GLOBAL ECONOMIC OUTLOOK – JULY

2013

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External Economic Relations Division

CNB CZECH NATIONAL BANK

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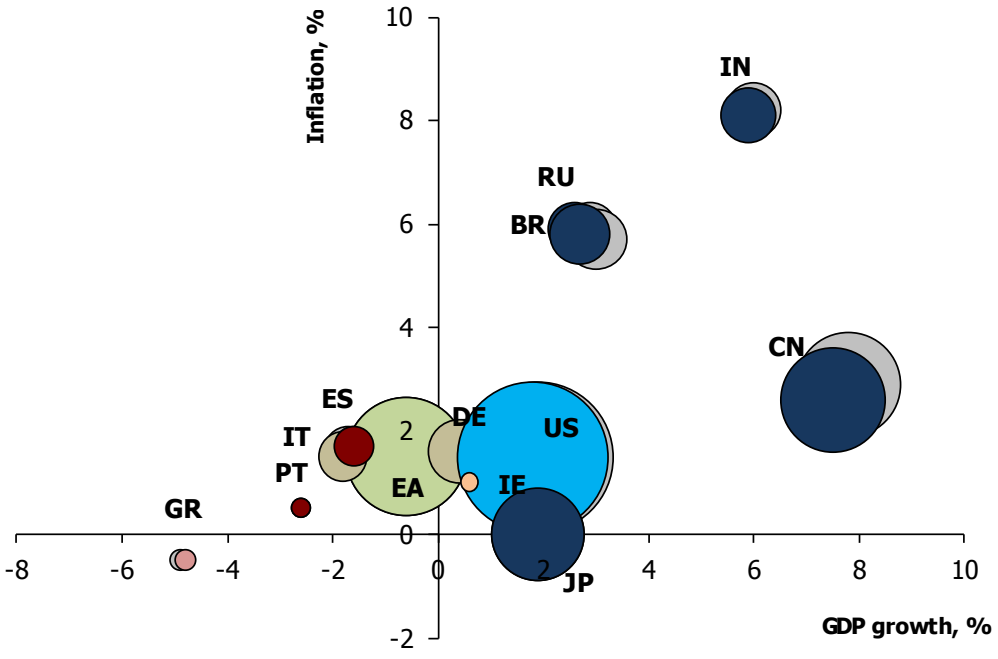
The July issue of Global Economic Outlook presents its regular overview of recent and expected developments in selected advanced and emerging economies, focusing on key economic variables such as GDP, inflation, leading indicators, interest rates, exchange rates and commodity prices. In this holiday issue, we focus on the competitiveness and determinants of tourism (see also the chart). The analysis compares the attractiveness of the Czech Republic with selected countries in the region that offer tourism services comparable to those in the Czech Republic (Austria, Germany, Hungary, Poland and Slovakia).

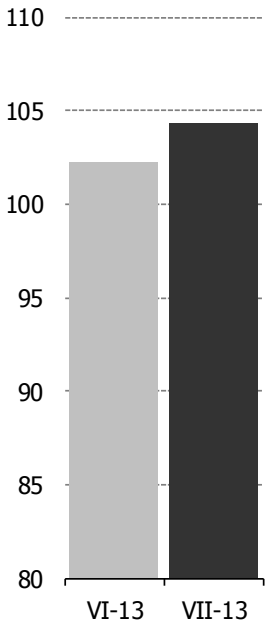
The outlooks for global economic activity still show a decline in economic performance in Europe for this year for both the euro area countries and the EU as a whole. 2014 has so far been seen as a year of return to positive economic growth amid inflation rates slowly approaching 2%. Germany remains the driver (albeit weakened) of the European economy. The German economy should be a significant contributor to the expected recovery in Europe in 2014. Positive growth in 2013 and still slightly elevated growth in 2014 (in line with the expected global recovery) are forecasted for the other regions of the world (Asia-Pacific, North America, Latin America). This is due to both the dynamically evolving economy in the USA, with relatively robust economic performance near 2%, and the progressively developing BRIC countries (except Brazil, whose economic performance is currently weakened). China is still the best-performing BRIC country. It will continue to record the highest growth rates and the lowest inflation until 2014.

The outlooks for interest rates in the USA and the euro area point to a very slight increase in rates across maturities during 2014. Market reactions to the Fed's communication regarding its thinking about scaling down quantitative easing caused short-term volatility in rates with longer maturities. The dollar is expected to appreciate slightly against the euro and other reserve currencies over the 1Y horizon. On the other hand, it is expected to depreciate against the Chinese, Indian, Brazilian currencies and very slightly also against the Russian currency. The outlook for dollar prices of oil and natural gas remains slightly declining until the end of 2014. The outlook for food commodities is slightly decreasing overall, but very mixed across individual components. Industrial metals prices are expected to rise gradually over the same time frame.

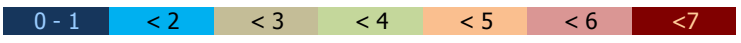
Outlook for the global economy in 2013



Outlook for Brent crude oil prices in December 2013



Receipts of international tourism to GDP, %



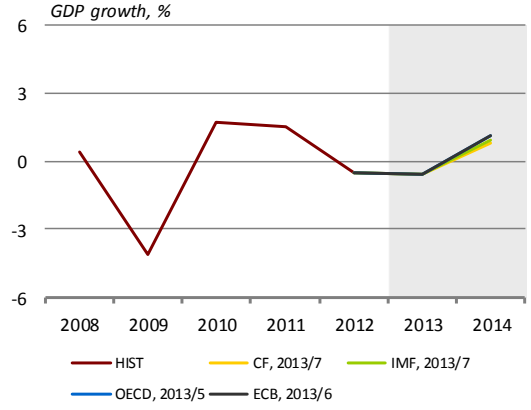
The size of each point represents the size of the country/region according to nominal GDP in US dollars in 2011. The colour of the points is assigned according to the receipts of international tourism- to-GDP in 2011, %. The grey colour is the CF forecast (GDP, inflation) or Bloomberg survey (oil price) for the previous month. [Cut-off date: 12 July 2013]
Zdroj: Bloomberg, Consensus Economics, CNB calculations.

II.1 GDP outlook in advanced countries

According to the July IMF's WEO, global growth remains weak and there is a risk of a lengthier slowdown of economic growth in emerging economies than previously assumed. At the same time, expected developments in the euro area and the USA failed to materialise, as a result of which the IMF lowered its outlook for economic growth in these economies compared to the April forecast. Although the labour market situation and household consumption in the USA are improving, the public finance situation is playing a negative role for economic growth. US economic output will also grow at a slower rate according to the Fed, which also revised its outlook for GDP growth towards weaker levels. Although the macroeconomic data from Germany are mixed, the July CF and the IMF lowered their outlooks for growth in the largest euro area economy. Overall, the new outlooks expect a contraction in economic activity of 0.6% in the euro area; growth will be 0.3%–0.4% in Germany and 1.7%–2.5% in the USA. On the other hand, the outlook for Japan is improving (especially the IMF and only slightly the BoJ) due to growth in consumption and net exports. The Japanese economy should grow by 1.9%–2.8% this year. Economic growth will strengthen in the European and American economies under review next year, while economic growth in Japan will slow.

Eurozone

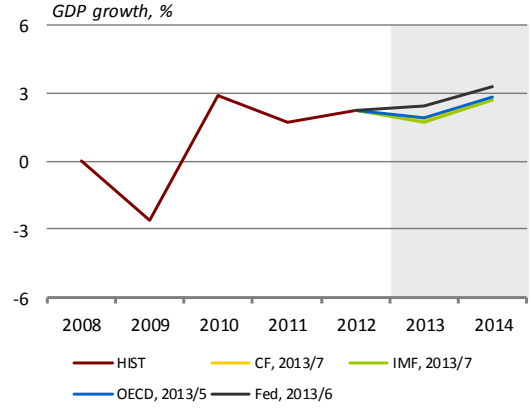
GDP growth, %



	CF	IMF	OECD	ECB
2013	-0.6	-0.6	-0.6	-0.6
2014	0.8	0.9	1.1	1.1

USA

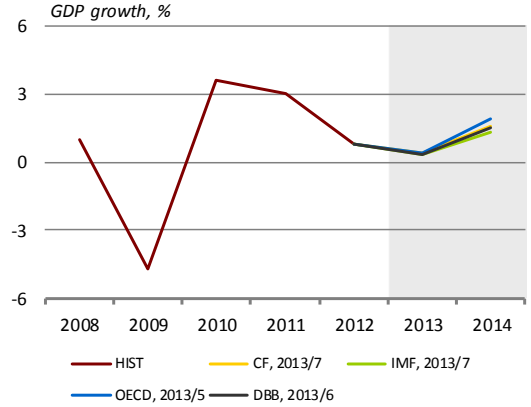
GDP growth, %



	CF	IMF	OECD	Fed
2013	1.8	1.7	1.9	2.5
2014	2.7	2.7	2.8	3.3

Germany

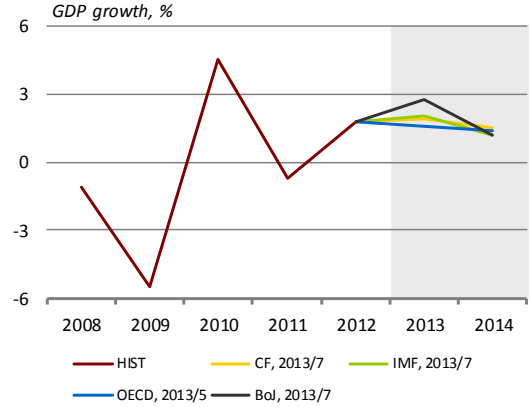
GDP growth, %



	CF	IMF	OECD	DBB
2013	0.4	0.3	0.4	0.3
2014	1.6	1.3	1.9	1.5

Japan

GDP growth, %



	CF	IMF	OECD	BoJ
2013	1.9	2.0	1.6	2.8
2014	1.5	1.2	1.4	1.2

Note: Legend shows latest forecast data in format "Source, year/month" of forecast publication. HIST: historical values. ECB and Fed: midpoint of range. Arrow indicates direction of revision of newly published forecast. If no arrow is shown, no new forecast was available in previous month or by cut-off date in current month. Asterisk indicates first published forecast for given year.
[Cut-off date for data: 12 July 2013)
Source: CF, IMF, OECD, ECB, Fed, DBB, BoJ, CNB calculations.

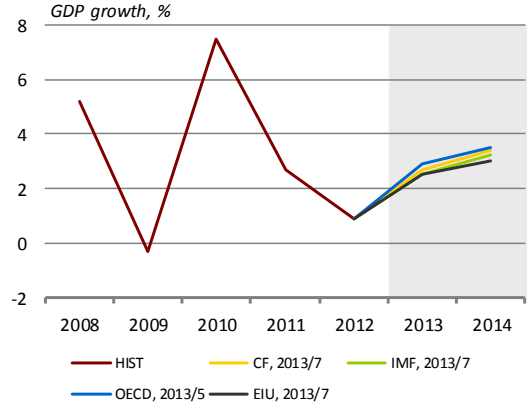
II.2 GDP outlook in BRIC countries

As in previous months, the outlooks for GDP growth in the BRIC countries deteriorated slightly. The July update to the IMF's WEO revised the outlook for all four countries under review downwards, especially in the cases of Russia (down by 0.9 pp this year) and Brazil (down by 0.5 pp this year). This deterioration is due to lower-than-expected growth in both domestic and external demand, whose decline is mainly a result of a worse outlook for economic growth in the euro area. The risks to the forecast are on the downside and include lower-than-estimated growth in potential output and a potential worsening of the credit conditions of households and corporations, which might occur in the event of capital outflows following a possible monetary policy tightening in the USA. The decline in estimated growth in commodity-exporting countries is also due to lower commodity prices.

The July CF outlook for economic growth in the BRIC countries also shifted downwards – by 0.3 pp for China, Russia and Brazil and by 0.1 pp for India this year. The EIU outlook was revised downwards for all the BRIC countries except Russia, where the outlook remained unchanged.

Brazil

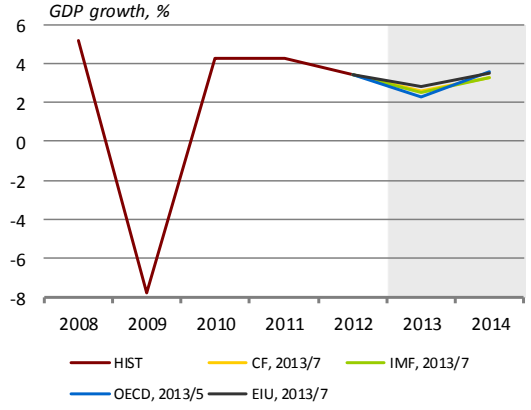
GDP growth, %



	CF	IMF	OECD	EIU
2013	2.7 ↓	2.5 ↓	2.9	2.5 ↓
2014	3.4 ↓	3.2 ↓	3.5	3.0 ↓

Russia

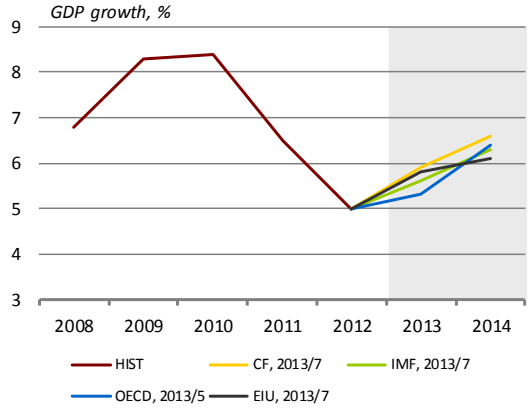
GDP growth, %



	CF	IMF	OECD	EIU
2013	2.6 ↓	2.5 ↓	2.3	2.8 →
2014	3.3 ↓	3.3 ↓	3.6	3.5 →

India

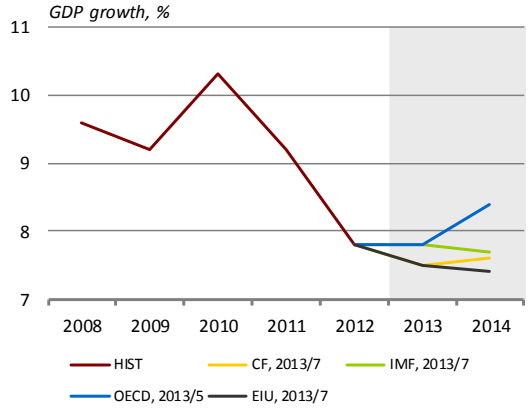
GDP growth, %



	CF	IMF	OECD	EIU
2013	5.9 ↓	5.6 ↓	5.3	5.8 ↓
2014	6.6 ↓	6.3 ↗	6.4	6.1 ↓

China

GDP growth, %



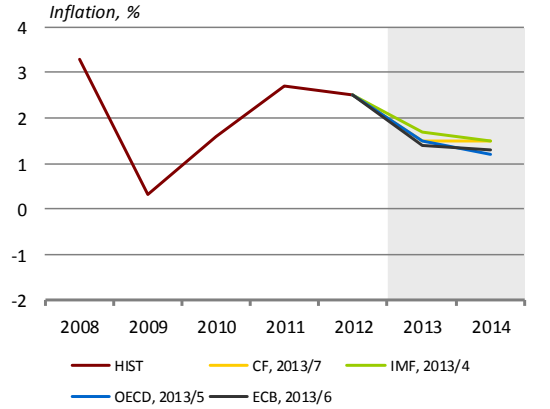
	CF	IMF	OECD	EIU
2013	7.5 ↓	7.8 ↓	7.8	7.5 ↓
2014	7.6 ↓	7.7 ↓	8.4	7.4 ↓

Note: Legend shows latest forecast data in format "Source, year/month" of forecast publication. HIST: historical values. Arrow indicates direction of revision of newly published forecast. If no arrow is shown, no new forecast was available in previous month or by cut-off date in current month. Asterisk indicates first published forecast for given year.
[Cut-off date for data: 12 July 2013)
Source: CF, IMF, OECD, EIU, CNB calculations.

II.3 Inflation outlook in advanced countries

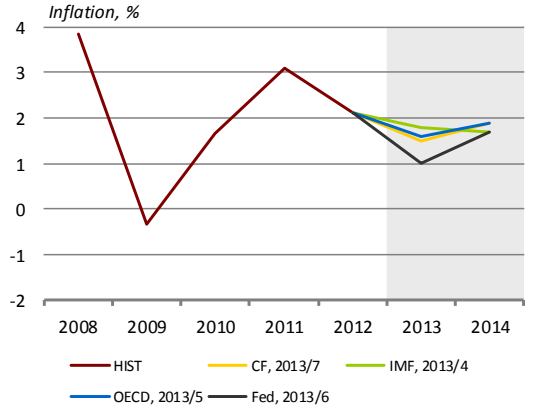
According to the new outlooks, consumer price inflation either was unchanged (CF for all the economies under review) or edged down (the Fed for the USA). Inflation will remain below 2% in the euro area, Germany and the USA this year and the next (below 1.6% in 2013 and below 1.9% in 2014). Consumer price inflation in Japan is expected to be zero or positive (0.7%). According to the BoJ, some indicators are suggesting an increase in inflation expectations. Inflation is expected to pick up further next year to 2.1%–3.2% (CF and the BoJ).

Eurozone



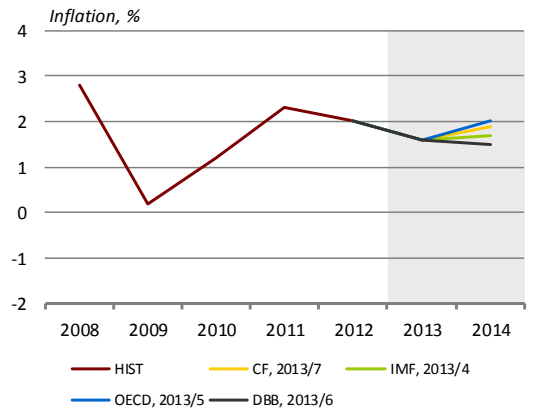
	CF	IMF	OECD	ECB
2013	1.5 →	1.7	1.5	1.4 ↘
2014	1.5 →	1.5	1.2	1.3 ↘

USA



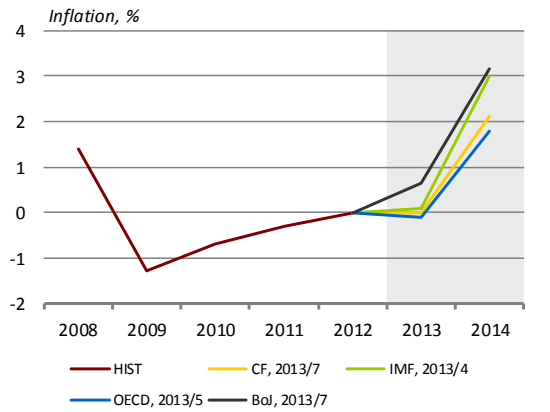
	CF	IMF	OECD	Fed
2013	1.5 →	1.8	1.6	1.0 ↘
2014	1.9 →	1.7	1.9	1.7 ↘

Germany



	CF	IMF	OECD	DBB
2013	1.6 →	1.6	1.6	1.6 ↗
2014	1.9 →	1.7	2.0	1.5 ↘

Japan



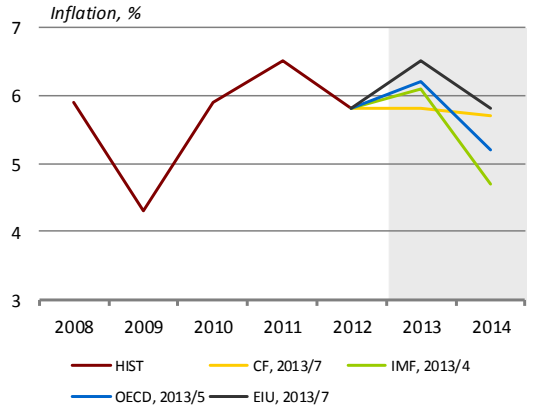
	CF	IMF	OECD	BoJ
2013	0.0 →	0.1	-0.1	0.7 ↗
2014	2.1 →	3.0	1.8	3.2 →

Note: Legend shows latest forecast data in format "Source, year/month" of forecast publication. HIST: historical values. ECB and Fed: midpoint of range. Arrow indicates direction of revision of newly published forecast. If no arrow is shown, no new forecast was available in previous month or by cut-off date in current month. Asterisk indicates first published forecast for given year.
[Cut-off date for data: 12 July 2013)
Source: CF, IMF, OECD, ECB, Fed, DBB, BoJ, CNB calculations.

II.4 Inflation outlook in BRIC countries

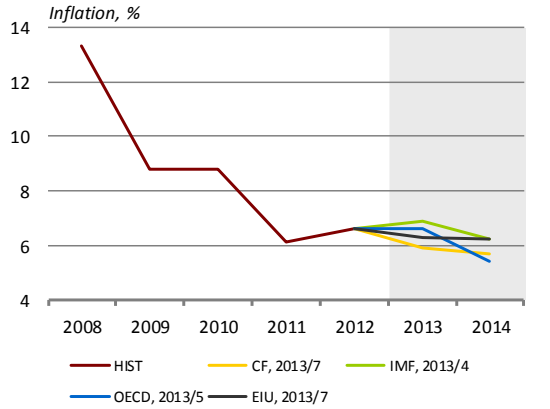
Since the last issue of GEO, the inflation outlooks for the BRIC countries have seen several changes, which, unlike the outlook for GDP growth, have moved in different directions. The upward revision to the outlook for CF inflation in Brazil is a response to higher actual inflation, which reached 6.7% for the 12 months to June. This is above the 6% upper limit of the tolerance band around the central bank's inflation target. In response to the elevated inflation, the central bank increased its key interest rate for the third consecutive month in July, by 0.5 pp to 8.5%. The high inflation was due to growth in food prices at the start of the year and also to the depreciating Brazilian real, which increased import prices. Consumer price inflation in China reached a 4-month high in June (2.7%), due mainly to higher prices of pork and rental housing. On the other hand, a decline in the producer price index reflects the weakening of the Chinese economy. A weakening is also expected by CF, which moved its outlook for inflation in China this year down by 0.3 pp. A similar downward shift in the CF outlook was also observed for India (0.1 pp), while the EIU expects higher inflation in India compared to the previous forecast. The outlook for inflation in Russia remains unchanged this year.

Brazil



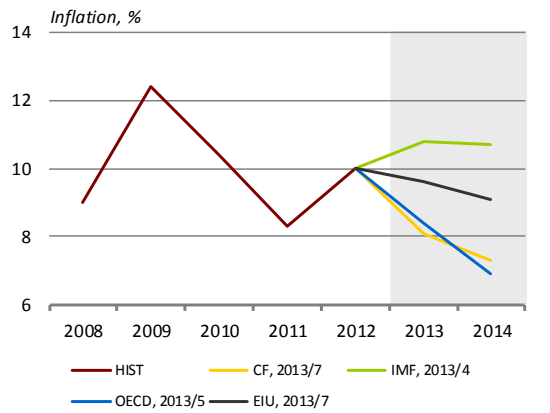
	CF	IMF	OECD	EIU
2013	5.8 →	6.1	6.2	6.5 ↘
2014	5.7 →	4.7	5.2	5.8 ↘

Russia



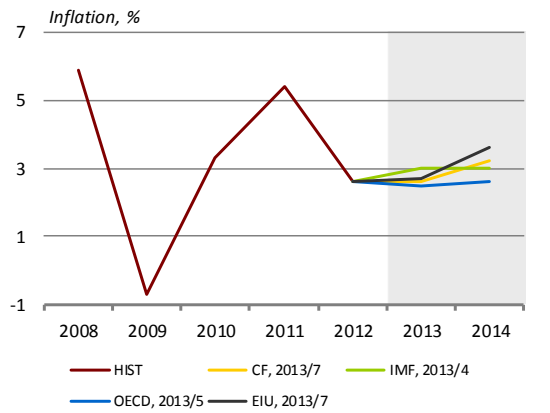
	CF	IMF	OECD	EIU
2013	5.9 →	6.9	6.6	6.3 ↘
2014	5.7 →	6.2	5.4	6.2 ↘

India



	CF	IMF	OECD	EIU
2013	8.1 →	10.8	8.4	9.6 ↘
2014	7.3 →	10.7	6.9	9.1 ↘

China

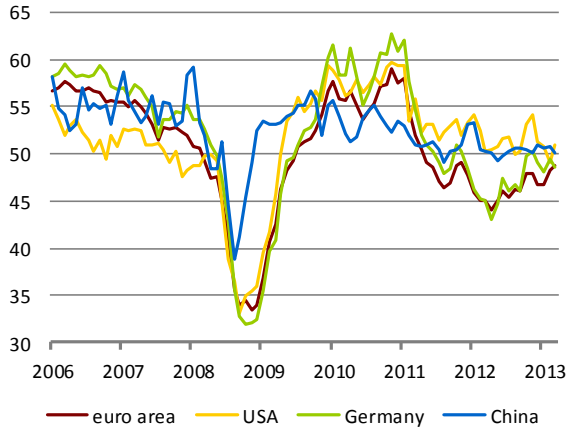


	CF	IMF	OECD	EIU
2013	2.6 →	3.0	2.5	2.7 ↗
2014	3.2 →	3.0	2.6	3.6 ↗

Note: Legend shows latest forecast data in format "Source, year/month" of forecast publication. HIST: historical values. Arrow indicates direction of revision of newly published forecast. If no arrow is shown, no new forecast was available in previous month or by cut-off date in current month. Asterisk indicates first published forecast for given year.
[Cut-off date for data: 12 July 2013)
Source: CF, IMF, OECD, EIU, CNB calculations.

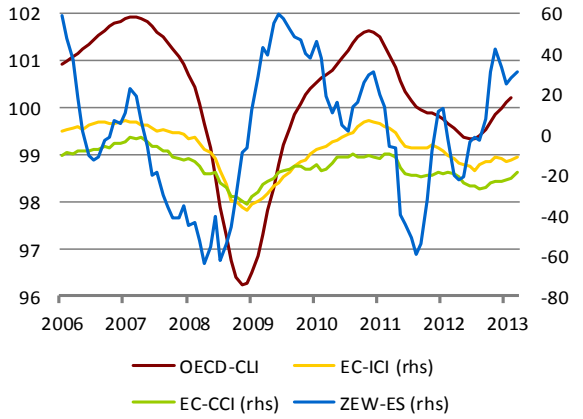
The outlook for leading indicators for the second half of this year improved slightly for both the US economy and the euro area (including Germany). The US Purchasing Managers' Index (PMI) in industry returned to above 50 points (the threshold separating growth from contraction) after one month, while composite leading indicators were flat and consumer confidence tended to improve. Business confidence and consumer sentiment improved in the euro area; the PMI in industry remains below 50 points. Although the PMI edged down to 48.6 points in Germany, the other leading indicators increased (the composite indicator and those tracking business and consumer sentiment). The PMI declined in China, but remains above 50 points.

PMI in manufacturing



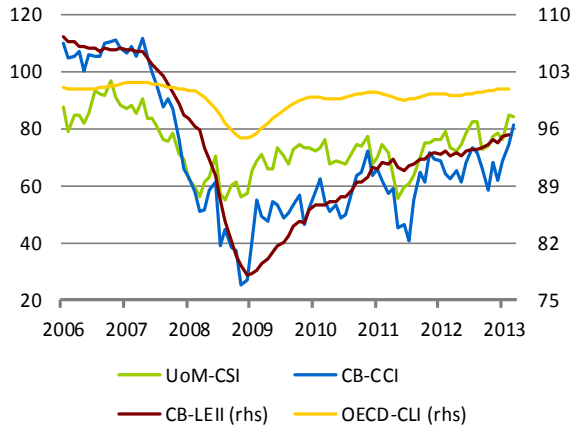
	EA	US	DE	CN
4/13	46.7	50.7	48.1	50.6
5/13	48.3	49.0	49.4	50.8
6/13	48.8	50.9	48.6	50.1

Euro area



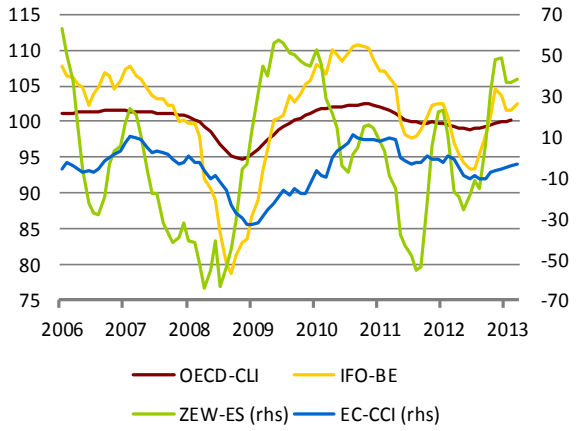
	OECD-CLI	EC-ICI	EC-CCI	ZEW-ES
4/13	100.1	-13.8	-22.3	24.9
5/13	100.2	-13.0	-21.9	27.60
6/13		-11.2	-18.8	30.60

USA



	CB-LEII	OECD-CLI	UoM-CSI	CB-CCI
4/13	95.1	100.9	76.4	69.0
5/13	95.2	100.9	84.5	74.3
6/13			84.1	81.4

Germany



	OECD-CLI	IFO-BE	ZEW-ES	EC-CCI
4/13	100.0	101.6	36.3	-4.9
5/13	100.1	101.6	36.4	-4.5
6/13		102.5	38.5	-3.2

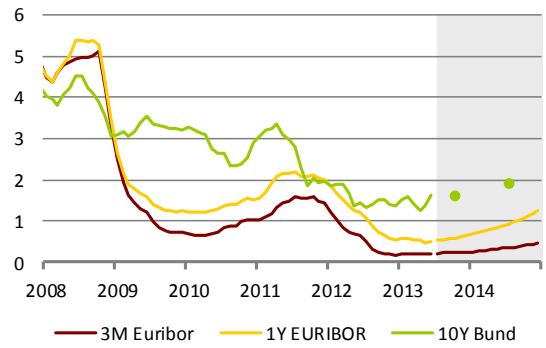
Note: **PMI** = Purchasing Manager Index (50); **OECD-CLI** = OECD Composite Leading Indicator (100); **EC-ICI** = European Commission Industrial Confidence Indicator (0); **EC-CCI** = European Commission Consumer Confidence Indicator (0); **ZEW-ES** = ZEW Economic Sentiment (0); **CB-LEII** = Conference Board Leading Economic Indicator Index (2004 = 100); **UoM-CSI** = University of Michigan Consumer Sentiment Index (Dec 1966 = 100); **CB-CCI** = Conference Board Consumer Confidence Index (1985 = 100); **IFO-BE** = IFO Business Expectations (2005 = 100). Values in parentheses indicate the index threshold between expected economic expansion and decline or the period as of which the index was normalised. [Cut-off date for data: 11 July 2013)
Source: OECD, EC, IFO, Conference Board, University of Michigan, CNB calculations.

IV.1 Interest rate outlook in the euro area and the USA

The 3M EURIBOR was slightly above 0.21% in the past two months, while the 1Y rate edged up in June. The European Central Bank left its key rates unchanged at its last meeting, announcing that they would remain at present or lower levels for an extended period. It thus joined other central banks with a forward guidance. Excess liquidity declined further to EUR 270 billion. According to the ECB, excess liquidity amounting to EUR 100–200 billion results in market rates that are only slightly above the deposit rate. The new market outlook for rates still expects the 3M EURIBOR to be below 1% at the 1Y horizon, while the July CF increased the outlook for the 10Y German government bond yield by 0.1 pp at the 3M horizon.

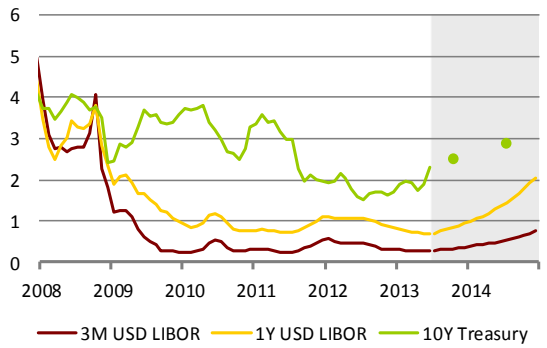
Dollar LIBOR rates saw no major changes in the period under review and the short-term volatility in rates, especially those with longer maturity, were caused by market reactions to the Fed's communication regarding scaling down bond purchases. CF07 shifted its outlook for the 10Y government bond yield significantly upwards over the entire horizon. Also deserving of mention is a change in the system for setting LIBOR rates, which will now be administered by NYSE Euronext.

EURO AREA



	06/13	07/13	12/13	06/14	12/14
3M EURIBOR	0.21	0.22	0.24	0.34	0.46
1Y EURIBOR	0.51	0.53	0.65	0.88	1.24
	06/13	07/13	10/13	07/14	
10Y Bund	1.62		1.6	1.9	

USA



	06/13	07/13	12/13	06/14	12/14
3M USD LIBOR	0.27	0.27	0.37	0.51	0.75
1Y USD LIBOR	0.68	0.69	0.94	1.36	2.05
	06/13	07/13	10/13	07/14	
10Y Treasury	2.29		2.5	2.9	

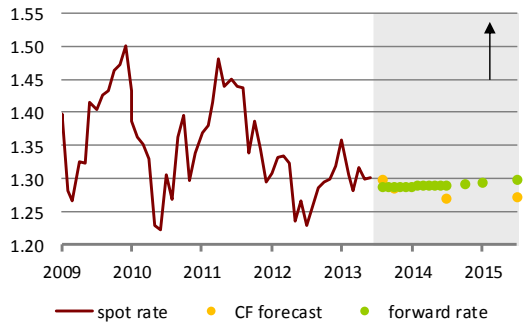
Note: Forecasts for EURIBOR and LIBOR rates are based on implied rates from interbank market yield curve (FRA rates are used from 4M to 15M and adjusted IRS rates for longer horizons). Forecasts for German and US government bond yields (10Y Bund and 10Y Treasury) are taken from CF. [Cut-off date for data: 10 July 2013] Source: Thomson Reuters (Datastream), Bloomberg, Consensus Forecasts, CNB calculations.

IV.2 Outlook for selected exchange rates

A change in direction of Fed monetary policy and a subsequent reversal in capital flows led to significant exchange rate movements on the global scale. Although the new data from the US labour market indicate an improvement and thus suggest a reduction in purchases by the Fed, larger cuts in the government sector fostered lower revised growth. The new CF forecast expects the euro to depreciate slightly to USD 1.27 against the euro at the 1Y horizon. Despite some signs of recovery of the UK economy and improving outlooks, sterling depreciated against the dollar after the Bank of England announced a forward guidance. The radical fiscal and monetary measures in Japan are starting to be felt in a slight economic recovery, but doubts persist about whether the 2% inflation target will be hit. CF07 thus expects the yen to depreciate by 4.6% at the 1Y horizon. A short-term appreciation of the Swiss franc in the first half of June forced the central bank to reiterate its commitment to the exchange rate ceiling and its preparedness to take further measures if necessary.

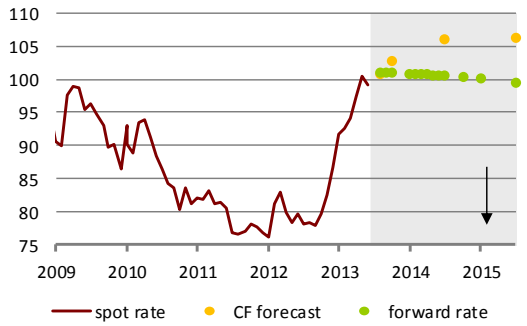
The currencies of emerging economies, including the BRIC countries, recorded a decline in confidence and a pronounced depreciation against the dollar, to which some central banks responded with foreign exchange interventions. The Brazilian currency depreciated by more than 10% against the dollar over the past two months, but according to CF07 should return to the early June level over the next month. In addition to political uncertainty, Brazil is experiencing high inflation and slowing growth. A sharp depreciation of the Indian and Russian currencies quelled speculation about a further decrease in rates. The renminbi depreciated temporarily at the end of June, when the market was affected by shortage of short-term liquidity. The aim was to reduce the access of small banks to cheap loans and thus curb shadow banking. China also took measures to internationalise its currency by allowing corporations to lend to their subsidies/branches overseas in domestic currency and by signing a currency swap agreement with the UK.

US$ per Euro



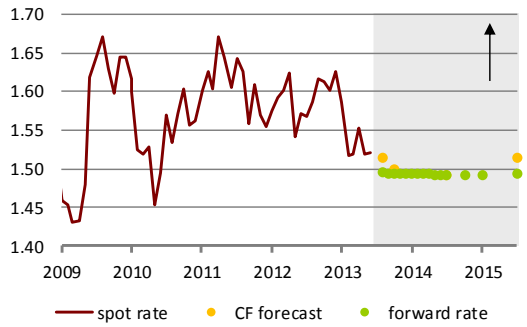
	08/07/13	08/13	10/13	07/14	07/15
spot rate	1.287				
CF forecast		1.299	1.285	1.269	1.271
forward rate		1.287	1.288	1.291	1.298

Yen per US$



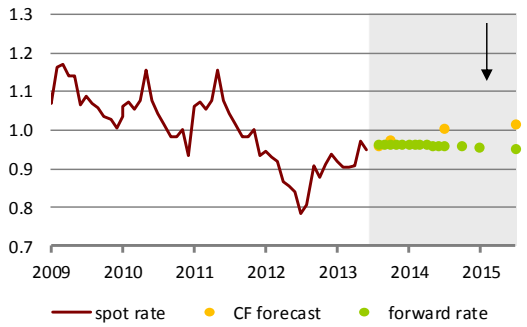
	08/07/13	08/13	10/13	07/14	07/15
spot rate	100.97				
CF forecast		100.80	102.70	106.00	106.30
forward rate		100.95	100.92	100.56	99.45

US$ per UK£



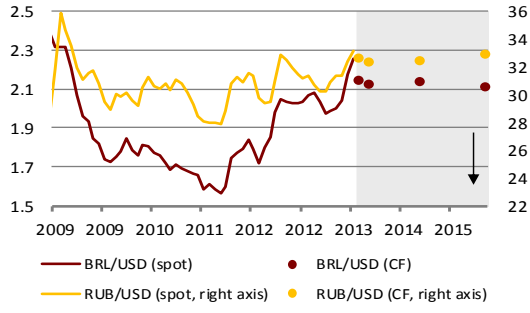
	08/07/13	08/13	10/13	07/14	07/15
spot rate	1.495				
CF forecast		1.515	1.499	1.492	1.514
forward rate		1.495	1.494	1.493	1.494

Swfr per US$



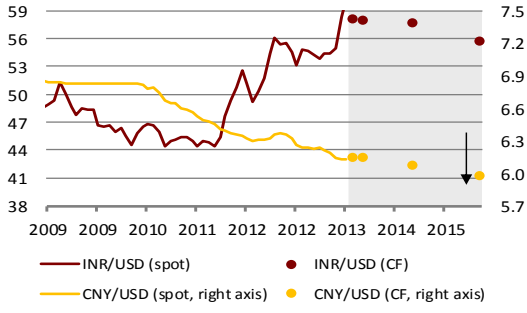
	08/07/13	08/13	10/13	07/14	07/15
spot rate	0.964				
CF forecast		0.957	0.973	1.002	1.016
forward rate		0.963	0.963	0.959	0.949

BRAZILIAN REAL, RUSSIAN ROUBLE



	31/07/14	08/13	10/13	07/14	07/15
BRL/USD (spot)	2.26				
BRL/USD (CF)		2.14	2.12	2.14	2.11
RUB/USD (spot)	33.26				
RUB/USD (CF)		32.58	32.34	32.45	32.87

INDIAN RUPEE, CHINESE RENMINBI



	31/07/14	08/13	10/13	07/14	07/15
INR/USD (spot)	60.87				
INR/USD (CF)		58.20	58.03	57.65	55.71
CNY/USD (spot)	6.14				
CNY/USD (CF)		6.15	6.14	6.08	5.98

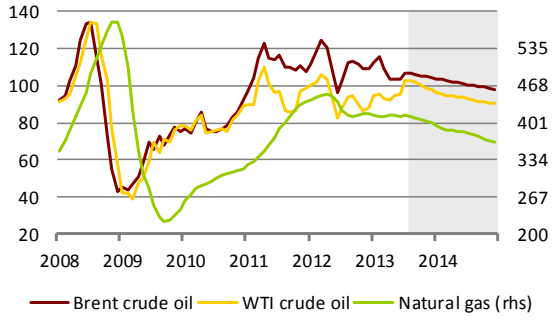
Note: Arrow indicates currency appreciation against US dollar. Exchange rates as of last day of month. Forward rate does not represent outlook; it is based on covered interest parity, i.e. currency of country with higher interest rate is depreciating. Forward rate represents current (as of cut-off date) possibility of hedging future exchange rate. [Cut-off date for data: 10 July 2013)
Source: Thomson Reuters (Datastream), Bloomberg, Consensus Forecasts, CNB calculations.

V.1 Oil and natural gas

Following an increase in early June as a result of geopolitical tensions in Syria and a weaker dollar, the price of Brent oil dropped quickly in the second half of the month as the Fed mentioned the possibility of gradually scaling down its bond purchases and the PMI for industry in China fell to its lowest level in nine months. In late June the price rose only gradually. It picked up in early July, when the political unrest in Egypt started, and the price was also supported by positive data from the US labour market. The price rose to its highest level since early April despite the quickly appreciating dollar. The WTI oil price was more interesting, rising even more strongly than the Brent price in late June and early July. In the short term this was due mainly to supply disruptions in Canada as a result of strong rain and floods. In the longer term, the prices of Brent crude oil (falling) and WTI crude oil (rising) are converging thanks to the improving oil transport infrastructure in the USA. The volume of rail and road transport from the inland to refineries on both the East and West Coast has increased and new pipelines are shipping oil from Cushing to the Gulf Coast. Their capacity should grow significantly over the next two years. This, coupled with increasing oil production in the USA and Canada, will lead to lower imports of light oil to the USA.

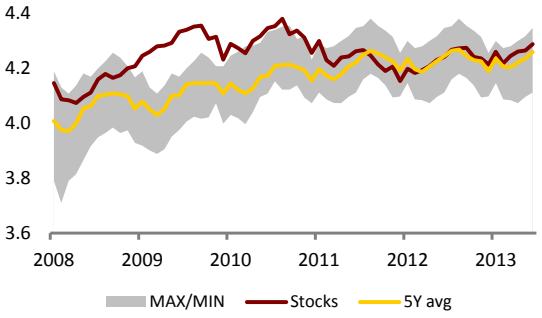
The US EIA expects the Brent oil price to average USD 102 and USD 100 a barrel in 2013 H2 and 2014 respectively; the July CF assumes a price just above USD 104.5 a barrel at both the 3M and 1Y horizons.

OUTLOOK FOR PRICES OF OIL AND NATURAL GAS

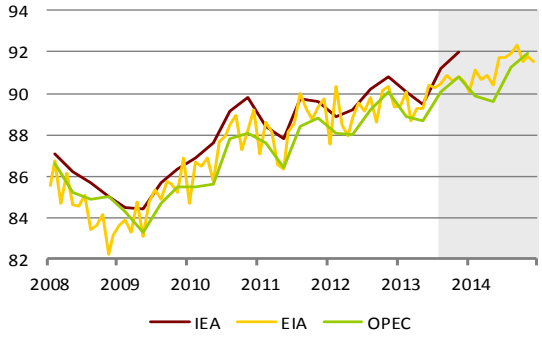


	Brent	WTI	Natural gas
2013	-4.39	3.46	-4.97
2014	-5.46	-4.30	-7.01

TOTAL STOCKS OF OIL AND OIL PRODUCTS IN OECD

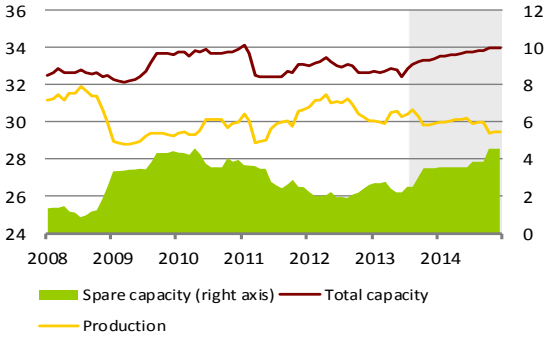


GLOBAL CONSUMPTION OF OIL AND OIL PRODUCTS



	IEA	EIA	OPEC
2013	1.03	0.98	0.87
2014		1.38	

PRODUCTION, TOTAL AND SPARE CAPACITY IN OPEC COUNTRIES



	Production	Total capacity	Spare capacity
2013	-2.31	-0.16	31.01
2014	-0.96	2.42	38.97

Note: Oil price in USD/barrel, price of Russian natural gas at German border in USD/1,000 m3 (IMF data, smoothed by the HP filter). Future oil prices (grey area) are derived from futures and future gas prices are derived from oil prices using model. Tables show annual percentage changes. Total oil stocks (commercial and strategic) in OECD countries including average, maximum and minimum in past five years in billions of barrels. Global consumption of oil and oil products in millions of barrels a day. Production and extraction capacity of OPEC in million barrels a day (EIA estimate). [Cut-off date for data: 8 July 2013]
Source: Bloomberg, IEA, EIA, OPEC, CNB calculations

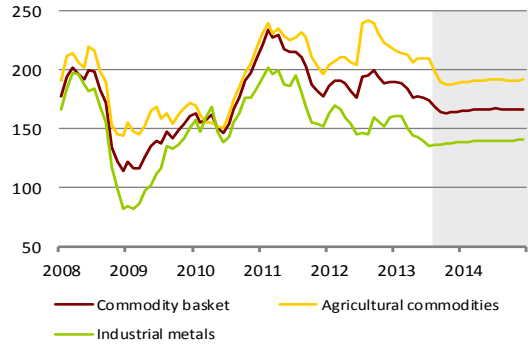
V.2 Other commodities

The overall non-energy commodity price index decreased only slightly in June, mainly because of a further decline in the industrial metals index, while the food price index was virtually flat in June and early July. Industrial metals across the index responded negatively to news of a slowdown in large emerging economies. However, their prices are expected to stagnate or increase slightly in the outlook.

In the case of food commodities, past developments and expectations are very mixed across the index. While wheat and rice prices fell in the past month, but their outlook is increasing, prices of energy crops (soy, maize) increased, but the outlook expects them to fall sharply due to good news about the weather and expected harvests. Pork prices recorded a further significant increase, reaching an all-time high, but are expected to fall rapidly. Beef prices grew more moderately but are expected to rise further to a new historical high. On the other hand, sugar prices fluctuated close to a more than three-year low. Coffee prices are showing a similar pattern.

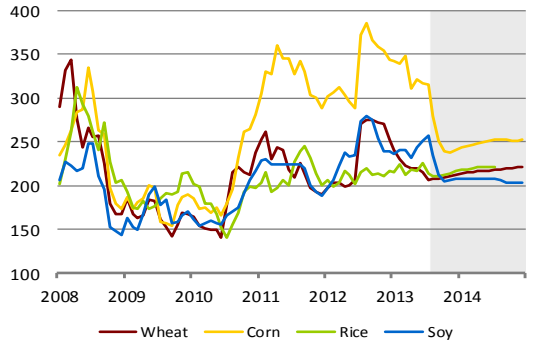
Cotton prices have been fairly volatile since the start of the year and show no signs of a trend over the forecast horizon either. By contrast, rubber prices continued to tumble, although this decline does not continue over the forecast horizon. Electricity prices fell slightly further to their lowest level this year.

PRICES OF NON-ENERGY COMMODITIES



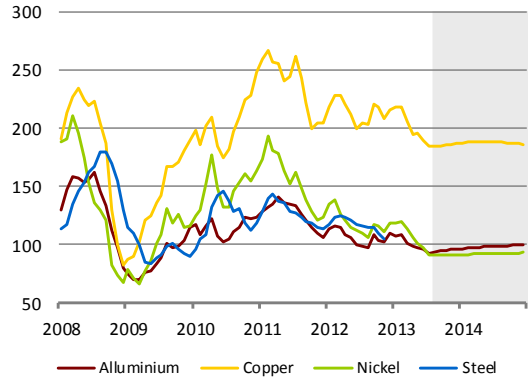
	Overall comm. basket	Agricultural comm.	Industrial metals
2013	-5.8	-6.4	-4.8
2014	-2.0	-3.3	0.0

FOOD COMMODITIES



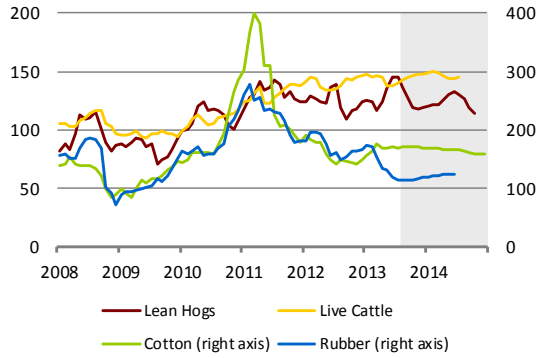
	Wheat	Corn	Rice	Soy
2013	-3.9	-8.3	3.5	-6.8
2014	5.3	-13.2	1.7	-10.3

METALS



	Aluminium	Copper	Nickel
2013	-5.9	-5.0	-9.8
2014	2.4	-0.7	-2.0

MEAT, NON-FOOD AGRICULTURAL COMMODITIES



	Lean hogs	Live Cattle	Cotton	Rubber
2013	0.2	1.7	6.2	-15.1
2014	-3.6	1.5	-0.6	

Note: Structure of non-energy commodity price indices corresponds to composition of The Economist commodity indices. All prices are given as indices, 2005 = 100 (charts) and percentage changes (tables). [Cut-off date for data: 8 July 2013)
Source: Bloomberg, CNB calculations.

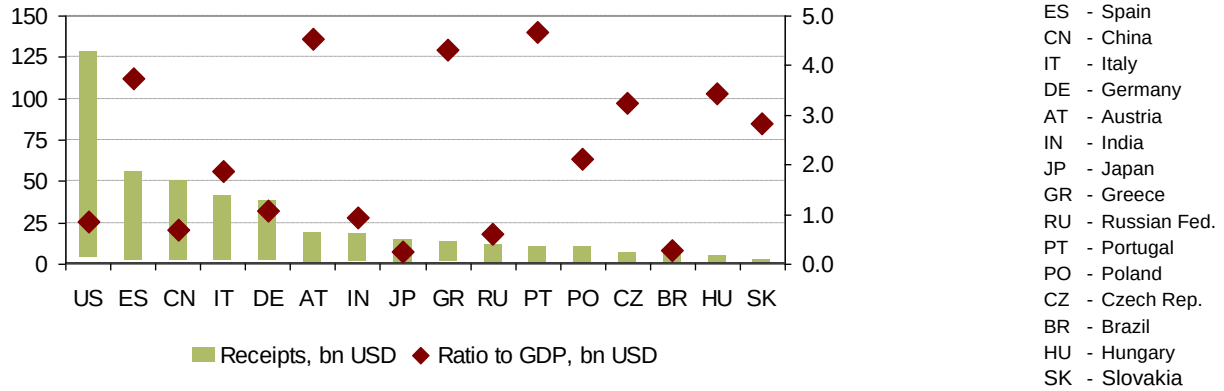
COMPETITIVENESS AND DETERMINANTS OF TRAVEL AND TOURISM[1]

Although global economic growth remains weak and is associated with a natural degree of uncertainty regarding future developments, the start of the summer season each year brings a surge in demand for travel. In some respects this demand is now even higher than before the crisis. This article compares the attractiveness of the Czech Republic with selected countries in the region that offer tourist services comparable to those in the Czech Republic (European countries that are not primarily seaside destinations). A simple comparison reveals that the Czech Republic is highly competitive in travel and tourism compared to Austria, Germany, Hungary, Poland and Slovakia. The Czech Republic's advantages include a unique cultural legacy and good infrastructure (especially compared to other Central European countries); by contrast, high fuel prices seem to be a negative factor. An econometric analysis of the determinants of travel and tourism from 21 countries to the Czech Republic reveals that geographical distance limits the number of foreign tourists, while common language roots and EU entry support travel. Surprisingly, entry into the Schengen area is insignificant for travel into the Czech Republic.

Introduction

According to a study by the World Travel and Tourism Council (WTTC, 2012), travel and tourism were more important for global GDP than the automotive and chemical industries in 2011, generating 9.1% of global GDP. However, this figure includes indirect impacts that are difficult to exclude from domestic economic activity, e.g. the purchase of food in a domestic supermarket by a foreign tourist or the manufacture and transport of hotel furniture. Although this segment of economic activity has not avoided the adverse impact of the economic and financial crisis, it has recovered relatively fast. According to the World Tourism Organisation (UNWTO), international tourism rose by 4% in 2012. The same global growth rate (3–4%) is expected this year. This is higher than the global GDP growth rate of 2.4% expected by the July CF.

Figure VI-1: Tourism income in selected countries, USD billions and %



Note: The left-hand scale shows the ratio of tourism income to GDP in % and the right-hand scale shows tourism income in USD billions in 2012.

Source: CF, UNWTO April 2013, Thomson Datastream, author's calculations

[1] Author: Oxana Babecká (Oxana.Babecka-Kucharcukova@cnb.cz). The opinions expressed in this article are those of the author and do not necessarily reflect the official position of the Czech National Bank.

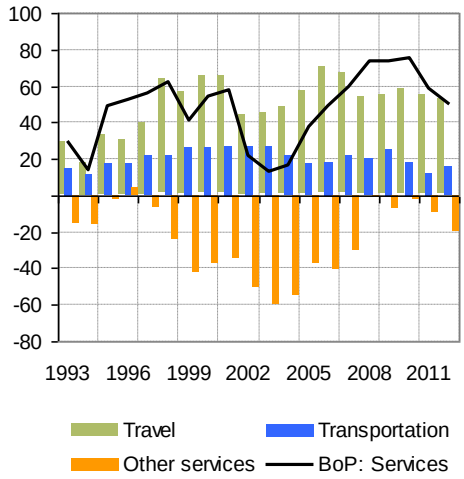
The importance of tourism varies widely from country to country (see Figure VI-1). According to the UNWTO, the USA had the highest income from international tourism in 2012. However, the ratio of that income to GDP is negligible. With a ratio of tourism income to GDP of 4.7%, Portugal is most dependent on tourism income among the selected countries. The Czech Republic ranked 36th in terms of tourism income in 2011–2012. Such income accounted for 3.3% of Czech GDP.

1. Competitiveness of the Czech Republic and selected countries in the region

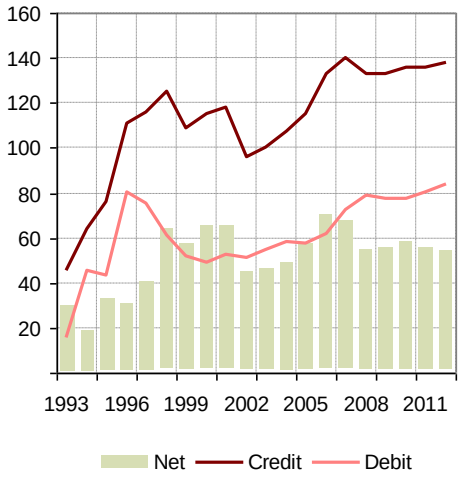
Although the Czech Republic is not a country whose prosperity depends on tourism, travel is an important item of the Czech balance of payments and helps to keep the services balance positive (see Figure VI-2). Travel credits and debits have long been rising in the Czech Republic, but their ratio to GDP has been falling since the mid-1990s (see Figure VI-3a). Similar trends can be observed in Hungary, Poland and Austria. In Slovakia, by contrast, the degree of openness to travel and tourism has risen. A slight increase has also been recorded for Germany.

Figure VI-2: Importance of travel for the Czech Republic

a) Importance of travel in the services balance of the Czech Republic, CZK billions, annual data



b) Travel credits and debits in the Czech Republic, CZK billions, annual data

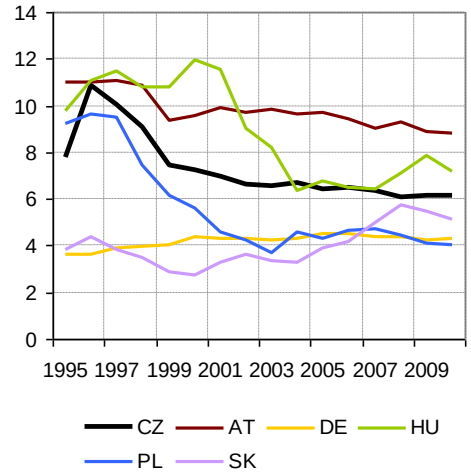


Source: ARAD, author's calculations

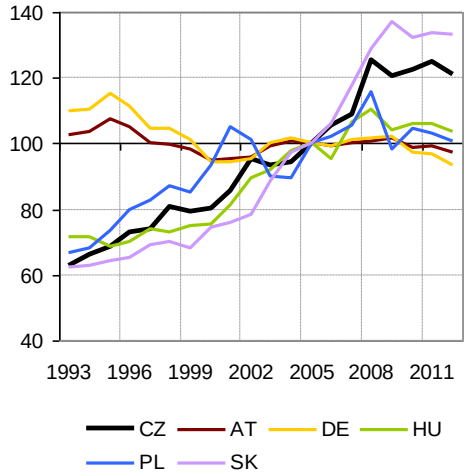
The real effective exchange rate of the domestic currency is one of the indicators of a country's overall price competitiveness and its competitiveness in tourism. It reflects the nominal effective exchange rate and the ratio of price levels weighted by the importance of trading partner countries. This indicator shows that with the exception of the most recent period, the Czech Republic and Slovakia lost the most ground to the countries under comparison (see Figure VI-3b).

Figure VI-3: Openness to travel and tourism and price competitiveness

a) Degree of openness to tourism, %



b) Effective exchange rate, 2005=100



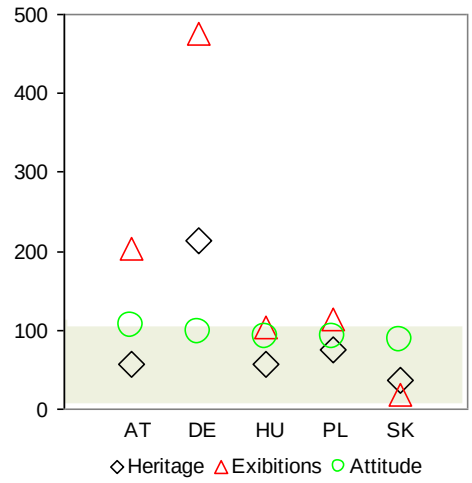
Note: The degree of openness to travel and touristm is the ratio of the sum of total travel credits and debits to GDP. Price competitiveness is proxied by the CPI-deflated real effective exchange rate of the koruna; an increase means currency appreciation. The weights of the effective exchange rate reflect the importance of the individual trading partner countries. Due to data unavailability it is difficult to construct an index reflecting the importance of travel credits and debits by country. Annual data. The most recent observation is for 2012.

Source: Thomson Datastream, author's calculations

Figure VI-4 compares selected competitiveness indicators from the annual *Travel and Tourism Competitiveness Report 2013* (World Economic Forum, 2013). To allow comparison, the indicators are adjusted so that the value for the Czech Republic equals 100 (the boundary between the grey and white areas of the figures). The greater is the distance from 100, the worse (grey background) or better (white background) is the country's competitiveness according to the given criterion by comparison with the Czech Republic. Most of the points in the figure are clearly in the grey part, so the Czech Republic's overall competitiveness can be assessed as above-average according to most indicators by comparison with the selected countries (and especially in Central Europe). The Czech Republic's biggest competitors are Germany and Austria, which organise more international exhibitions and have higher-quality motorways and cheaper fuels. Refuelling in the Czech Republic is the most expensive of the six countries under comparison, but a tourist spends less on a night in a hotel than in Austria or Germany. The Czech Republic has the potential to further increase its competitiveness in the future thanks partly to the fact that it ranks second among the selected countries in terms of the number of cultural heritage sites of global importance (behind Germany, which is several times larger). Government support for tourism development is also a positive factor.

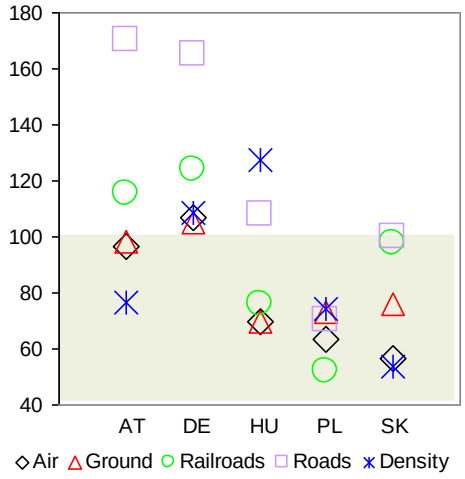
Figure VI-4. Comparison of selected competitiveness indicators

a) Cultural conditions, index CZ = 100



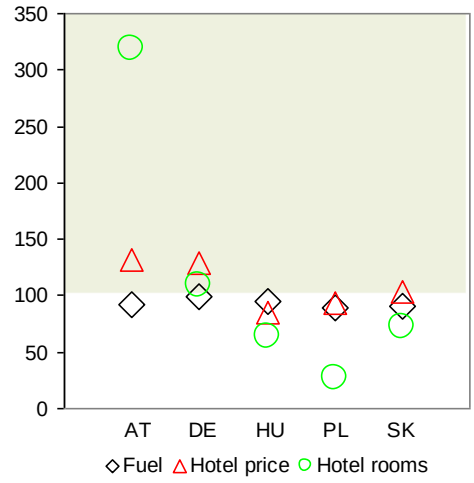
◇ Heritage – number of cultural heritage sites
Δ Exhibitions – number of international exhibitions
o Attitude – politeness of staff

b) Infrastructure quality, index CZ = 100



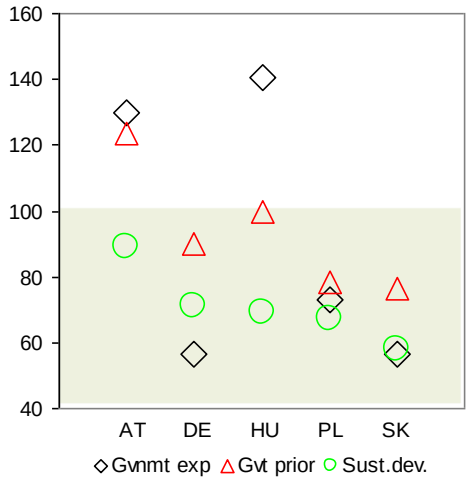
◇ Air – quality of air transport and airports
Δ Ground – quality of domestic transport
o Railroads – quality of railroad transport
□ Roads – quality of roads and motorways
⁎ Density of infrastructure (roads, motorways etc.)

c) Travel costs, index CZ = 100



◇ Fuel – fuel prices
Δ Hotel price – price per night in hotel in USD
o Hotel rooms – total number of places in hotels

d) Sector development and state support, index CZ = 100



◇ Gvt exp – government expenditure on travel and tourism
Δ Gvt prior – importance of sector for government
o Sust.dev. – sustainable development of sector

Note: Austria – AT, Germany – DE, Hungary – HU, Poland – PL and Slovakia – SK.

Source: WEF 2013: *The Travel and Tourism Competitiveness Report 2013* and author's calculations.

2. Econometric analysis of the determinants of travel and tourism in the Czech Republic

The importance of selected macroeconomic and geographical factors for travel and tourism is examined here using a gravity model.[2] In the standard gravity model the

[2] This empirical model describes the hypothesis that the level of bilateral trade between two countries is directly proportional to their size (i.e. their GDP) and inversely proportional to their geographical distance.

level of bilateral goods trade is the explained variable. The "gravitational" determinants of services remain practically unexplored. A significant obstacle is the limited quality and availability of bilateral travel and tourism data (credits, debits, number of tourists etc.) from open data sources. For the same reason, this analysis focuses solely on the Czech Republic and is performed using CZSO data. Macroeconomic variables are taken from Thomson Datastream. The gravity equation is estimated separately for the number of foreign tourists in Czech hotels and the number of foreign tourists in Czech spas. It is estimated using annual data on travel and tourism from 21 countries[3] to the Czech Republic in 2000–2012 (a total of 258 observations). The share of each country is at least 1% of the total number of tourists in the selected category or at least 0.5% of the total number of foreign tourists in the selected category. The results are summarised in Table VI-1.

The estimated equation[4] has a high explanatory power – 0.78 for hotels and 0.84 for spas. Overall, services trade (travel and tourism into the Czech Republic) is in line with the general results of gravity equations for goods. In particular, the larger the partner country, the more tourists can be expected from it. On the other hand, distance and currency appreciation have an adverse effect on the number of tourists, as they make goods and services in the destination country more expensive.

While travel from neighbouring countries should be more frequent, the absence of a sea coast is regarded as an obstacle to the development of tourism (the coefficient on LANDLOCKEDij is negative and significant). This is due to the need to cross several land borders, especially when travelling from distant countries, and related visa obligations, as well as the higher preference of tourists from these countries for travelling to the seaside compared to tourists from seaside countries. Travel is also supported by the possibility to be understood in a foreign country when speaking one's mother tongue (the coefficient on SLAVij is mostly positive and significant) and by EU membership of both countries (the coefficient on EU is positive and mostly significant). The impact of entry into the Schengen area was also examined by including a binary variable in the regression. However, the result was insignificant and therefore not incorporated into the analysis. Entry into the Schengen area did not affect the movement of tourists from non-EU countries, who had not previously needed visas anyway, so the overall impact was modest and moreover outweighed by the strong negative effect of the global economic and financial crisis. Bilateral exchange rate volatility also has an insignificant effect on travel and tourism. A comparison of the specifications for hotels and spas reveals important differences in coefficient elasticity. For example, distance has a much more pronounced adverse impact on travellers for health purposes compared to other tourists (the coefficient on DISTij is several times lower in the regression with hotels than in the regression with spas; specifications with robust standard deviations). This

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The model is called "gravity model" due to its similarity to Newton's law of gravity. The theoretical foundations of the gravity model are derived from Anderson and Van Wincoop (2003). Poisson regression appears to be the most suitable econometric approach, as trade is either positive or zero – see Santos Silva and Tenreyro (2006). The empirical literature mostly uses an extended version of the gravity model where other factors limiting or supporting bilateral trade (e.g. quality of infrastructure, quality of the institutional environment, exchange rate volatility) are added to the basic determinants of trade. For an extended gravity model estimated using Poisson regression for goods trade, see Babecká Kucharčuková, Babecký and Raiser (2012).

[3] Austria, Belgium, China, Denmark, France, Germany, Hungary, Israel, Italy, Japan, the Netherlands, Poland, the Russian Federation, Slovakia, South Korea, Spain, Sweden, Switzerland, Ukraine, the United Kingdom and the United States.

[4] Poisson regression with robust standard deviations (poisson) is used for the estimate. An alternative estimate uses random effect regression (re). Random effect regression has rather higher standard deviations due to the relatively low number of observations.

may be because the first group is made up mainly of tourists from neighbouring countries, while visitors come from all over the world for the purposes of tourism and visiting cultural heritage sites.

Table VI-1. Results of the regression analysis

	HOTELS		SPAS	
	poisson	poisson, re	poisson	poisson, re
GDPjt	**0.71** ***	**1.36** ***	**0.75** ***	**1.35** ***
	(0.10)	(0.00)	(0.19)	(0.00)
AREAj	**0.08** **	**-0.49** ***	**1.04** ***	**-0.74** ***
	(0.03)	(0.11)	(0.09)	(0.20)
RERijt	**-0.07** **	**-0.46** ***	**-0.58** ***	**-0.55** ***
	(0.03)	(0.00)	(0.07)	(0.00)
DISTij	**-0.86** ***	**-0.95** ***	**-2.30** ***	**0.14**
	(0.13)	(0.32)	(0.24)	(0.65)
CONTIGij	**0.65** ***	**0.46**	**2.12** ***	**3.16** ***
	(0.15)	(0.64)	(0.22)	(1.17)
LANDLOCKEDij	**-0.78** ***	**-1.03** *	**-2.03** ***	**-1.04**
	(0.15)	(0.63)	(0.31)	(1.10)
SLAVij	**0.59** ***	**2.24** ***	**-1.31** ***	**4.73** ***
	(0.23)	(0.51)	(0.38)	(1.17)
EU	**0.23** **	**0.03** ***	**0.03**	**0.10** ***
	(0.11)	(0.00)	(0.12)	(0.00)
CRISIS	**-0.12** *	**-0.16** ***	**0.00**	**-0.10** ***
	(0.07)	(0.00)	(0.11)	(0.00)
CONSTANT	**6.40** ***	**4.34** **	**1.53**	**-3.86**
	(0.87)	(2.15)	(2.22)	(4.68)

Note: GDPjt is the real GDP of the partner country; AREAj is the size of the foreign country; DISTijt is the distance from the Czech Republic; RERijt is the bilateral real exchange rate calculated using the CPI. CONTIGij takes the value of 1 for countries bordering on the Czech Republic and 0 otherwise. LANDLOCKEDij equals 1 if, like the Czech Republic, the partner country has no sea coast and 0 otherwise. SLAVij is a binary variable (0/1) defining the group of Slavic countries. EU7 equals 1 if the country is an EU member and 0 otherwise. CRISIS denotes the period of economic crisis and equals 1 from 2008 onwards and 0 before 2008. Explanatory variables (except binary ones) are in logarithms. Poisson regression with robust standard deviations (poisson) and Poisson regression with random effects (re) are used for the estimate. Standard deviations are given in parentheses. Significance levels are indicated with asterisks: *** for 1%, ** for 5% and * for 10%.

To conclude, it is important to emphasise that the analysis in this article has its limits and must therefore be interpreted with considerable caution. Using data on the number of tourists does not show the overall impact on the travel balance. For example (i) a tourist from a "richer" country will spend more than a tourist from a "poorer" country, and (ii) the number of tourists may remain unchanged but total travel credits will fall if travellers spend less.

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A1. Change in GDP predictions for 2013

	CF		IMF		OECD		CB / EIU	
EA	0.0	2013/7 2013/6	-0.3	2013/7 2013/4	-0.5	2013/5 2012/11	-0.1	2013/6 2013/3
US	-0.1	2013/7 2013/6	-0.2	2013/7 2013/4	-0.1	2013/5 2012/11	-0.1	2013/6 2013/3
DE	-0.1	2013/7 2013/6	-0.3	2013/7 2013/4	-0.2	2013/5 2012/11	-0.1	2013/6 2012/12
JP	0.0	2013/7 2013/6	0.4	2013/7 2013/4	0.9	2013/5 2012/11	0.0	2013/7 2013/4
BR	-0.3	2013/7 2013/6	-0.5	2013/7 2013/4	-1.1	2013/5 2012/11	-0.5	2013/7 2013/6
RU	-0.3	2013/7 2013/6	-0.9	2013/7 2013/4	-1.5	2013/5 2012/11	0.0	2013/7 2013/6
IN	-0.1	2013/7 2013/6	-0.1	2013/7 2013/4	-1.2	2013/5 2012/11	-0.4	2013/7 2013/6
CN	-0.3	2013/7 2013/6	-0.2	2013/7 2013/4	-0.7	2013/5 2012/11	-0.3	2013/7 2013/6

A2. Change in inflation predictions for 2013

	CF		IMF		OECD		CB/EIU	
EA	0.0	2013/7 2013/6	0.1	2013/4 2012/10	-0.1	2013/5 2012/11	-0.2	2013/6 2013/3
US	0.0	2013/7 2013/6	0.0	2013/4 2012/10	-0.2	2013/5 2012/11	-0.5	2013/6 2013/3
DE	0.0	2013/7 2013/6	-0.3	2013/4 2012/10	-0.3	2013/5 2012/11	0.1	2013/6 2012/12
JP	0.0	2013/7 2013/6	0.3	2013/4 2012/10	0.4	2013/5 2012/11	0.0	2013/7 2013/4
BR	0.1	2013/7 2013/6	1.2	2013/4 2012/10	0.9	2013/5 2012/11	0.0	2013/7 2013/6
RU	0.0	2013/7 2013/6	0.3	2013/4 2012/10	0.2	2013/5 2012/11	0.0	2013/7 2013/6
IN	-0.1	2013/7 2013/6	1.2	2013/4 2012/10	0.7	2013/5 2012/11	0.5	2013/7 2013/6
CN	-0.3	2013/7 2013/6	0.0	2013/4 2012/10	1.0	2013/5 2012/11	-0.6	2013/7 2013/6

A3. List of abbreviations

BoJ	Bank of Japan
BR	Brazil
BRIC	Brazil, Russia, India and China
CB-CCI	Conference Board Consumer Confidence Index
CB-LEII	Conference Board Leading Economic Indicator Index
CBOT	Chicago Board of Trade
CF	Consensus Forecasts
CN	China
CNB	Czech National Bank
DBB	Deutsche Bundesbank
DE	Germany
EA	euro area
EC	European Commission
ECB	European Central Bank
EC-CCI	European Commission Consumer Confidence Indicator
EC-ICI	European Commission Industrial Confidence Indicator
EIU	The Economist Intelligence Unit database
EEA	European Economic Area
ES	Spain
EU	European Union
EMI	European Monetary Institute

EURIBOR	Euro Interbank Offered Rate
Fed	Federal Reserve System (the US central bank)
FRA	forward rate agreement
GBP	pound sterling
GDP	gross domestic product
GR	Greece
CHF	Swiss franc
ICE	Intercontinental Exchange
IE	Ireland
IFO	Institute for Economic Research
IFO-BE	IFO Business Expectations
IMF	International Monetary Fund
IN	India
IRS	interest rate swap
IT	Italy
JP	Japan
JPY	Japanese yen
LIBOR	London Interbank Offered Rate
N/A	not available
OECD	Organisation for Economic Co-operation and Development
OECD-CLI	OECD Composite Leading Indicator
PMI	Purchasing Managers' Index
PT	Portugal
RU	Russia
UoM	University of Michigan
UoM-CSI	University of Michigan Consumer Sentiment Index
US	United States
USD	US dollar
ZEW-ES	ZEW Economic Sentiment

A4. List of thematic articles published in GEO

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