

ANALYSIS

11 November 2024

Development of international trade in goods price indices in the Q3 2024

In the Q3 2024, compared to the Q2 2024, export prices increased by 0.8%. In the year-on-year (y-o-y) comparison, export prices increased by 3.8% in the Q3 2024. Import prices increased by 1.0% in the Q3 2024 compared to the Q2 2024. In the y-o-y comparison, import prices increased by 2.7% in the Q3 2024. The terms of trade reached the value of 99.8% in the Q3 2024 compared to the Q2 2024. In the y-o-y comparison, the terms of trade reached the value of 101.0% in the Q3 2024.

Export prices

Quarter-on-quarter (q-o-q; in the Q3 2024 compared to the Q2 2024), export prices increased by 0.8%. Prices of the following increased the most: electricity, gas, steam and air conditioning by 9.2%, wood and products of wood and cork, except furniture by 2.8%, textiles by 2.5%, and paper and paper products by 2.3%. The following significantly decreased: prices of coke and refined petroleum products by 7.8% and prices of products of forestry, logging and related services by 5.0%. Prices of chemicals and chemical products and of furniture and parts thereof decreased the same, by 1.5%.

Year-on-year, in the Q3 2024, export prices increased by 3.8% (in the Q2 2024 by 3.7%). Prices of the following considerably increased: waste collection, treatment and disposal services; materials recovery services by 16.7%, furniture by 12.9%, and products of forestry, logging and related services by 12.7%. Mainly prices of the following decreased: coke and refined petroleum products by 11.9%, electricity, gas, steam and air conditioning by 3.0%, and products of agriculture, hunting and related services by 1.6%.

Import prices

Quarter-on-quarter (in the Q3 2024 compared to the Q2 2024), import prices increased by 1.0%. Especially prices of the following increased: electricity, gas, steam and air conditioning by 12.1%, textiles by 3.6%, and crude petroleum and natural gas by 3.2%. Prices of the following decreased: coke and refined petroleum products by 8.6%, other non-metallic mineral products by 0.5%; prices of chemicals and chemical products and of other manufactured goods decreased the same, by 0.1%.

Year-on-year, in the Q3 2024, import prices increased by 2.7% (in the Q2 2024 by 3.0%). Rather significant price increases were in other transport equipment by 10.7%, beverages by 10.1%, and food products by 7.3%. Prices of coke and refined petroleum products considerably decreased by 13.0%, prices of electricity, gas, steam and air conditioning by 9.8%, of leather and related products by 3.7%, and of other non-metallic mineral products by 1.9%.

The terms of trade

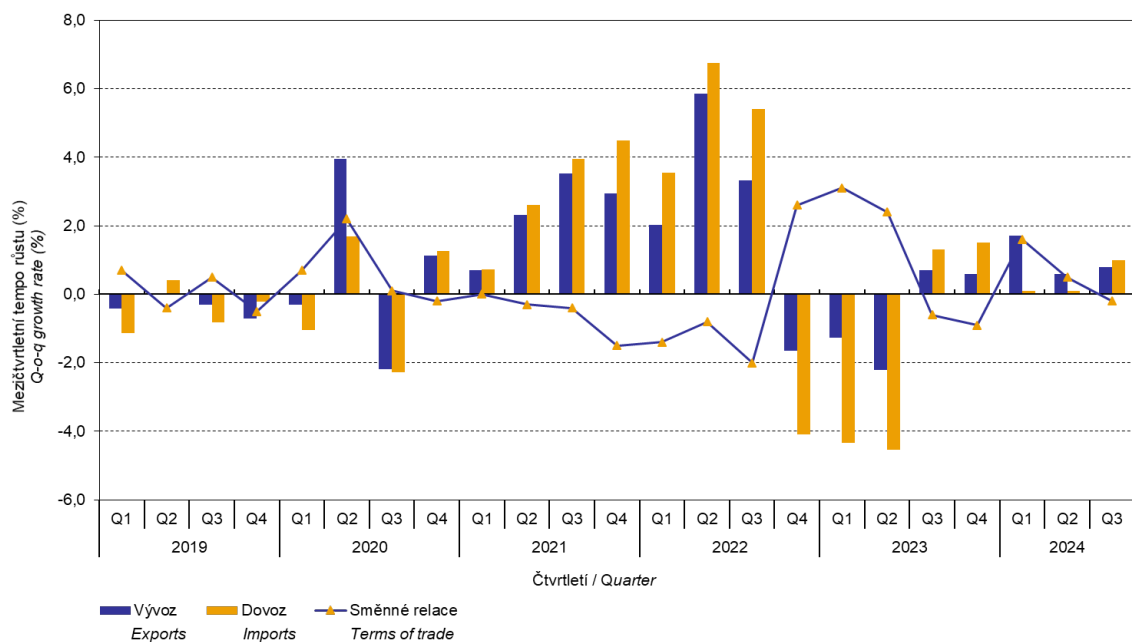
Quarter-on-quarter (in the Q3 2024 compared to the Q2 2024), the terms of trade reached the value of 99.8% and headed into negative territory. A significant negative value was reached by

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furniture (97.0%), a positive value by wood and products of wood and cork, except furniture (102.6%).

Year-on-year, in the Q3 2024, the terms of trade increased to the value of 101.0% (in the Q2 2024 the value was 100.6%) and for the seventh successive quarter they remained in positive values – see the Chart No 2. A significant positive value was recorded by furniture (109.5%) and a negative value mainly by textiles (94.2%).

Graf č. 1 Vývoj indexů cen v zahraničním obchodě se zbožím mezičtvrtletně
Chart No 1 Trend of price indices in international trade in goods, q-o-q



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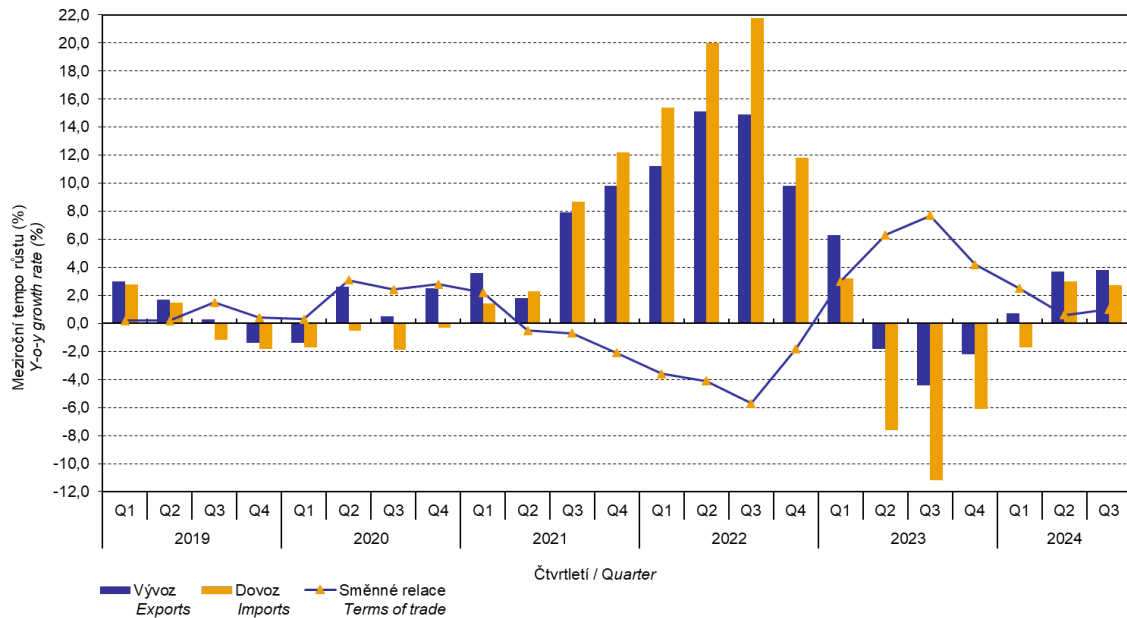
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Graf č. 2 Vývoj indexů cen v zahraničním obchodě se zbožím meziročně
Chart No 2 Trend of price indices in international trade in goods, y-o-y



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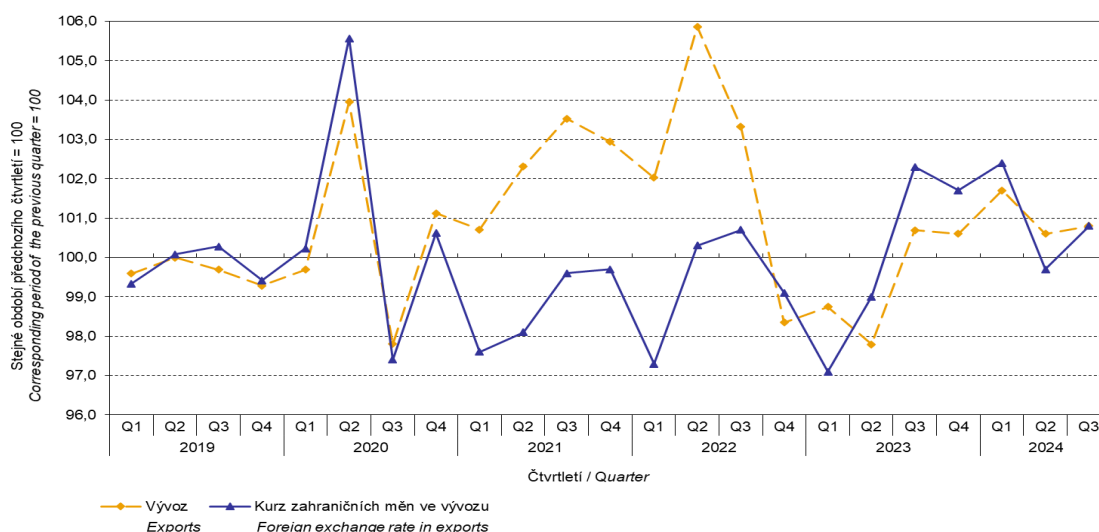
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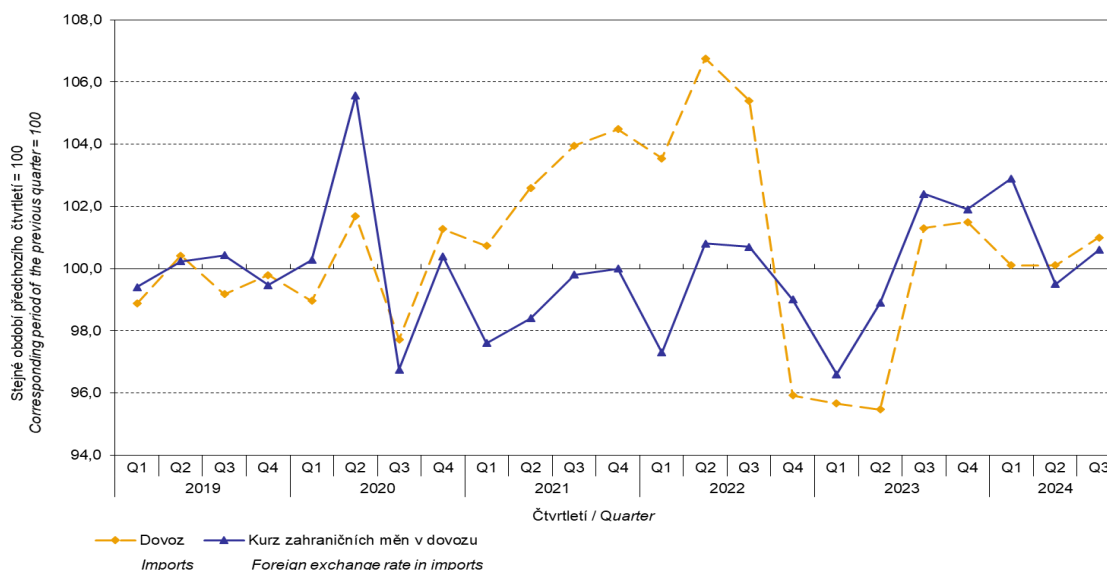
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The international trade in goods (change of ownership) price development was also significantly influenced by the CZK exchange rate to the major foreign currencies. All monitored foreign currencies have been included in the **quarter-on-quarter exchange rate index**. Q-o-q indices of the CZK exchange rate to these currencies were weighted by the respective weight, which pertains to those foreign currencies in the export price index and in the import price index (before the Q3 2023, only two most important currencies, i.e. EUR and USD, have been included; as of the Q3 2023, the calculation was refined by the inclusion of all currencies and it was calculated backwards to the year 2021).

Graf č. 3 Indexy cen vývozu a vývoj kurzu mezičtvrtletně
Chart No 3 Export price indices and exchange rate development, q-o-q



Graf č. 4 Indexy cen dovozu a vývoj kurzu mezičtvrtletně
Chart No 4 Import price indices and exchange rate development, q-o-q



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From the Charts Nos 3 and 4 above, it is apparent that in both exports and imports, international trade in goods prices have a relation to exchange rate effects. Contracts with foreign entities are usually concluded for longer periods of time and the longer the contract period is, the stronger the relation to exchange rates is.

International trade in goods price indices, year-on-year, adjusted for exchange rate influence

The Czech Statistical Office (CZSO) also calculates year-on-year international trade in goods price indices adjusted for exchange rate effects. The calculation is carried out as follows: prices in foreign currencies reported in the current month are **converted** to Czech crowns **by the exchange rate** of the same month **of the previous year**. Afterwards, together with prices reported in CZK, they are used for the weighted mean calculation. This exchange rate adjusted base price index of a month is related to the non-adjusted base price index of the corresponding month of the previous year and thus the year-on-year adjusted price index for the month is calculated.

Since 2017, adjusted quarter-on-quarter price indices have been calculated similarly, too. **Differences between the adjusted and non-adjusted price indices may be considerable.** They are obvious in the Charts Nos 6 and 7, for example, in the Q2 of 2021 and in the Q1 and Q2 of 2024.

The employed method does not enable to make a 100% exchange rate adjustment because not all trade transactions made in foreign currencies are also reported in foreign currencies; the proportion does not exceed 30%. It follows from the aforementioned that **at the full exchange rate adjustment, differences** between the published price indices and the exchange rate adjusted ones **would probably further increase**.

The exchange rate adjusted indices described above can also be used to make the exchange rate adjusted breakdown of increments of price indices. The Table 1 gives the **published and exchange rate adjusted breakdown of increments** of export and import price indices. The breakdown illustrates well how many percentage points each of the groups “exchange rate contributed” to the index.

It is generally true that the exchange rate effect decreases the value of price indices in international trade in goods if CZK is strengthening to foreign currencies in total. Conversely, the exchange rate effect pushes the price indices up if CZK is weakening to foreign currencies in total.

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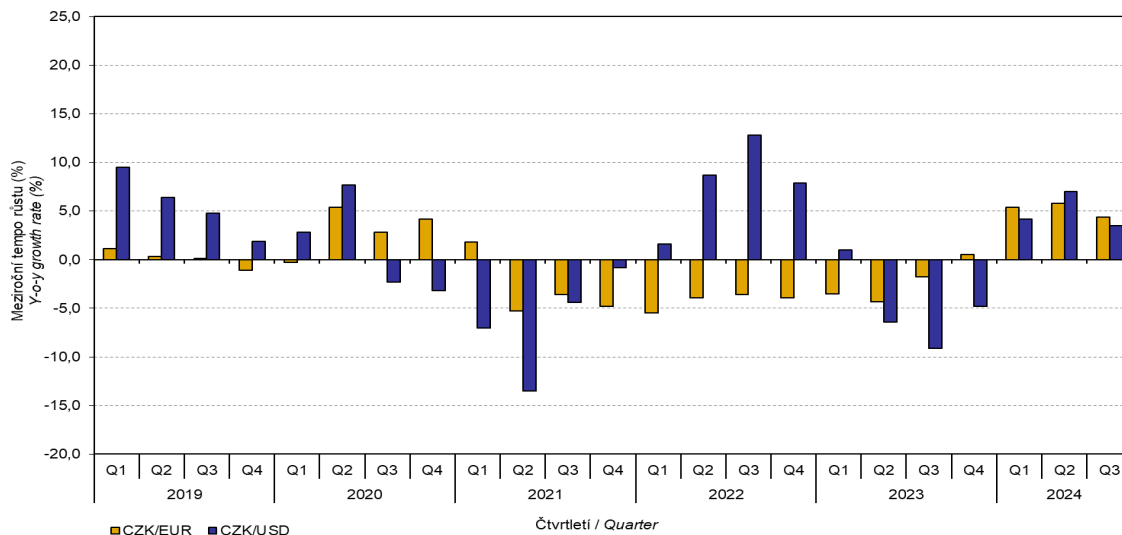
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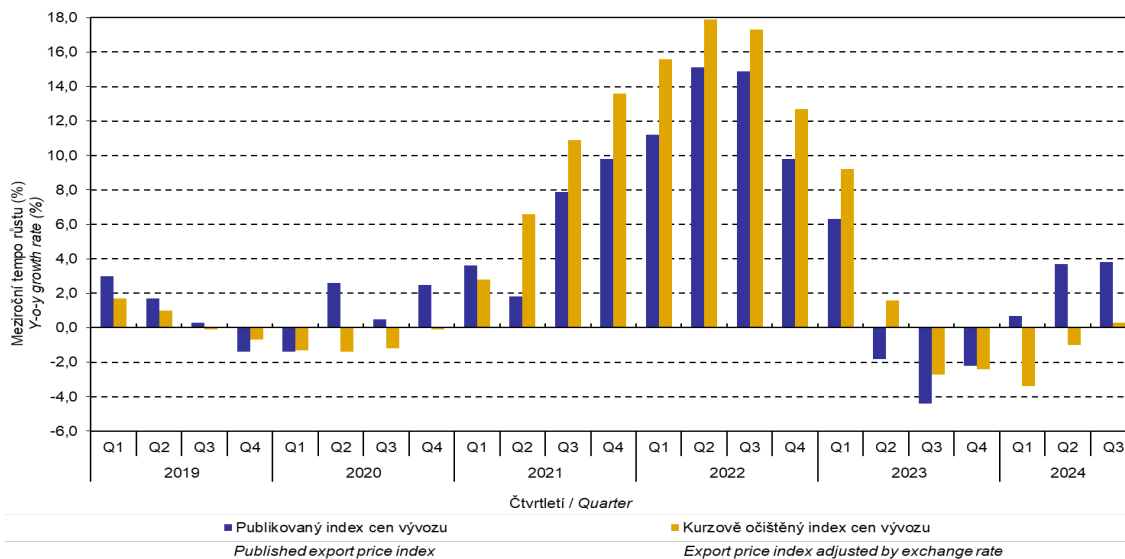
The Chart No 5 below illustrates the CZK exchange rate to the two most important foreign currencies, i.e. to EUR and USD.

Graf č. 5 Vývoj čtvrtletních kurzů meziročně
Chart No 5 Quarterly exchange rates development, y-o-y



From the Charts Nos 6 and 7 below, it is apparent how significant the exchange rate influence of all monitored foreign currencies on the value of the export and import price indices was.

Graf č. 6 Vývoj indexů vývozních cen meziročně
Chart No 6 Trend in export price indices, y-o-y



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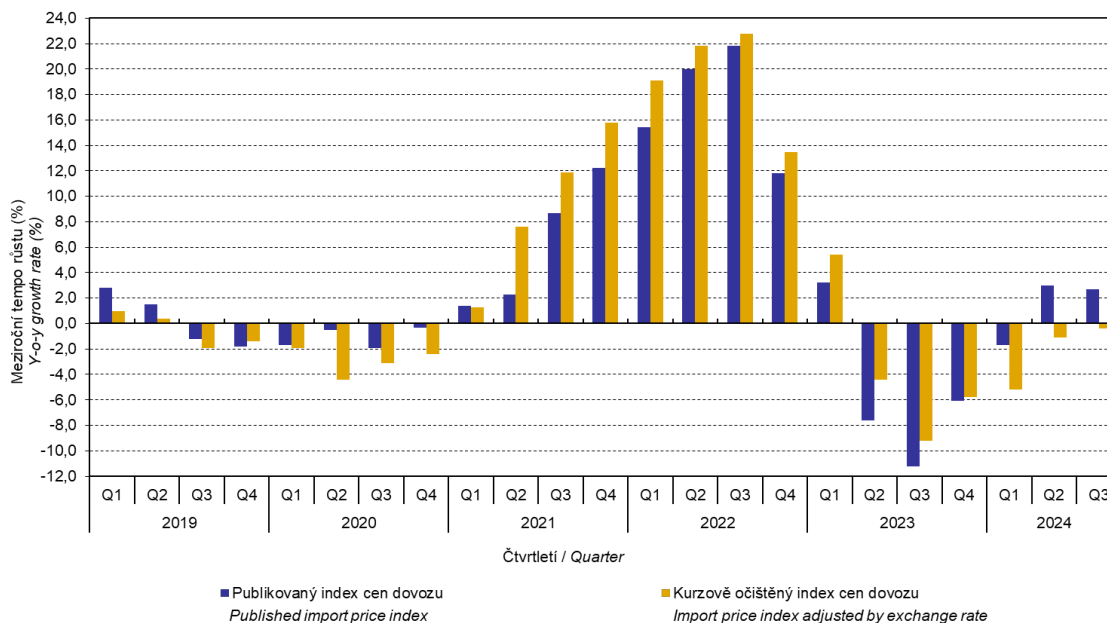
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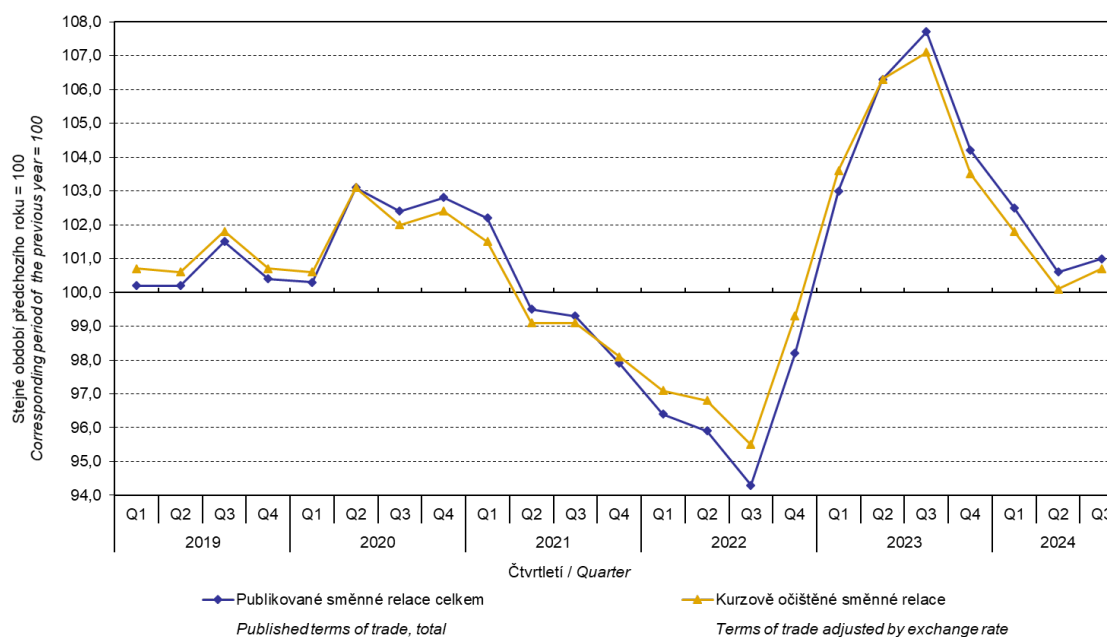
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Graf č. 7 Vývoj indexů dovozních cen meziročně
Chart No 7 Trend in import price indices, y-o-y



The Chart No 8 shows the exchange rate influence on the value of the year-on-year terms of trade.

Graf č. 8 Směnné relace meziročně
Chart No 8 Terms of trade, y-o-y



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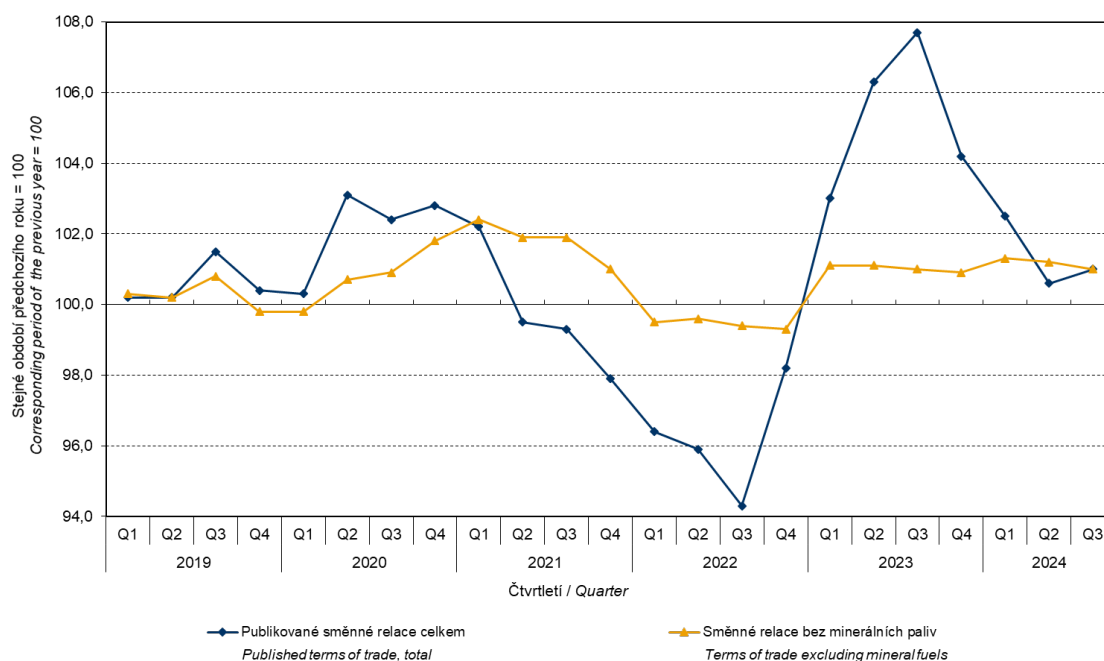
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Graf č.9 Publikované směnné relace a směnné relace s vyloučením minerálních paliv meziročně
Chart No 9 Published terms of trade and terms of trade excluding mineral fuels, y-o-y



The Chart No 9 shows the development of the value of the terms of trade when mineral fuels are excluded, i.e. two-digit divisions 05, 06, 19, and 35 of the CPA classification (which correspond to the 'mineral fuels, lubricants and related materials' = the SITC 3 section). In this chart, the effect of mineral fuels can be observed that has an influence on the total value of the y-o-y terms of trade. Since the Q1 2023, mineral fuels were increasing the value of the terms of trade. However, in the Q2 2024, there was a turnabout and mineral fuels started to decrease the value of the terms of trade. In the Q3 2024, the terms of trade with the mineral fuels excluded and the total year-on-year terms of trade reached the same value. It is related, of course, to the world market price development, mainly of crude petroleum prices. Import prices, which have a higher proportion of crude materials (compared to export prices), respond in a more sensitive way to price turbulences. Therefore, the terms of trade are usually increasing when prices of crude materials are decreasing, and, vice versa, when prices of crude materials are increasing, the terms of trade are decreasing.

Final summary

In the Q3 2024, the exchange rate effect increased, **year-on-year**, both the export price index and the import price index. Export prices were increasing faster than the import ones; therefore, the terms of trade reached positive values, **year-on-year**. After elimination of the exchange rate effect, the terms of trade were lower than the published terms of trade. Values free of the exchange rate effect correspond to the exchange rate adjusted indices – see the Charts Nos. 6, 7, and 8.

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Tabulka 1 Rozklad přírůstků publikovaných a kurzově očištěných indexů cen vývozu a dovozu za 3. čtvrtletí 2024
Table 1 Breakdown of increments of export and import price indices - published and exchange rate adjusted for Q3 2024

CZ-CPA	Název Name	Publikované Published					Očištěné o kurzové vlivy Exchange rate adjusted				
		Meziroční Year-on-year					Meziroční Year-on-year				
		Q2/2024	07/2024	08/2024	09/2024	Q3/2024	Q2/2024	07/2024	08/2024	09/2024	Q3/2024
Rozklad přírůstků indexů vývozních cen <i>Breakdown of increments of export price indices</i>											
	Celkem <i>Total</i>	3,7	5,0	4,0	2,3	3,8	-1,0	0,1	0,5	0,2	0,3
A	Produkty zemědělství, lesnictví a rybářství <i>Products of agriculture, forestry and fishing</i>	0,0	0,0	0,0	0,1	0,0	-0,1	0,0	0,0	0,0	0,0
B	Těžba a dobývání <i>Mining and quarrying</i>	0,0	0,0	-0,1	-0,1	0,0	-0,2	-0,1	-0,1	-0,1	-0,1
C	Výrobky zpracovatelského průmyslu <i>Manufactured products</i>	4,1	4,9	3,6	2,6	3,7	-0,1	0,5	0,4	0,7	0,5
D	Elektrina, plyn, pára a klimatizovaný vzduch <i>Electricity, gas, steam and air conditioning</i>	-0,5	-0,1	0,3	-0,5	-0,1	-0,7	-0,5	0,1	-0,6	-0,3
E	Zásobování vodou; čin. souv. s odpad. vodami, odpady a sanacemi <i>Water supply; sewerage, waste management and remediation services</i>	0,1	0,2	0,2	0,2	0,2	0,1	0,2	0,1	0,2	0,2
J	Informační a komunikační služby <i>Information and communication services</i>	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Rozklad přírůstků indexů dovozních cen <i>Breakdown of increments of import price indices</i>											
	Celkem <i>Total</i>	3,0	4,7	3,1	0,4	2,7	-1,1	0,2	-0,1	-1,2	-0,4
A	Produkty zemědělství, lesnictví a rybářství <i>Products of agriculture, forestry and fishing</i>	-0,2	-0,2	-0,2	-0,2	-0,2	-0,3	-0,2	-0,3	-0,2	-0,2
B	Těžba a dobývání <i>Mining and quarrying</i>	0,3	0,7	0,4	-0,4	0,1	0,0	0,1	0,1	-0,5	-0,1
C	Výrobky zpracovatelského průmyslu <i>Manufactured products</i>	2,9	4,1	2,8	1,2	2,7	-0,6	0,3	0,1	-0,2	0,0
D	Elektrina, plyn, pára a klimatizovaný vzduch <i>Electricity, gas, steam and air conditioning</i>	-0,2	-0,1	0,0	-0,2	-0,1	-0,3	-0,2	-0,1	-0,3	-0,2
J	Informační a komunikační služby <i>Information and communication services</i>	0,2	0,1	0,0	0,0	0,1	0,1	0,1	0,0	0,0	0,0

Poznámka / Note:

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The closing table gives published **non-adjusted** international trade in goods price indices.

Tabulka 2 Indexy cen vývozu a dovozu ve 3. čtvrtletí 2024

Table 2 Export and import price indices in Q3 2024

CZ-CPA	Název Name	Stálé váhy roku 2021 (‰) 2021 constant weights (‰)	Stejně období předchozího roku = 100 Corresponding period of the previous year = 100				
			Q2/2024	07/2024	08/2024	09/2024	Q3/2024
			Indexy vývozních cen <i>Export price indices</i>				
	Celkem <i>Total</i>	1000,0	103,7	105,0	104,0	102,3	103,8
A	Produkty zemědělství, lesnictví a rybnářství <i>Products of agriculture, forestry and fishing</i>	20,5	95,9	100,5	102,2	102,7	101,8
B	Těžba a dobývání <i>Mining and quarrying</i>	3,2	85,5	91,4	91,2	90,1	90,9
C	Výrobky zpracovatelského průmyslu <i>Manufactured products</i>	943,6	104,6	105,5	104,0	102,9	104,1
D	Elektrina, plyn, pára a klimatizovaný vzduch <i>Electricity, gas, steam and air conditioning</i>	16,0	89,8	95,6	105,5	90,2	97,0
E	Zásobování vodou; čin. souv. s odpad. vodami, odpady a sanacemi <i>Water supply; sewerage, waste management and remediation services</i>	12,0	109,4	118,8	118,0	113,3	116,7
J	Informační a komunikační služby <i>Information and communication services</i>	4,7	99,3	98,9	99,8	95,7	98,1
			Indexy dovozních cen <i>Import price indices</i>				
	Celkem <i>Total</i>	1000,0	103,0	104,7	103,1	100,4	102,7
A	Produkty zemědělství, lesnictví a rybnářství <i>Products of agriculture, forestry and fishing</i>	15,6	86,8	88,4	86,1	88,3	87,6
B	Těžba a dobývání <i>Mining and quarrying</i>	52,5	105,1	109,0	105,6	95,3	103,0
C	Výrobky zpracovatelského průmyslu <i>Manufactured products</i>	919,1	103,4	104,8	103,3	101,5	103,2
D	Elektrina, plyn, pára a klimatizovaný vzduch <i>Electricity, gas, steam and air conditioning</i>	6,4	81,8	90,3	96,8	83,9	90,2
J	Informační a komunikační služby <i>Information and communication services</i>	2,7	135,8	116,7	124,9	117,8	119,7

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Note: For internal reasons, the Czech decimal comma is used instead of the English decimal point as a decimal separator in tables and charts of this analysis.

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