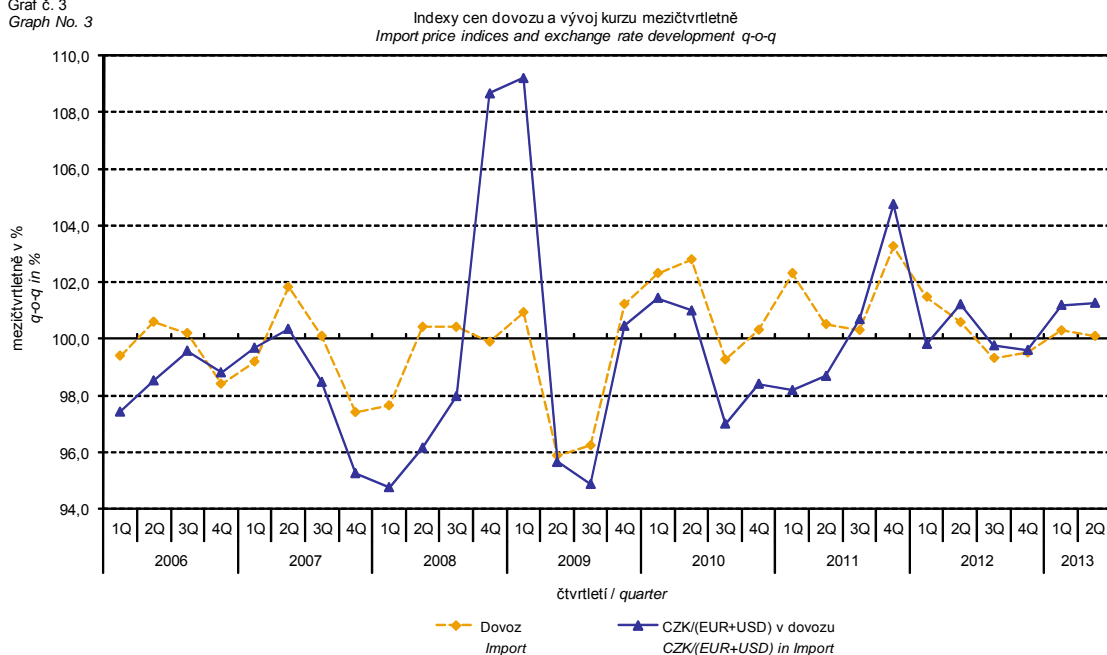
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## ANALYSIS

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. 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:

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## ANALYSIS

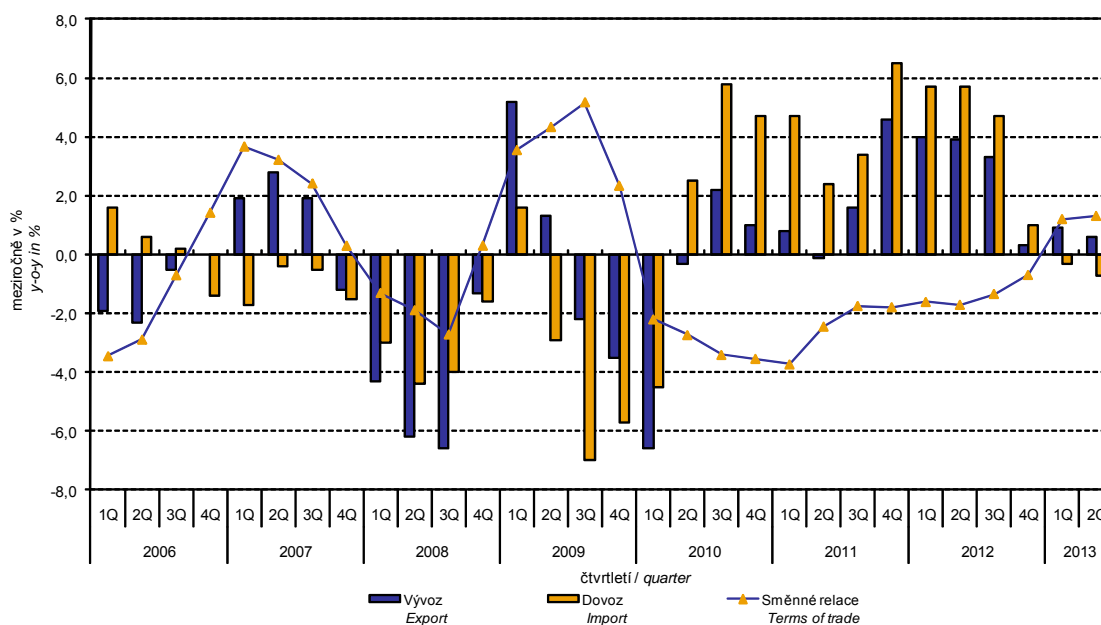
**Export prices in Q2 2013** increased by 0.6% (in Q1 2013 they rose by 0.9%). Among more important groups of goods, a growth was reported for prices of 'food and live animals' by 4.4%, 'miscellaneous manufactured articles' by 2.3%, and of 'machinery and transport equipment' by 1.6%. Prices of 'mineral fuels, lubricants and related materials' dropped by 3.4%, those of 'chemicals and related products' by 1.4%, and those of 'manufactured goods classified chiefly by material' decreased by 0.9%.

**Import prices in Q2 2013** decreased by 0.7% (in Q1 2013 they fell by 0.3%). There were drops in prices observed in 'mineral fuels, lubricants and related materials' by 7.7%, 'crude materials, inedible, except fuels' by 6.5%, and in prices of 'chemicals and related products' by 1.7%. Conversely, a growth of prices among the more important groups was indicated for 'food and live animals' by 6.0%, 'miscellaneous manufactured articles' by 1.8%, and for 'machinery and transport equipment' by 0.9%.

**Terms of trade in Q2 2013** increased, year-on-year, to the value of 101.3% (by 0.1 percentage point (p.p.) more than in Q1 2013), and thus stayed in positive values for the second quarter – see Graph No. 4 below. The significant positive values of terms of trade were recorded in 'mineral fuels, lubricants and related materials' (104.7%), 'crude materials, inedible, except fuels' (104.1%), and in 'machinery and transport equipment' (100.7%). Among more important groups of goods, negative values were recorded for 'food and live animals' (98.5%) and for 'manufactured goods classified chiefly by material' (99.1%).

Graf č. 4  
Graph No. 4

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



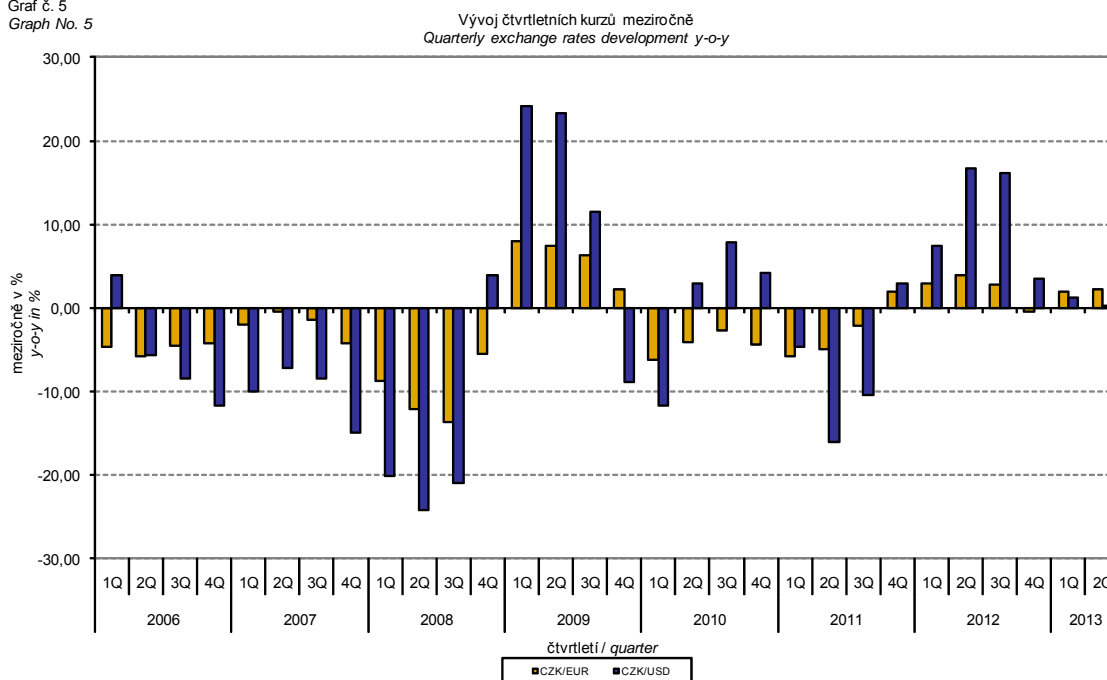
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## ANALYSIS

Graf č. 5  
Graph No. 5



### 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 10, 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 a good manner, how many percentage points each of the groups “exchange rate contributed” to the index.

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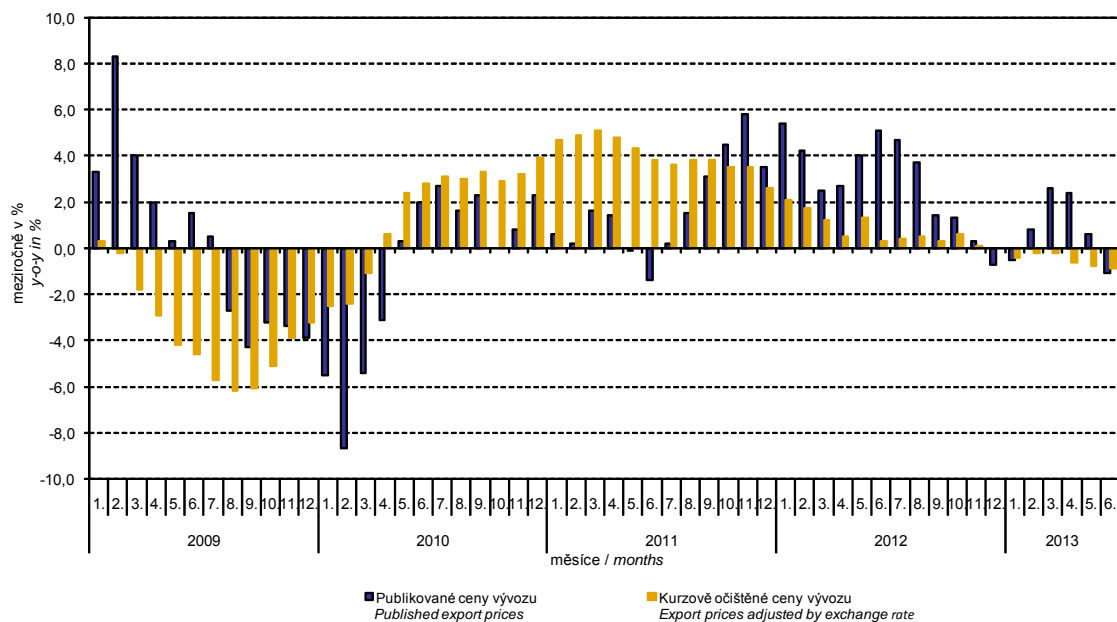
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It holds in general that the effects of exchange rate decrease the value of price indices in external trade if CZK is strengthening to foreign currencies in total. Conversely, the effects of exchange rate push the price indices up if CZK is weakening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

Graf č. 6  
Graph No. 6

Vývozní ceny meziročně  
Export prices y-o-y



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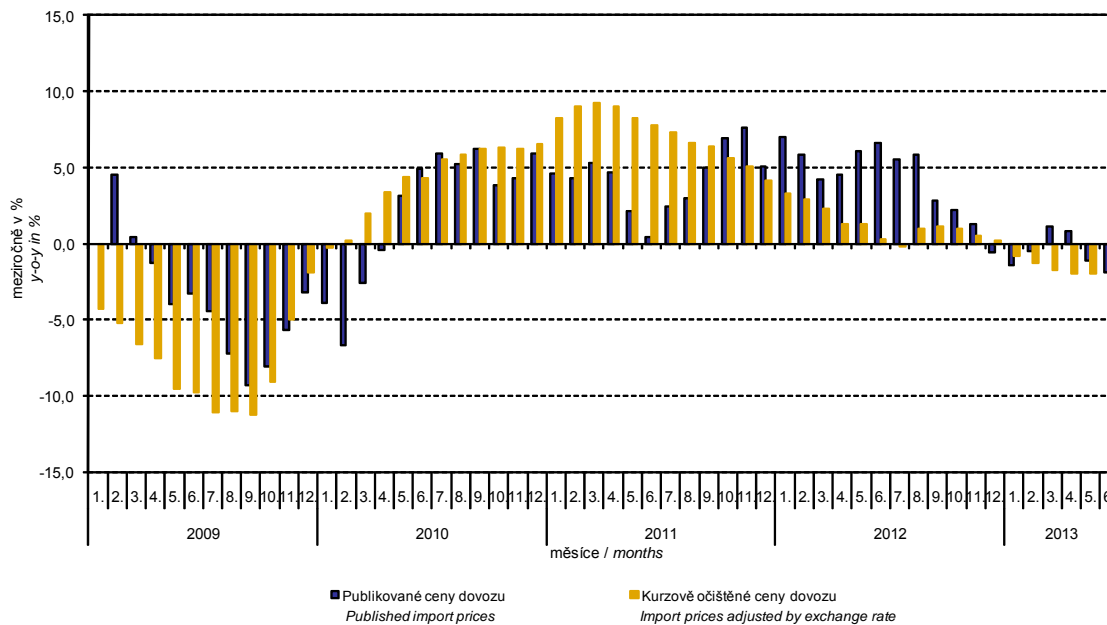
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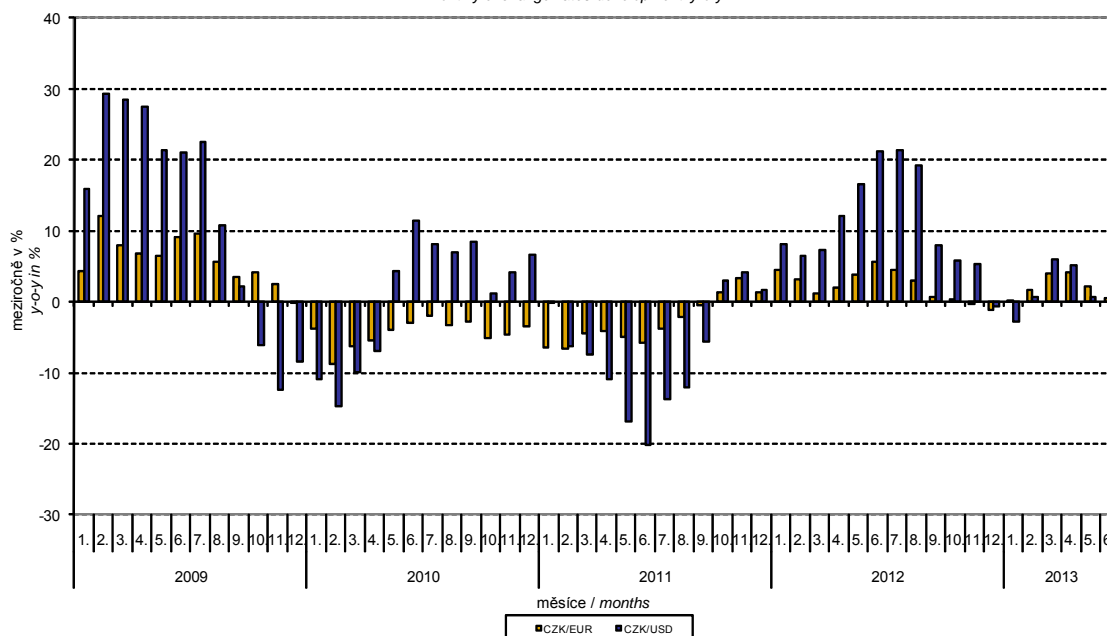
Graf č. 7  
Graph No. 7

Dovozní ceny meziročně  
Import prices y-o-y



Graf č. 8  
Graph No. 8

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



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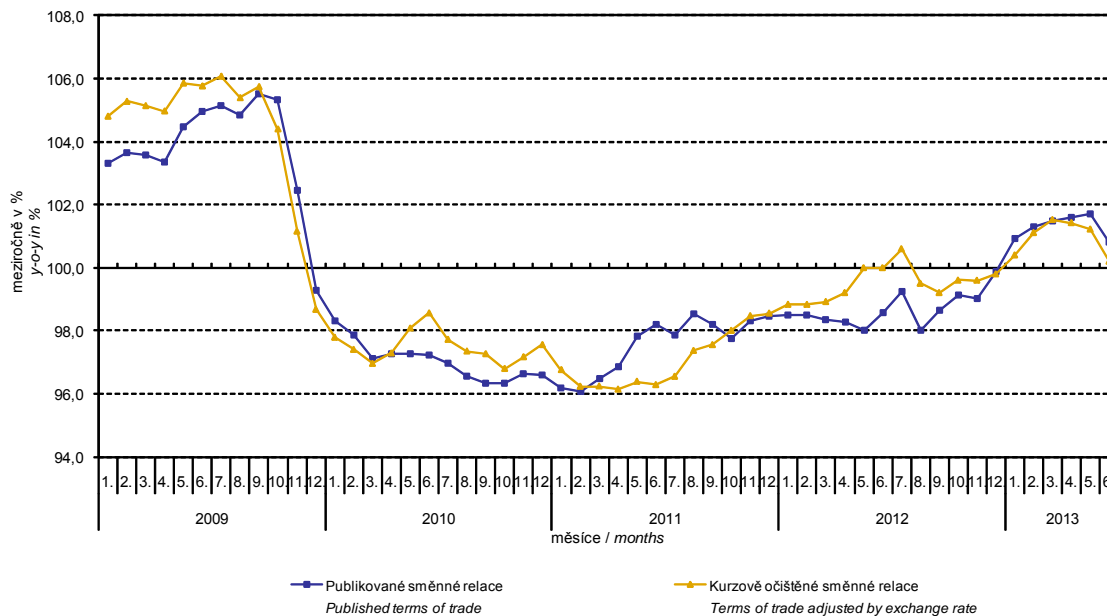
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Graf č. 9  
Graph No. 9

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.

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'.

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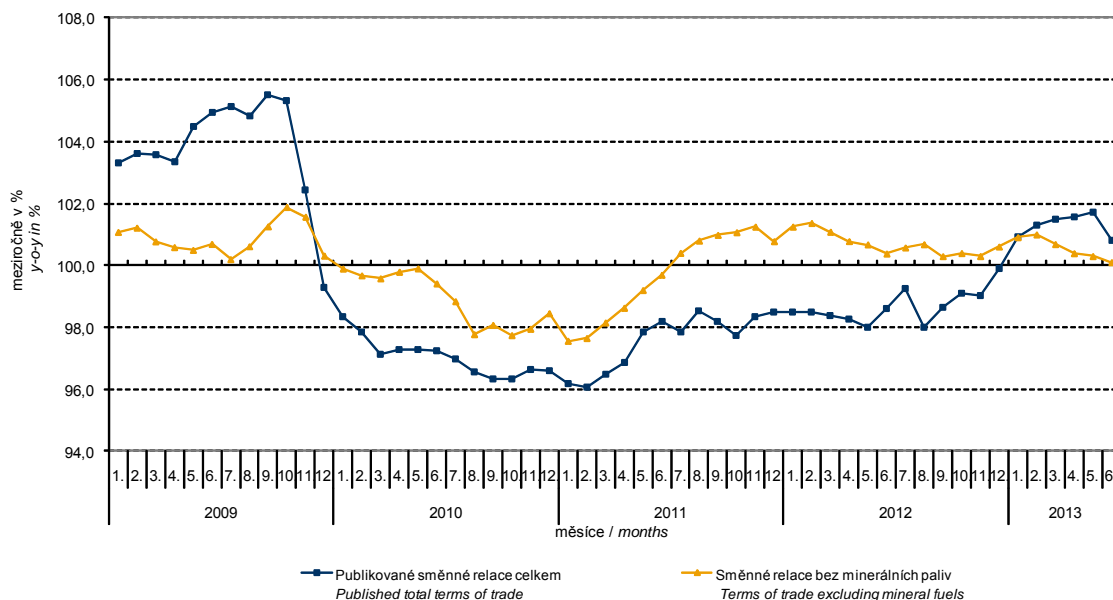
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Graf č. 10  
Graph No. 10

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' began to decrease the overall value of y-o-y terms of trade since Q4 2009. In Q1 2013 the situation began to reverse and 'mineral fuels, lubricants and related materials' have had again an upward 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 červen 2013**  
**Table 1: Breakdown of export and import price indices - published and adjusted by exchange rate influences for June 2013**

SITC	Název Name	Publikované Published				Očištěné Adjusted			
		Meziměsíční M-o-m	Meziroční Year-on-year			Meziměsíční M-o-m	Meziroční Year-on-year		
		06/2013	04/2013	05/2013	06/2013	06/2013	04/2013	05/2013	06/2013
<b>Rozklad přírůstků indexů vývozních cen</b> <i>Breakdown of export price indices</i>									
	<b>Celkem</b> <i>Total</i>	-0,9	2,4	0,6	-1,1	-0,3	-0,5	-0,8	-0,9
0	<b>Potraviny a živá zvířata</b> <i>Food and live animals</i>	0,0	0,1	0,1	0,1	0,0	0,1	0,1	0,1
1	<b>Nápoje a tabák</b> <i>Beverages and tobacco</i>	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
2	<b>Suroviny nepoživatelné, s výjimkou paliv</b> <i>Crude materials, inedible, except fuels</i>	-0,1	0,0	-0,1	-0,2	-0,1	-0,1	-0,1	-0,1
3	<b>Minerální paliva, maziva a příbuzné materiály</b> <i>Mineral fuels, lubricants and related materials</i>	-0,1	0,0	-0,1	-0,2	-0,1	-0,2	-0,2	-0,2
4	<b>Živočišné a rostlinné oleje</b> <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	<b>Chemikálie a příbuzné výrobky</b> <i>Chemicals and related products</i>	-0,1	0,1	-0,2	-0,2	0,0	-0,2	-0,3	-0,1
6	<b>Tržní výrobky tříděné hlavně podle materiálu</b> <i>Manufactured goods classified chiefly by material</i>	-0,1	0,1	-0,3	-0,5	0,0	-0,4	-0,5	-0,4
7	<b>Stroje a dopravní prostředky - z toho:</b> <i>Machinery and transport equipment - thereof:</i>	-0,4	1,7	0,9	-0,2	-0,1	0,2	0,1	-0,2
74	Stroje a zařízení všeobecně užívané v průmyslu, j.n. <i>General industrial machinery and equipment, n.e.s.</i>	-0,1	0,0	-0,1	-0,2	-0,1	0,0	0,0	0,0
77	Elektrická zařízení, přístroje a spotřebiče, j.n. <i>Electrical machinery, apparatus and appliances, n.e.s.</i>	0,0	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>	0,0	0,7	0,4	0,1	0,1	0,2	0,2	0,1
8	<b>Průmyslové spotřební zboží</b> <i>Miscellaneous manufactured articles</i>	-0,1	0,4	0,3	0,1	0,0	0,1	0,1	0,0
<b>Rozklad přírůstků indexů dovozních cen</b> <i>Breakdown of import price indices</i>									
	<b>Celkem</b> <i>Total</i>	-1,0	0,8	-1,1	-1,9	-0,4	-2,0	-2,0	-1,1
0	<b>Potraviny a živá zvířata</b> <i>Food and live animals</i>	0,0	0,3	0,3	0,3	0,0	0,2	0,2	0,3
1	<b>Nápoje a tabák</b> <i>Beverages and tobacco</i>	0,0	0,1	0,0	0,1	0,0	0,1	0,1	0,0
2	<b>Suroviny nepoživatelné, s výjimkou paliv</b> <i>Crude materials, inedible, except fuels</i>	0,0	-0,2	-0,2	-0,3	0,0	-0,3	-0,3	-0,3
3	<b>Minerální paliva, maziva a příbuzné materiály</b> <i>Mineral fuels, lubricants and related materials</i>	-0,5	-1,1	-1,4	-1,0	-0,3	-1,6	-1,4	-0,5
4	<b>Živočišné a rostlinné oleje</b> <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	<b>Chemikálie a příbuzné výrobky</b> <i>Chemicals and related products</i>	-0,1	0,1	-0,3	-0,4	-0,1	-0,2	-0,3	-0,3
6	<b>Tržní výrobky tříděné hlavně podle materiálu</b> <i>Manufactured goods classified chiefly by material</i>	-0,2	0,3	0,0	-0,4	-0,1	-0,2	-0,2	-0,4
7	<b>Stroje a dopravní prostředky - z toho:</b> <i>Machinery and transport equipment - thereof:</i>	-0,2	1,0	0,3	-0,2	0,1	-0,1	-0,2	0,0
74	Stroje a zařízení všeobecně užívané v průmyslu, j.n. <i>General industrial machinery and equipment, n.e.s.</i>	0,0	0,2	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	0,0	-0,1	0,0	-0,2	-0,2	-0,3
77	Elektrická zařízení, přístroje a spotřebiče, j.n. <i>Electrical machinery, apparatus and appliances, n.e.s.</i>	-0,1	0,4	0,2	0,0	0,0	0,3	0,3	0,3
78	Silniční vozidla <i>Road vehicles (including air-cushion vehicles)</i>	0,0	0,2	0,1	0,1	0,0	0,0	0,0	0,0
8	<b>Průmyslové spotřební zboží</b> <i>Miscellaneous manufactured articles</i>	0,0	0,3	0,2	0,0	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 2. čtvrtletí 2013

Table 2: Export and import price indices in Q2 2013

SITC	Název Name	Stejně období předchozího roku = 100 Corresponding period of previous year = 100				
		1Q/2013	04/2013	05/2013	06/2013	2Q/2013
<b>Indexy vývozních cen</b> Export price indices						
	<b>Celkem</b> <i>Total</i>	100,9	102,4	100,6	98,9	100,6
0	<b>Potraviny a živá zvířata</b> <i>Food and live animals</i>	104,7	105,5	104,2	103,6	104,4
1	<b>Nápoje a tabák</b> <i>Beverages and tobacco</i>	103,4	104,5	103,1	104,1	103,9
2	<b>Suroviny nepoživatelné, s výjimkou paliv</b> <i>Crude materials, inedible, except fuels</i>	101,2	99,0	97,4	95,5	97,3
3	<b>Minerální paliva, maziva a příbuzné materiály</b> <i>Mineral fuels, lubricants and related materials</i>	94,0	98,3	96,3	95,1	96,6
4	<b>Živočišné a rostlinné oleje</b> <i>Animal and vegetable oils, fats and waxes</i>	99,8	101,8	100,2	98,1	100,1
5	<b>Chemikálie a příbuzné výrobky</b> <i>Chemicals and related products</i>	102,7	100,7	97,5	97,6	98,6
6	<b>Tržní výrobky tříděné hlavně podle materiálu</b> <i>Manufactured goods classified chiefly by material</i>	99,4	100,5	99,2	97,8	99,1
7	<b>Stroje a dopravní prostředky</b> <i>Machinery and transport equipment</i>	101,6	103,6	101,7	99,5	101,6
8	<b>Průmyslové spotřební zboží</b> <i>Miscellaneous manufactured articles</i>	101,8	104,0	102,4	100,5	102,3
<b>Indexy dovozních cen</b> Import price indices						
	<b>Celkem</b> <i>Total</i>	99,7	100,8	98,9	98,1	99,3
0	<b>Potraviny a živá zvířata</b> <i>Food and live animals</i>	104,8	107,2	105,5	105,3	106,0
1	<b>Nápoje a tabák</b> <i>Beverages and tobacco</i>	108,2	111,4	109,7	108,7	109,9
2	<b>Suroviny nepoživatelné, s výjimkou paliv</b> <i>Crude materials, inedible, except fuels</i>	92,4	94,6	94,3	91,5	93,5
3	<b>Minerální paliva, maziva a příbuzné materiály</b> <i>Mineral fuels, lubricants and related materials</i>	96,0	93,0	91,2	92,7	92,3
4	<b>Živočišné a rostlinné oleje</b> <i>Animal and vegetable oils, fats and waxes</i>	101,4	95,7	91,8	91,4	93,0
5	<b>Chemikálie a příbuzné výrobky</b> <i>Chemicals and related products</i>	100,7	100,5	97,7	96,6	98,3
6	<b>Tržní výrobky tříděné hlavně podle materiálu</b> <i>Manufactured goods classified chiefly by material</i>	100,0	101,9	100,1	98,0	100,0
7	<b>Stroje a dopravní prostředky</b> <i>Machinery and transport equipment</i>	100,5	102,8	100,8	99,3	100,9
8	<b>Průmyslové spotřební zboží</b> <i>Miscellaneous manufactured articles</i>	101,1	103,1	102,2	100,2	101,8

Developed by: Vladimír Klimeš, Price Statistics Department  
Director of the Department: Jiří Mrázek, telephone: (+420) 274 052 533

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