

GLOBAL ECONOMIC OUTLOOK – MAY

Monetary and Statistics Department
External Economic Relations Division

2014

II. Economic outlook in advanced economies	3
II.1 Euro area	3
II.2 United States	4
II.3 Germany	5
II.4 Japan	5
III. Economic outlook in BRIC countries	6
III.1 China	6
III.2 India	6
III.3 Russia	7
III.4 Brazil	7
IV. Outlook of exchange rates vis-à-vis the US dollar	8
V. Commodity market developments	9
V.1 Oil and natural gas	9
V.2 Other commodities	10
VI. Focus	11
How far the V4 countries are from Austria: A detailed look using CPLs	11
A. Annexes	18
A1. Changes in GDP predictions for 2014	18
A2. Changes in inflation predictions for 2014	18
A3. List of abbreviations	18
A4. List of thematic articles published in the GEO	19

Cut-off date for data

12 - 16 May 2014

CF survey date

12 May 2014

GEO publication date

23 May 2014

Notes to charts

ECB and Fed: midpoint of the range of forecasts.

The arrows in the GDP and inflation outlooks indicate the direction of revisions compared to the last GEO. If no arrow is shown, no new forecast is available. Asterisks indicate first published forecasts for given year.

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.

Editors and authors

Luboš Komárek	Oxana Babecká Kucharčuková	Tomáš Adam	Filip Novotný	Milan Klíma
lubos.komarek@cnb.cz	oxana.babecka-kucharckukova@cnb.cz	tomas.adam@cnb.cz	filip.novotny@cnb.cz	milan.klima@cnb.cz
Editor-in-chief Summary	Editor III.1 Russia III.3 China	Editor II.1 Eurozone	II.2 United States	II.3 Germany
Soňa Benecká	Marie Duršpek Raková	Jan Hošek	Václav Žďárek	
sona.benecka@cnb.cz	marie.durspek-rakova@cnb.cz	jan2461.hosek@cnb.cz	vaclav.zdarek@atlas.cz	
II.4 Japan	III.2 India III.4 Brazil	V. Commodity market developments	Focus	

The May issue of Global Economic Outlook presents its regular overview of recent and expected developments in selected territories, focusing on key economic variables: inflation, GDP growth, leading indicators, interest rates, exchange rates and commodity prices. In this issue, we also analyse the structural differences and trends in prices of some household consumption items in the Visegrad Four countries since they joined the EU. Given the heterogeneity of euro area countries, these trends are compared with those for household consumption in Austria.

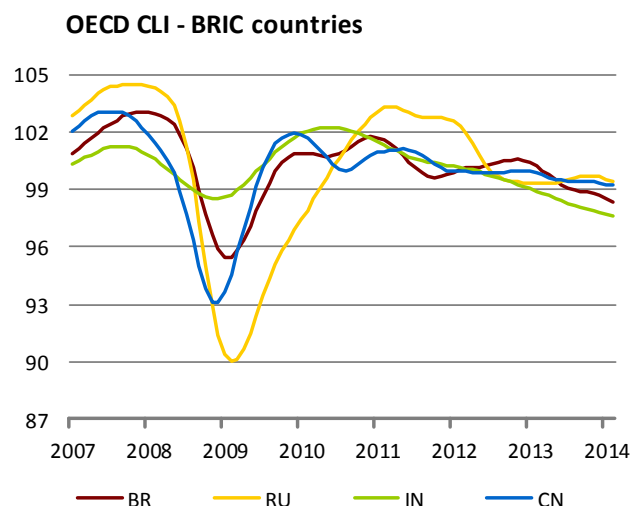
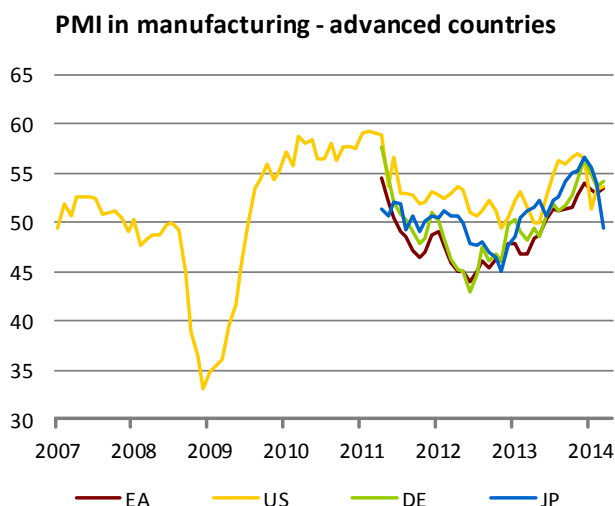
The economic situation in advanced countries stabilised at relatively satisfactory levels despite marked differences across countries, particularly in the euro area. The global economic recovery this year and the next should be driven by the USA. The euro area should also see a gradual upswing in growth over the same period, albeit at roughly one-half the pace of the US economy. The Japanese economy is still showing satisfactory GDP growth, although industry there is probably already facing the effects of a gradually appreciating yen. This is confirmed by the leading indicator for Japanese industry, which has not stopped declining yet. The inflation outlooks in advanced countries remain very low (except for inflation in Japan, which has increased due to a tax hike). In the euro area they are still falling, though with a hint of a return above 1% in 2015. This situation is forcing the ECB to continue intensively considering easing the monetary conditions in an unconventional manner.

The Chinese economy is continuing to slow gradually. Its growth rate should be just above 7% again next year. Domestic consumption should play an increasing role, while the dependence of economic growth on investment should decrease. The outlooks for the Brazilian economy are still none too optimistic owing to domestic economic problems and unsuccessful reforms, which have contributed to an increase in inflation towards 6%. The Russian economy continues to see massive capital outflows and currency depreciation due to the political tensions between Russia and Ukraine. By contrast, positive outlooks, i.e. rising economic growth and a marked disinflationary process, are prevailing in the Indian economy even after the elections.

The outlooks for euro area interest rates are very low until the end of 2015. Interest rates in the USA are expected to rise gradually at the end of this year, a trend which should continue into 2015. According to CF, the US dollar should appreciate against the euro and the Japanese yen. The dollar is also expected to appreciate against the Brazilian and Russian currencies and also slightly against the Indian currency. By contrast, it should depreciate against the Chinese renminbi.

The price of oil is fluctuating within a narrow band just above USD 107 a barrel. The outlook remains falling until the end of 2015, reflecting expectations that growth in extraction will exceed growth in demand over the given horizon and that spare extraction capacity will increase. Commodity market developments remain mixed, although a falling price trend prevails in most markets. Very modest price growth is expected for industrial metals, whereas the current growth in food commodity prices (due mainly to rising wheat and corn prices) should shift to lower levels.

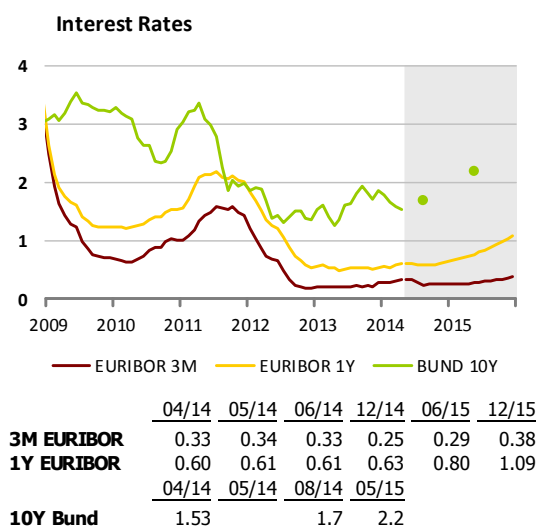
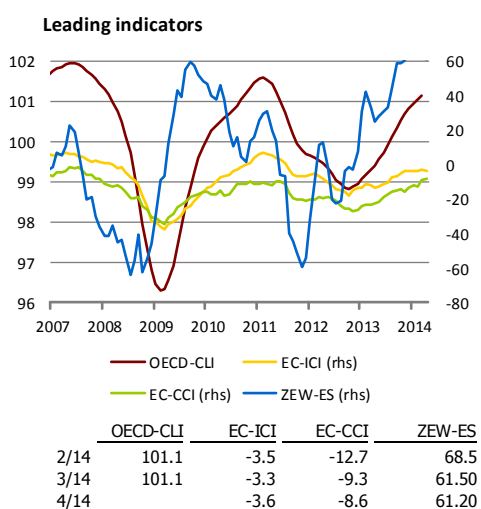
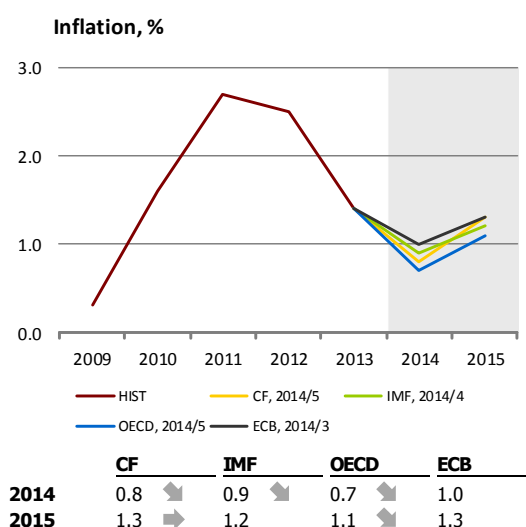
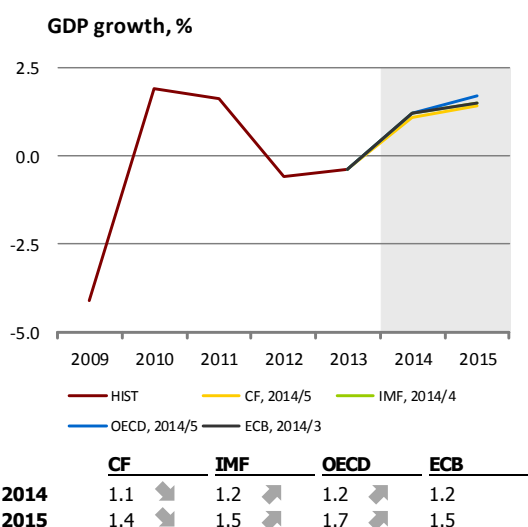
Available PMI time series for countries followed in the GEO



II.1 Euro area

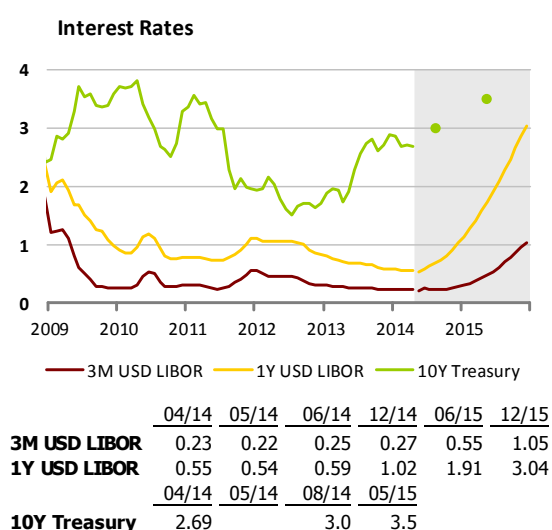
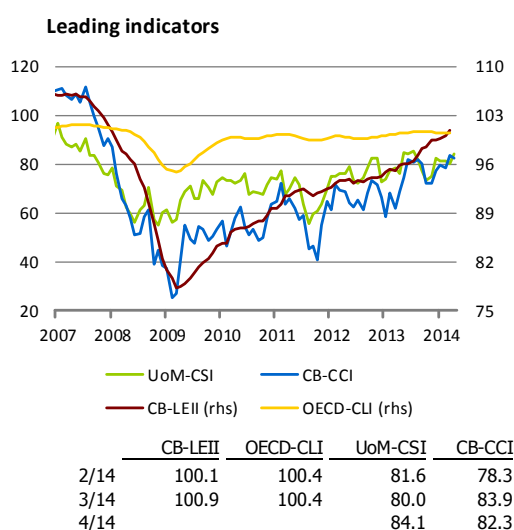
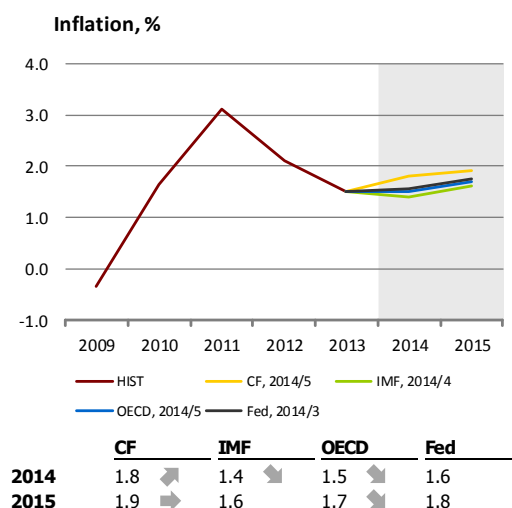
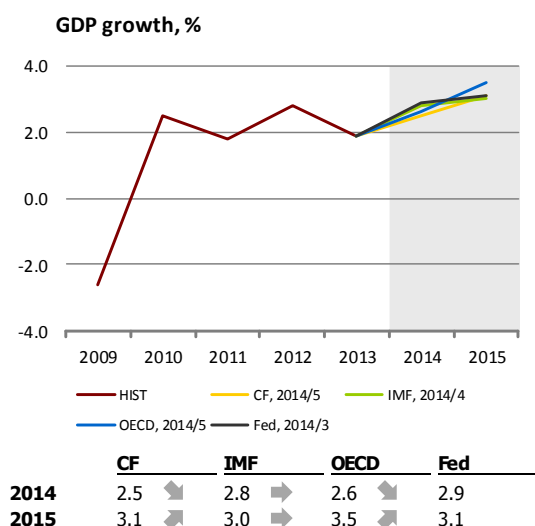
According to Eurostat’s flash estimate, euro area GDP rose by 0.2% quarter on quarter (and 0.9% year on year) in 2014 Q1. The rate of growth of the euro area economy was thus the same as in 2013 Q4, the estimate for which was revised down by 0.2 pp. The growth was driven by the German economy (growth of 0.8%), but the second-largest euro area economy, France, was flat. Growth in Italy declined again after one period of growth. Growth also declined in the Netherlands, but picked up in Spain. Following solid February results, the industrial production index fell in March, mainly because of lower output in the energy sector due to the mild winter. The PMI in manufacturing is signalling an improvement in April and has reached a three-month high. Moreover, the PMI is signalling an expansion in all euro area countries for the first time since November 2007. The May CF slightly reduced its outlook for euro area growth this year and the next. By contrast, the OECD outlook for euro area GDP growth was revised upwards compared to November.

Annual HICP inflation rose to 0.7% in April (from 0.5% in March). The difference compared with March was mainly due to the contribution of transport prices, which rose in connection with this year’s Easter. CF lowered its outlook for inflation this year, while the OECD revised its outlook more significantly at both horizons compared to November and now expects similar inflation figures to CF. At its May meeting the ECB repeated that it was prepared to use both conventional and unconventional policy instruments to prevent a too prolonged period of low inflation. Mario Draghi emphasised that the ECB would if necessary react to the new inflation forecast, which will be published in June. The outlook for money market rates decreased slightly compared to the previous month at both maturities under review over the entire horizon.



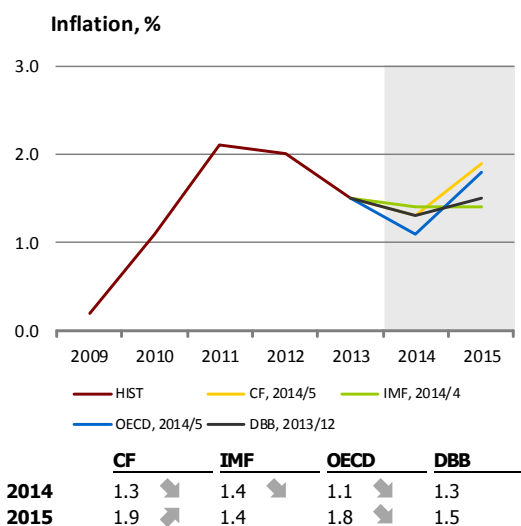
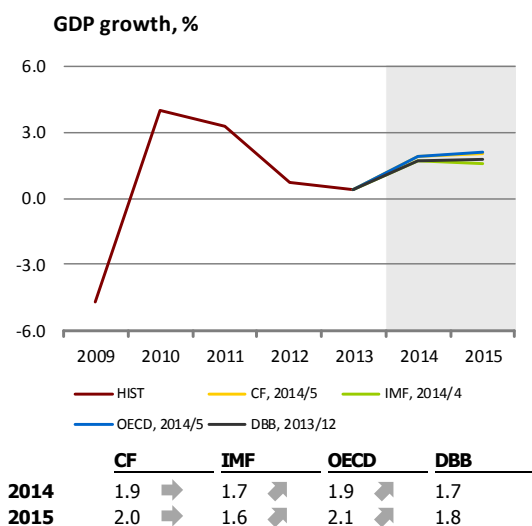
II.2 United States

The outlooks for the USA assume relatively strong GDP growth this year despite a current modest downward revision. By contrast, the outlooks for 2015 have been revised upwards and economic growth should thus pick up further in 2015. Given the slowing Chinese economy and the relatively low expected growth in the euro area, the US economy is thus one of the drivers of global economic growth. In 2014 Q1 alone, GDP growth slowed to 2.3% year on year according to preliminary estimates and was flat compared to the previous quarter. The annual growth rate of industrial production also slowed slightly in April and its average growth since the start of this year is currently below the full-year CF outlook. However, April also saw an improvement in the PMI leading indicator in industry, which represents a positive signal for industrial production going forward. Other positive signals include continued high annual growth in nominal retail sales in April and a pronounced improvement in the University of Michigan consumer sentiment index. Private consumption is thus the main driver of economic growth. Unemployment dropped quite significantly (to 6.3%) in April compared to previous months. This, together with a pick-up in inflation to 2% in April, is consistent with an expected monetary policy tightening. The market outlooks for 3M interest rates are indicating relatively fast growth towards 1% in 2015. Nonetheless, the inflation outlooks for this year and the next remain well anchored below 2%. The average exchange rate of the dollar against the euro has been at a relatively strong level for the euro since March. The markets are tensely awaiting the June ECB meeting, at which monetary policy is expected to be eased, putting depreciation pressure on the euro. The CF expects the euro to be 5.7% weaker against the dollar at the one-year horizon.



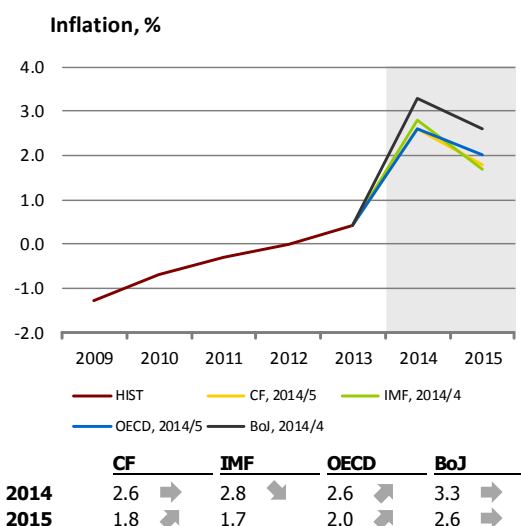
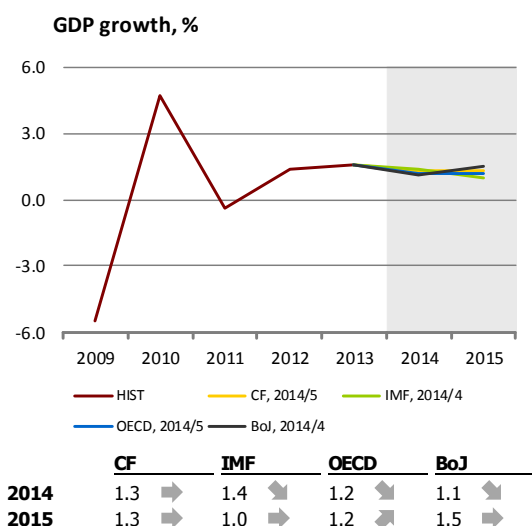
II.3 Germany

Economic growth in Germany strengthened sharply in 2014 Q1 in both quarter-on-quarter and year-on-year terms (from 0.4% to 0.8% and from 1.4% to 2.3% respectively), thanks mainly to domestic demand growth. Household and government consumption also increased, as did investment (both fixed investment and investment in inventories), whose growth was strongly affected by the very mild winter. By contrast, external demand had a negative effect on economic growth. Exports fell and imports rose on the back of rising domestic demand. The May CF and the OECD expect GDP to rise by 1.9% this year as a whole. This estimate is supported by increases in almost all leading indicators of the business climate (except the ZEW index) and consumer confidence. Annual inflation rose by 0.3 pp to 1.3% in April, mainly due to faster growth in services and food prices (2.3% and 1.8% respectively). By contrast, energy prices fell by 1.3%.



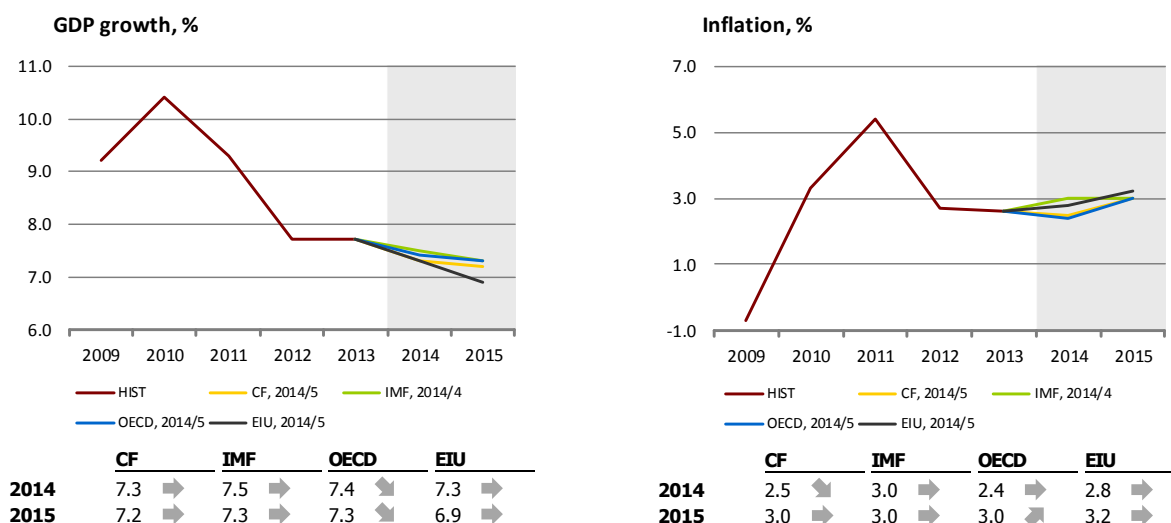
II.4 Japan

The April inflation figure in Tokyo, which is a leading indicator of Japanese inflation, was the highest in 22 years (2.7%). This marked increase in the price level was mainly due to a consumption tax hike. This effect is temporary, however, and the weakening of the yen, which was the main contributor to inflation last year, also halted at the start of this year. The increase in consumption tax was reflected in retail sales growth in March as consumers frontloaded ahead of this increase as expected. Consumer demand is expected to fall in April but rebound in May. On the other hand, the PMI in manufacturing recorded its fourth decrease in a row to below 50 in April. According to businesses, the increase in consumption tax was the main reason for the fall in orders. Therefore, it is not easy to predict the overall effect of the tax change on the Japanese economy, and speculation about a further monetary policy easing continues. CF did not change its growth outlook in May compared to previous months, whereas the OECD and BoJ reduced their outlooks for 2014.



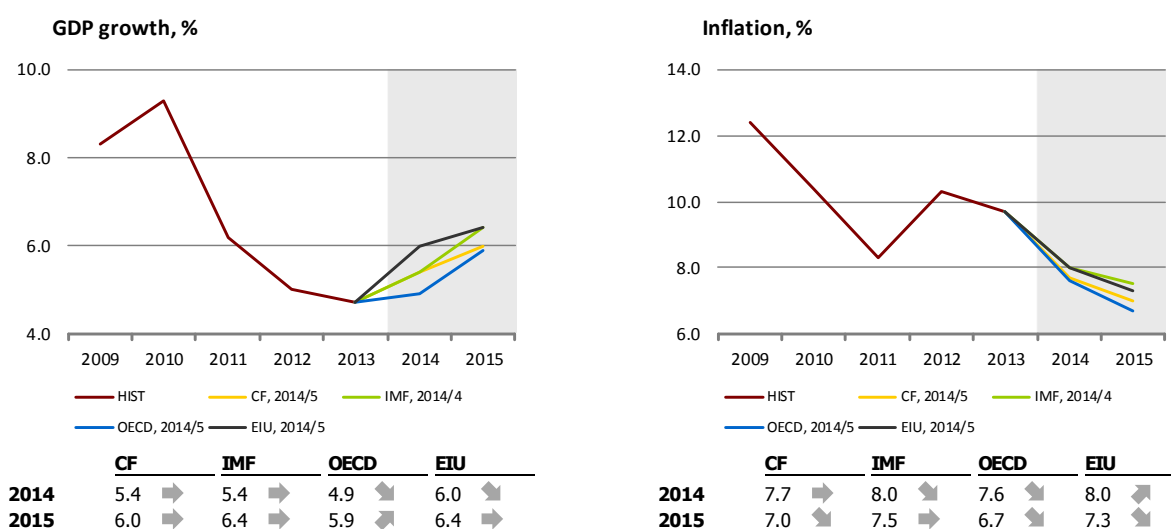
III.1 China

The new CF, EIU and OECD outlooks expect the Chinese economy to grow by 7.3%–7.4% this year. The May OECD outlook says the weaker growth outlook is due to tightening credit conditions, which are adversely affecting investment. The European Commission also published a new outlook in May. It expects China to record growth of just 7.2%. According to the Commission, gradually falling dependence on investment, which up to now has been very strong and associated with growth in lending, in favour of domestic consumption could lead to weaker but more stable economic growth. Inflation in China will stay between 2.4% and 2.8% this year. According to CF, the renminbi will appreciate against the dollar and reach the January 2014 level in May 2015 despite concerns about the intention of the Chinese government and central bank to weaken the domestic currency and thereby boost exports. The CF expects the exchange rate to be stable in the following year.



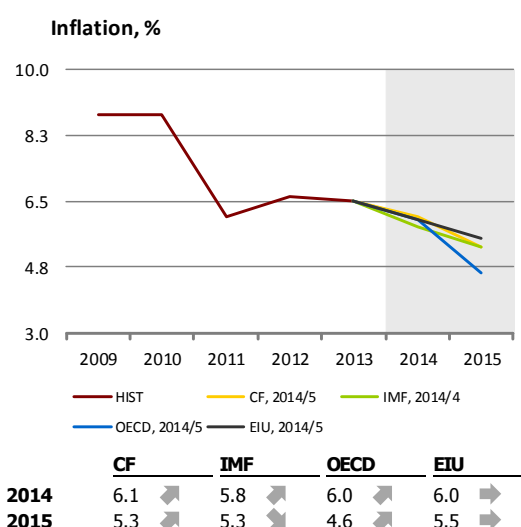
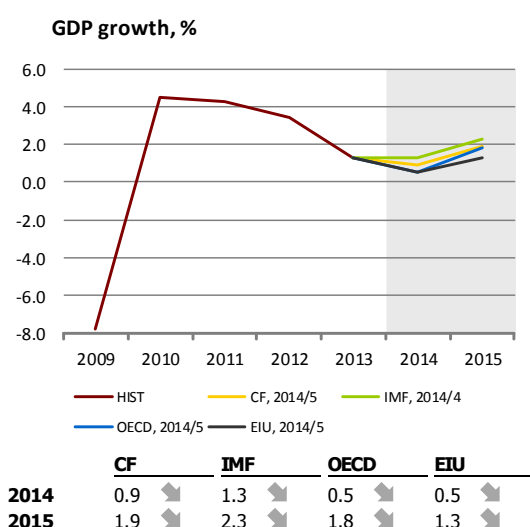
III.2 India

The two-month elections ended in May and the economic situation is expected to improve. The new CF, EIU and OECD outlooks expect the Indian economy to grow by 4.9%–6.0% this year. In 2015, GDP growth should edge up to 5.9%–6.4%. Inflation should decrease slightly to 7% in 2014, although there is uncertainty about the effects of the worse monsoon weather on food prices. The international institutions predict inflation of around 7% in 2015 as well. The central bank's key interest rate has been at 9% since April. The Indian currency has stabilised at around 60 rupees to the dollar, partly thanks to capital inflows.



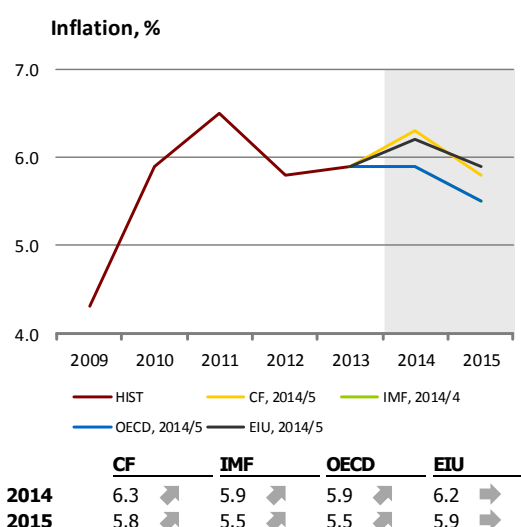
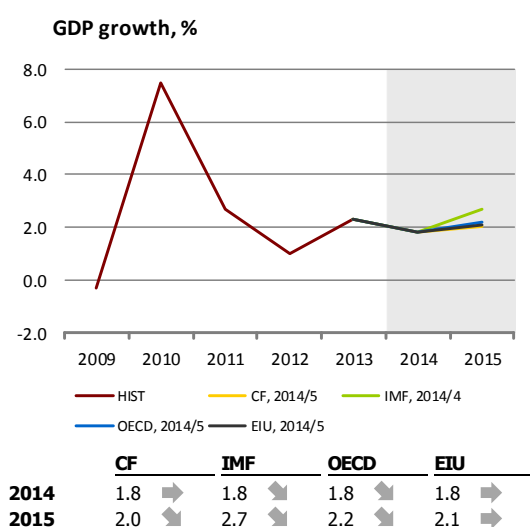
III.3 Russia

The geopolitical crisis together with the negative impact of persisting structural problems continue to adversely affect the outlook for Russia's economic performance. The higher risk of an escalation of the Ukrainian conflict led to a massive outflow of private capital, which, according to the World Bank, totalled USD 63.7 billion in 2014 Q1, as against USD 59.4 billion for the whole of 2013. At the start of April, the new WEO estimated this year's GDP growth rate at 1.3%, but at the end of April the IMF outlook fell to 0.2% (see Concluding statement for the Article IV consultation mission). The EBRD expects stagnation and the European Commission predicts 1% growth for the Russian economy. The new CF, EIU and OECD forecasts range between 0.5% and 0.9%. The risk of higher inflation in Russia is continuing to increase, driven by rising food and energy prices and also by the previous depreciation of the rouble, which led the Russian central bank to increase its key rate by 0.25 pp to 7.5% at the end of April. Inflation will rise to at least 6% this year according to the CF, EIU and OECD outlooks.



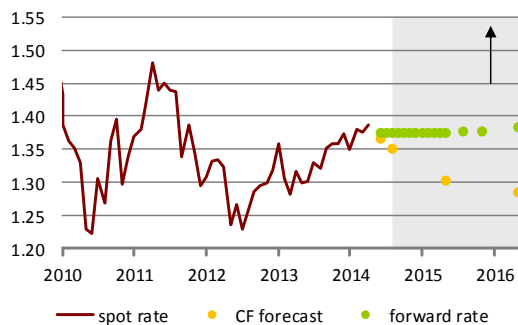
III.4 Brazil

Brazil is failing to kick-start economic growth, and consumer confidence is still very low. In April, the IMF lowered its GDP outlook from 2.6% to 1.8% for 2014 and from 2.9% to 2.7% for 2015. The CF GDP growth forecast also remains low, at 1.8% for 2014 and 2.0% for 2015. By contrast, the inflation forecasts remain high, at around 6% for both 2014 and 2015. High inflation is also being supported by higher airfares before the football World Cup, which begins in June. The central bank's interest rate has been at 11% since March. The Brazilian real has stabilised at around BRL 2.20 to the dollar despite the difficult economic situation.



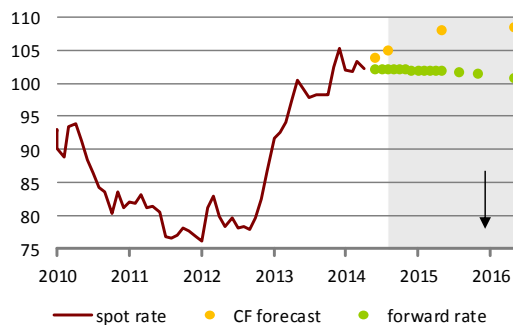
IV. Outlook of exchange rates vis-à-vis the US dollar

THE EURO



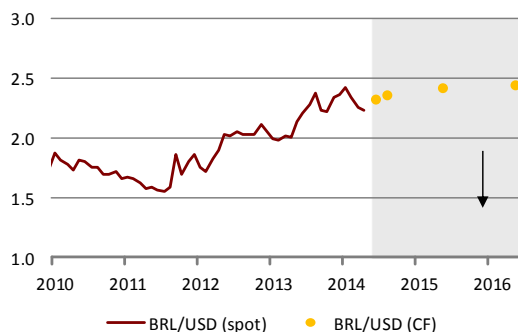
	12/05/14	06/14	08/14	05/15	05/16
spot rate	1.376				
CF forecast		1.366	1.351	1.302	1.285
forward rate		1.376	1.375	1.376	1.383

THE JAPANESE YEN



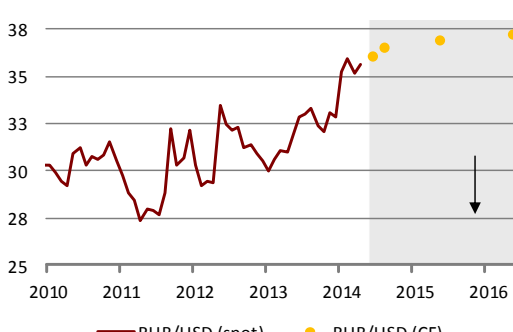
	12/05/14	06/14	08/14	05/15	05/16
spot rate	102.10				
CF forecast		103.80	105.00	108.00	108.50
forward rate		102.11	102.07	101.83	100.82

THE BRAZILIAN REAL



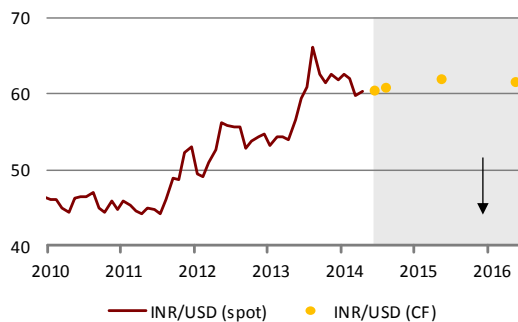
	12/05/14	06/14	08/14	05/15	05/16
spot rate	2.22				
CF forecast		2.32	2.36	2.42	2.44

THE RUSSIAN ROUBLE



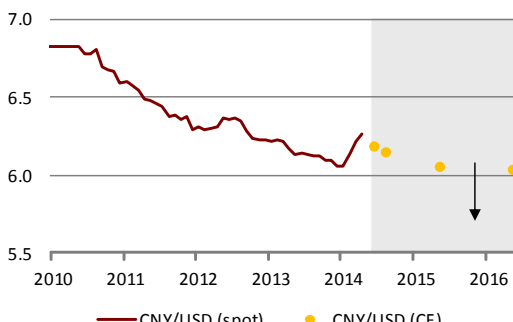
	12/05/14	06/14	08/14	05/15	05/16
spot rate	35.11				
CF forecast		36.09	36.55	36.94	37.19

THE INDIAN RUPEE



	12/05/14	06/14	08/14	05/15	05/16
spot rate	59.87				
CF forecast		60.50	60.76	61.84	61.62

THE CHINESE RENMINBI



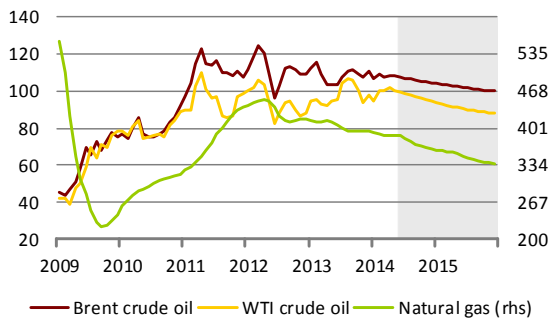
	12/05/14	06/14	08/14	05/15	05/16
spot rate	6.24				
CF forecast		6.18	6.15	6.06	6.04

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.

V.1 Oil and natural gas

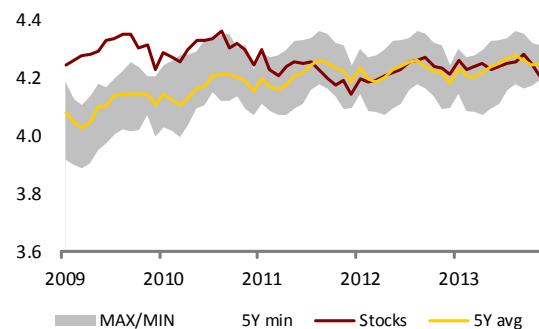
The Brent crude oil price fell in March but rose for most of April on uncertainty about extraction growth in Libya and about the agreements between the Libyan government and rebels. The escalating conflict in Ukraine fostered further growth in risk premia and the oil price was also supported by favourable data from the US labour market. Refinery demand is gradually going up too, thanks to rising refining margins and the winding-down of seasonal maintenance. By contrast, price growth continued to be dampened by weaker data from the Chinese economy and fast growth in extraction from unconventional resources (especially in North America). The Brent price fell slightly in late April (probably due to profit-taking by financial investors) and fluctuated within a narrow range of USD 107–108.5 a barrel in the first half of May. The price of WTI oil was closest to the Brent price in the first half of April, when it rose owing to a rapid drop in stocks at the Cushing inland terminal, which is the settlement point for WTI oil contracts. Since then, however, the spread has widened to USD 7–9 a barrel. The oil price forecasts are still falling, reflecting expectations that extraction growth will exceed demand growth over the given horizon and that spare extraction capacity will rise. The EIA increased its forecast for the average Brent price this year and the next by USD 1 to USD 106 and USD 102 a barrel respectively, in line with the market outlook based on futures contracts. The May CF predicts a more modest price decline (to USD 105 a barrel one year ahead). The observed fall in oil stocks does not stem from a shortage of oil in the market, but is a logical consequence of the falling price forecast, as it is not economically advantageous to store oil in such a situation

OUTLOOK FOR PRICES OF OIL AND NATURAL GAS

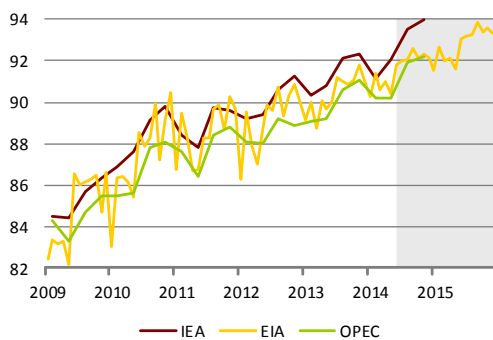


	Brent	WTI	Natural gas
2014	-1.76	0.26	-5.81
2015	-4.52	-7.77	-8.15

TOTAL STOCKS OF OIL AND OIL PRODUCTS IN OECD

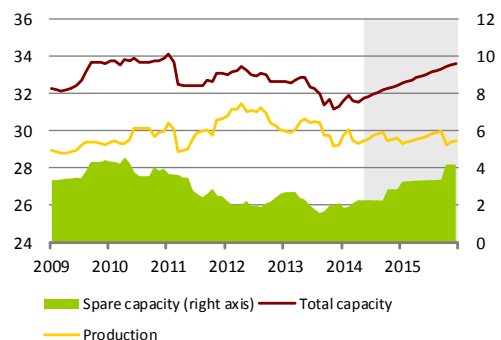


GLOBAL CONSUMPTION OF OIL AND OIL PRODUCTS



	IEA	EIA	OPEC
2014	1.41	1.31	1.25
2015		1.35	

PRODUCTION, TOTAL AND SPARE CAPACITY IN OPEC COUNTRIES



	Production	Total capacity	Spare capacity
2014	-1.27	-0.62	8.35
2015	-0.27	3.52	51.85

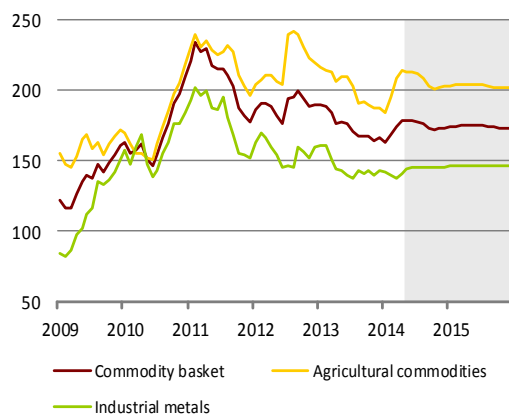
Note: Oil price in USD/barrel, price of Russian natural gas at German border in USD/1,000 m³ (IMF data, smoothed by the HP filter). Future oil prices (grey area) are derived from futures and future gas prices are derived from oil prices using model. Tables show annual percentage changes. Total oil stocks (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).

Source: Bloomberg, IEA, EIA, OPEC, CNB calculations

V.2 Other commodities

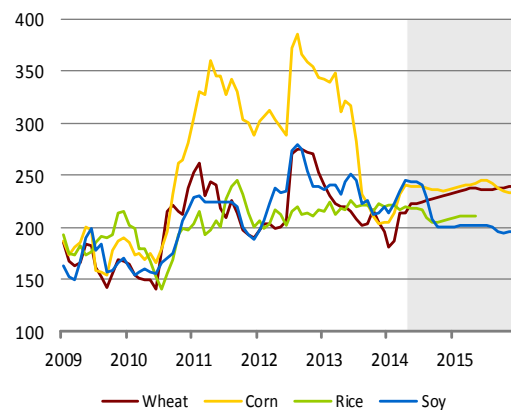
Commodity markets again showed mixed trends across commodities. The average monthly food commodity price index increased further in April, but the prices of its components were broadly flat in April and early May on a daily basis following two months of strong growth. Meat prices dropped in May from their previous record highs. As for non-food agricultural commodities, the price of cotton was flat and the price of rubber continued to follow a downward trend and currently stands at levels last seen in 2005 (with the exception of the end of 2008). The average basic metals price index rose slightly in April and early May, but has not yet moved far from the flat trend seen over the last year or so. Growth in physical demand from large emerging markets continues to fade. A weakening inflow of financial investment into commodity markets can also be observed as the need to hedge against inflation falls as a result of the tapering of the monetary stimulus in the USA. As for individual metals, only the nickel price increased markedly, owing to a ban on exports of raw materials from Indonesia. The price of aluminium also went up slightly, but fell back again at the end of April. After declining in March, the price of copper stabilised in response to extraction shortfalls in Chile. The outlook for the industrial metals price index is only slightly rising. Turning to food commodities, wheat prices are expected to rise further, corn prices should be flat, and rice and soy prices should decline in second half of 2014 following the new harvest.

PRICES OF NON-ENERGY COMMODITIES



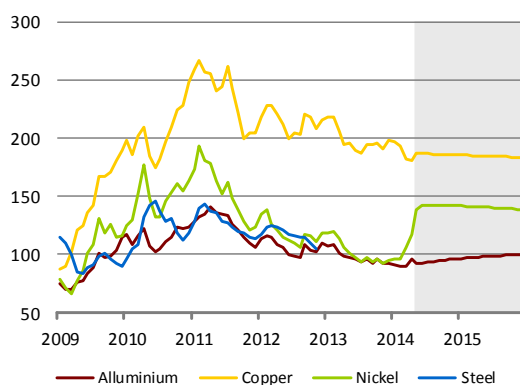
	Overall	Agricultural	Industrial
2014	-0.4 ↗	1.6 ↘	-1.3 ↗
2015	0.2 ↗	-0.8 ↘	2.0 ↗

FOOD COMMODITIES



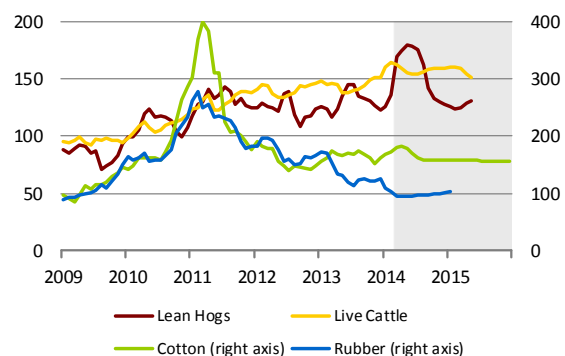
	Wheat	Corn	Rice	Soy
2014	1.3 ↗	-16.3 ↘	-2.6 ↗	-3.6 ↗
2015	8.9 ↗	2.9 ↗	-1.4 ↘	-10.7 ↘

METALS



	Aluminium	Copper	Nickel
2014	-4.2 ↘	-5.9 ↗	26.5 ↗
2015	5.6 ↘	-1.3 ↗	8.8 ↗

MEAT, NON-FOOD AGRICULTURAL COMMODITIES



	Lean hogs	Live Cattle	Cotton	Rubber
2014	17.2 ↗	9.5 ↗	1.1 ↗	-26.5 ↘
2015	-16.9 ↘	-0.9 ↘	-6.1 ↗	

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).
Source: Bloomberg, CNB calculations.

How far the V4 countries are from Austria: A detailed look using CPLs:¹

The economic and financial turbulence observed in recent years has led to concerns about the alignment and sustainability of the euro area as a whole. Developments on the southern periphery of the euro area point to potential problems stemming from low long-term alignment. It therefore remains important to monitor the convergence of Central European countries, which – with the exception of Slovakia – have so far kept their independent monetary policies. This article analyses the structural differences and trends in the prices of household consumption items in the Visegrad Four (V4) countries from EU entry until 2012. Given the heterogeneity of the euro area countries, Austria appears to be a suitable benchmark.² The statistical analysis first examines cross-sectional data, where developments in selected years illustrate the frequency of incidence of consumption items in categories with different comparative price levels vis-à-vis Austria. Transition matrices are then used to show the dynamics of comparative price levels (CPLs). Although only a modest change was found in the aggregate data over the nine years, the results obtained using detailed data reveal substantial price level convergence compared to 2004 for food, housing, energy, leisure time activities and information services. By contrast, the CPLs for education and health care expenditure remain at low and almost unchanged levels compared to the base year. Hungary, which was hit harder by the financial crisis, represents something of an exception to these common V4 trends.

1 Subcategories of consumption in V4 countries

Aggregate analysis of comparative price levels is used for overall assessment of an economy's degree of convergence.³ However, this approach does not make it possible to highlight substantial differences in the speed of change (adjustment) in sub-segments due to different degrees of exposure of individual sectors to international competition. For example, a lower price level compared to tradable goods is seen for services (including those with a large share of labour costs). By contrast, a relatively high price level is displayed by investment goods. This article therefore aims to provide a more in-depth analysis of CPLs based on detailed data.

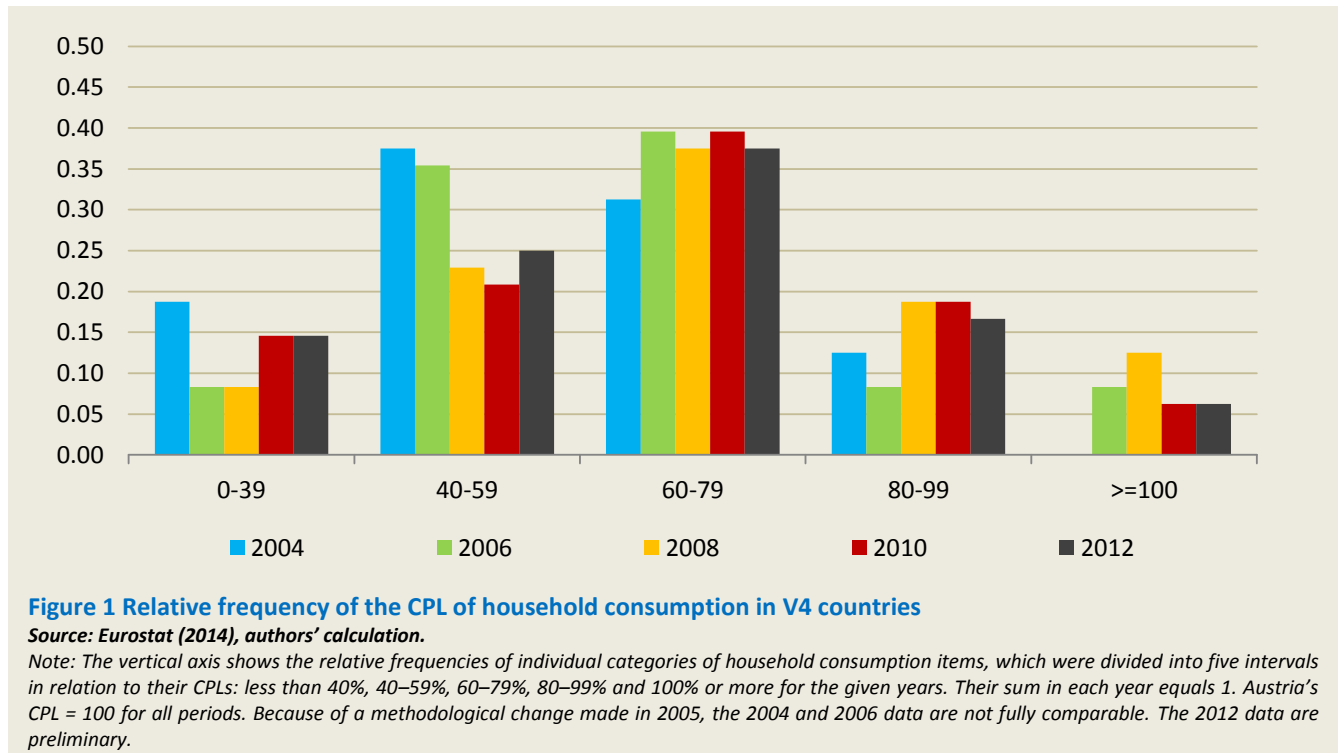
The price convergence of consumption subcategories in the V4 countries can be illustrated using changes in the relative frequency of individual items in pre-defined categories. For the purposes of this analysis, five categories were created, corresponding to CPL levels of 0–39%, 40–59%, 60–79%, 80–99% and 100% or more (Austria's price level equals 100). V4 consumption items were divided into the relevant categories regardless of country of origin; the sum of the number of items in each category was used to calculate the relative frequency, i.e. the share of the frequency of items in each category in the total number of items. The sum of the shares of all

¹ Written by Václav Žďárek (vaclav.zdarek@atlas.cz). The text is based on Žďárek (2013), which used data for EU countries provided by Paul Konijn (Eurostat). The opinions expressed in this article are those of the author and do not necessarily reflect the official position of the CNB. This article follows up on the March Focus, which analysed the impacts of the financial crisis on changes in comparative price levels for GDP and its main expenditure components in the Visegrad Four countries.

² Austria is above the average for both the EA-17 and the EU-15. It shares not only borders, but also, in part, a common history with three of the V4 countries and thus directly influences their behaviour. The Austrian economy was used in the first international comparisons of the former Czechoslovakia and the newly established Czech Republic in the early 1990s (see Pelej, 1996, and Spěváček, 2003). An alternative choice of reference country would be Germany, which is often used in empirical studies (see Čihák and Holub, 2003).

³ The overall evolution of price levels compared to the euro area average is examined in a regular section of the *Analyses of the Czech Republic's Current Economic Alignment with the Euro Area*, published by the CNB every year (see, for example, CNB, 2013).

categories in a given year equals 1. An increase in frequencies in higher categories over time means convergence to the reference country's price level, while a decrease indicates price divergence. The overall result is summarised in Figure 1 and the results for individual countries are shown in Table A1 in the Appendix. Figure 1 shows that the CPL grew faster in the V4 region as a whole in the initial years after EU accession (see the rising frequency in the central interval of 60–79% of the Austrian level and the rising shares of higher price levels). By contrast, the effect of the crisis is apparent, for example, when one compares the columns for 2006 and 2008. With the exception of items which were approaching the Austrian level before the onset of the financial turbulence (i.e. items with a CPL of 80% or more), a decrease in relative frequency was recorded in 2008 compared to 2006.



A detailed look at the components of final consumption in individual V4 countries (see the Appendix for the results) reveals several important tendencies. Above all, the trends over the entire period under review were very heterogeneous, both between V4 countries and within individual categories. The CPLs of the Slovak and Czech economies were the fastest to adjust, increasing for all consumer basket categories except for one in the Czech Republic. The Hungarian economy saw rapid heterogeneous developments accompanied by significant rises and falls in CPLs for many items. For example, health care, education and restaurant and hotel services declined by more than 10 pp, whereas alcoholic beverages and tobacco and communications rose by more than 20 pp. CPL heterogeneity is also visible for Poland (albeit to a lesser degree). When comparing the V4 countries, it is important to bear in mind that the observed differences vis-à-vis Austria are partly due to fiscal measures adopted before EU accession and in 2007–2008. Moreover, the CPL is calculated using prices in the single currency, so structural changes cannot be separated from price adjustment through the exchange rate channel.

The changes in the CPLs of consumption subcategories are also affected by different pricing strategies and emphasis on quality across corporations in the countries under review. The influence of competition and business structure in the retail sector should not be overlooked either. All this results in sizeable differences in CPLs. In Poland, for example, very low CPL growth can be observed for food and non-alcoholic beverages; the situation in the Czech Republic and Slovakia is the exact opposite. Another example

is the negligible change in the CPL for clothing and footwear in the Czech Republic compared to strong CPL convergence in this category in Poland and Slovakia. We can also consider the strategy of emphasising the cost of production, often at the expense of quality. This is the case with “shopping tourism” in border areas of Poland and Hungary, reflected in a low price level of the corresponding items compared to Austria.

The CPLs for alcoholic beverages and cigarettes rose considerably in all countries, owing mainly to changes to tax rates, which increased the CPL by more than 20 pp. Even larger CPL movements were recorded for communications, with all countries except Poland seeing growth of over 30 pp. The observed trend is linked with low competition in the Central European communications market. The corresponding CPL of more than 100% means that domestic prices exceed the price of comparable goods in Austria.

As regards items containing mainly nontradable goods, the CPLs for housing and energy rose significantly in the Czech Republic and Slovakia. Only limited growth in this category was recorded in Hungary and Poland. However, the price level of housing and energy remains low in all countries: 50% of the Austrian price level was exceeded significantly only by the Czech Republic (roughly 68%) and by a slight margin also by Slovakia (roughly 55%).⁴ The CPLs for restaurant and hotel services also increased in all V4 countries except Hungary. Mixed CPL trends are visible in health care and education. Both categories have long shown the lowest CPLs (between 20% and 40%), reflecting, among other things, the mechanism of funding in these sectors.⁵

In general, it is important to remember that the relative frequency indicator assigns the same weight to all consumption items,⁶ so the result may differ considerably from the aggregate view of economic convergence.

2 Dynamics of price level changes in the V4 countries

Detailed CPL trends can also be tracked using a simple analytical tool called transition matrices. These matrices show the probability that the CPL of a particular item has changed and shifted to another price level category over an exactly specified period. Although it provides an *ex post* perspective and its information value going forward is thus relatively limited, it is an important piece of empirical evidence used in detailed analyses of ongoing adjustment processes.

Table 1 contains transition matrices for the V4 countries for the five non-overlapping categories used above (0–39%, 40–59%, etc.). Two non-overlapping periods were selected to allow us to distinguish any effects of the financial crisis: 2004–2008 and 2008–2012.⁷ The rows of the matrix show the distribution according to the five selected categories which was observed at the end of the period for the items included in the

⁴ It would be interesting to monitor the CPL in the narrower category of housing, but Eurostat does not publish such data.

⁵ The Austrian health care system is of very high quality and is simultaneously one of the most heavily subsidised in the OECD. Total health care expenditure stands at 10.2% of GDP, of which around 8% of GDP is expenditure by the Austrian state (see OECD, 2011, 2012, 2014). The educational system is also of a high standard, contributing to growth in skilled labour and thereby supporting economic and productivity growth and fostering low youth unemployment. Education expenditure also markedly exceeds the OECD average at the basic, secondary and university levels (see OECD, 2009, 2013). Total average direct expenditure per pupil/student at all three levels in 2010 (in PPP) was almost USD 11,000. The USA was in first place with more than USD 13,000, compared to just USD 5,400 in the Czech Republic, USD 4,300 in Hungary, USD 5,900 in Poland and USD 4,500 in Slovakia (the OECD average was USD 7,600; see OECD, 2013a).

⁶ This is only a simplified example. Generally, it is not hard to create a weighted indicator reflecting actual consumer expenditure.

⁷ Probabilities are very often calculated for intervals of more than one year, e.g. five or ten years. Since sufficient source information is not available, only intervals of three or four years were defined. The average one-year figures for the entire periods under review are very similar to those given in the table.

same category in the base year. In other words, the main diagonal of the transition matrix contains figures showing the percentage of items which remained in the same category at the end of the period. The numbers above the main diagonal show the percentage of items which moved to higher categories compared to the base year. Conversely, elements below the main diagonal show the percentage of items whose CPL declined compared to the base year and therefore moved to lower categories.⁸

Transition matrices of CPLs of consumption (before and during the crisis), V4 countries

a) Before the crisis (2004–2008)

		CPL (t+x = 2008)				
		0–39	40–59	60–79	80–99	≥ 100
CPL (t = 2004)	0–39	46.03	42.86	8.73	2.38	0.00
	40–59	2.55	35.03	50.96	8.92	2.55
	60–79	0.68	3.42	32.88	39.73	23.29
	80–99	0.80	0.00	4.88	54.40	40.00
	≥ 100	0.00	0.00	0.00	26.67	73.33

b) During the crisis (2008–2012)

		CPL (t+x = 2012)				
		0–39	40–59	60–79	80–99	≥ 100
CPL (t = 2008)	0–39	78.13	17.19	4.69	0.00	0.00
	40–59	23.68	54.39	20.15	1.75	0.00
	60–79	6.90	35.86	46.21	9.66	1.38
	80–99	0.00	3.87	38.06	47.74	10.32
	≥ 100	0.00	0.91	11.82	52.73	34.55

Note: Austrian price level = 100 in each period. CPL (t) – initial CPL, CPL (t+x) – end CPL. The figures were multiplied by 100 and the data were rounded, so the row sums may not add up.

Source: Eurostat (2014), authors' calculation.

A comparison of the figures in the upper and lower parts of Table 1 reveals that the highest probabilities usually lie on the diagonal, i.e. they indicate no change in the price level over time. Goods and services with CPLs of 40–59% and 60–79% were the exception in the pre-crisis period. The CPLs in these categories shifted a category higher in 2008. The sole exception during the crisis was the ≥ 100% category, where the CPL of goods and services fell to 80–99% in 2012 with a probability of more than 50%.

In the pre-crisis period the empirical probability of a decline in the CPL was substantially lower than the probability of convergence to the Austrian price level, reflecting a slowdown in the price convergence process after the crisis erupted. Mixed trends were recorded during the crisis: in the 40–59% category, for example, both divergence from and convergence to Austria occurred, but in the 60–79% and 80–99% categories there was a high probability of a decline.⁹

⁸ For example, the figures in the first row (the third to seventh columns from the left) in part (a) of Table 1 show the probability that an item with a price level of less than 40% relative to Austria shifted to a higher price category (i.e. higher than 40%) or stayed in the given category. The figure 46.03 indicates that around 46% of goods with CPLs between 0% and 39% in 2004 were still in the same category in 2008. A shift to the 40–59% category occurred in 42.86% of cases, while shifts to an even higher category (60–79%, 80–99%, 100% or more) made up only 8.7%, 2.4% and 0.0% respectively of the CPL movements statistically recorded in the V4 countries.

⁹ The one-year probabilities are higher than the multi-year probabilities. In the table, the differences can also be verified using a formal stability test of the transition matrix (the pre-crisis/crisis period versus the whole

A comparison of the elements on the main diagonal of both matrices suggests higher CPL stability in 2004 and 2008 for items which converged the most to the Austrian price level. In 2008 and 2012, by contrast, items in lower categories showed the most stable prices compared to Austria.

Overall, the price levels of actual final consumption were about 46–54% of the average in Austria on EU accession. According to the 2012 data they have not changed much, standing at 48–62%. Our analysis of CPL changes over the nine years shows very mixed trends both across countries and within items: the Czech and Slovak economies exhibit relatively fast adjustment across consumer basket items (except those containing nontradable goods), in contrast to the very mixed trends recorded in Hungary and Poland. Looking at the subcomponents of the basket, convergence of price structures continued in individual periods (more strongly for tradables than nontradables). In the last few years, however, the convergence process has slowed because of the economic and financial crisis and its different impacts on the individual V4 countries.

References

ČIHÁK, M., HOLUB, T.: Price Convergence to the EU; What Do the 1999 ICP Data Tell Us? CNB, Prague, Working Paper Series No. 2, May 2003.

CNB: Analyses of the Czech Republic's Current Economic Alignment with the Euro Area. CNB, Prague, 2013.

EUROSTAT: Economy and Finance (Prices). Eurostat, Luxembourg, 2014.

EUROSTAT-OECD: Methodological Manual on Purchasing Power Parities (PPPs). Eurostat, Luxembourg, 2012.

KOLEKTIV CES VŠEM, NOZV NVF: Konkurenční schopnost České republiky 2010–2011. Linde, Praha, 2011 (in Czech).

OECD: Purchasing Power Parities and Real Expenditures. 1993 Result. OECD, Paris, 1995.

OECD: Purchasing Power Parities and Real Expenditures. 1996 Result. OECD, Paris, 1999.

OECD: Economic Surveys. Austria (various years). OECD, Paris, July 2009, July 2011, July 2013.

OECD: Education at Glance 2013: OECD Indicators. OECD, Paris, 2013 (a).

OECD: Health Data. OECD, Paris, 2014.

PELEJ, J.: Srovnání hrubého domácího produktu České republiky za rok 1993 s Rakouskem a s dalšími evropskými zeměmi v rámci Evropského srovnávacího programu. *Statistika*, 1996, No. 4, pp. 147–154 (in Czech).

SPĚVÁČEK, V.: Parity kupní síly – nástroj mezinárodních srovnání. *Politická ekonomie*, Vol. L, 2003, No. 1, pp. 59–78 (in Czech).

SPĚVÁČEK, V. et al.: *Makroekonomická analýza* (1. vyd.). Linde, Praha, 2012 (in Czech).

UN: International Comparison of GDP in Europe 1993. United Nations, New York & Geneva 1997.

WORLD BANK: *Measuring the Real Size of the World Economy: The Framework, Methodology, and Results of the International Comparison Program – ICP*. Washington, DC: World Bank, 2013.

period under review); in our case, this test led to rejection of the hypothesis of structural stability (unchanged empirical probabilities) during the crisis period.

ŽDÁREK, V.: A Theoretical and Empirical Analysis of the Process of Nominal Convergence in Transition Countries with a Particular Emphasis on the Czech Economy. Thesis, Faculty of Finance and Accounting, University of Economics, Prague, 2013 (mimeo).

ŽDÁREK, V.: The Impacts of the Financial Crisis on Price Levels in Visegrad Group Countries, *Global Economic Outlook*, 2014, No. 3, pp. 11–20.

Appendix

Table A1: Relative price levels of consumption expenditure (Austrian CPL = 100)

Czech Republic	2004	2006	<i>Change</i> ¹	2008	<i>Change</i> ²	2010	<i>Change</i> ³	2012	<i>Change</i> ⁴	<i>Total</i> ⁵
Actual private consumption	48.5	54.9	6.4	65.7	10.8	63.4	-2.3	61.7	-1.7	13.2
Household expenditure on final consumption	53.7	60.2	6.5	73.5	13.3	70.9	-2.6	68.5	-2.4	14.8
Food and non-alcoholic beverages	56	62.9	6.9	70.8	7.9	67.7	-3.1	70.1	2.4	14.1
Alcoholic beverages, tobacco	65	73.1	8.1	85.7	12.6	90.2	4.6	89.2	-1	24.3
Clothing and footwear	91.6	94.8	3.1	103	8.2	94.2	-8.7	94.8	0.6	3.2
Housing, energy and fuels	43.6	48.7	5.1	78.1	29.5	77	-1.2	68.6	-8.4	25
Household equipment and furnishings	71.5	77.6	6.1	81	3.4	77.4	-3.6	74.5	-2.9	3
Health care	35.5	43.4	7.9	48	4.6	42.1	-5.9	44.3	2.2	8.8
Transport	61.9	66.1	4.2	76.5	10.4	74.9	-1.6	72.8	-2.1	10.8
Communications	86.1	124	37.9	119	-5.2	122	2.8	117	-4.5	31.1
Recreation, culture and sport	48.7	58.5	9.8	63.1	4.6	64.4	1.3	63.2	-1.2	14.5
Education	30.8	31.8	1	33.6	1.8	32.5	-1.1	30.5	-2	-0.3
Restaurant and hotel services	45.6	53.7	8.1	61.3	7.6	56.5	-4.8	55.2	-1.2	9.6
Other goods and services	43.3	51.9	8.6	62	10.1	62.4	0.4	61.6	-0.8	18.3
Hungary	2004	2006	<i>Change</i> ¹	2008	<i>Change</i> ²	2010	<i>Change</i> ³	2012	<i>Change</i> ⁴	<i>Total</i> ⁵
Actual private consumption	54.3	54.3	0	58.8	4.5	52.2	-6.6	50	-2.2	-4.3
Household expenditure on final consumption	60	59.5	-0.5	66.1	6.6	59.9	-6.2	57.1	-2.8	-2.9
Food and non-alcoholic beverages	61.4	64.7	3.3	73.2	8.6	71	-2.2	67.6	-3.4	6.2
Alcoholic beverages, tobacco	66.8	65.7	-1.1	77.8	12.1	91.9	14	88.8	-3.1	22
Clothing and footwear	81.8	85.3	3.5	94	8.7	83.6	-10.5	80.2	-3.4	-1.7
Housing, energy and fuels	43.8	42.4	-1.4	50.9	8.6	50.1	-0.9	47.2	-2.9	3.4
Household equipment and furnishings	68	66.7	-1.3	73.9	7.2	65.5	-8.4	61.1	-4.4	-6.9
Health care	43.5	44.9	1.4	43.6	-1.3	30.6	-13	30.3	-0.2	-13.1
Transport	75.7	72.9	-2.8	81.5	8.6	80.1	-1.4	78.2	-1.9	2.5
Communications	85.6	88.6	3	109	20.6	117	7.6	117	-0.2	31
Recreation, culture and sport	58.6	67	8.5	69.4	2.3	55.4	-13.9	53.5	-1.9	-5.1
Education	33.3	28.8	-4.5	27.3	-1.5	23.4	-3.9	21.1	-2.3	-12.2
Restaurant and hotel services	60.2	57.8	-2.4	65	7.3	50.1	-14.9	47.5	-2.6	-12.7

Other goods and services	49.8	52.3	2.5	55	2.7	52.2	-2.8	50.1	-2	0.3
Poland	2004	2006	Change¹	2008	Change²	2010	Change³	2012	Change⁴	Total⁵
Actual private consumption	45.8	54.3	8.5	58.6	4.3	51.1	-7.5	48.3	-2.8	2.4
Household expenditure on final consumption	51.5	61.3	9.8	65.9	4.6	57.4	-8.5	53.8	-3.6	2.3
Food and non-alcoholic beverages	50	60.6	10.6	65	4.4	61	-4.1	51.6	-9.4	1.6
Alcoholic beverages, tobacco	57.6	69.5	11.9	80.1	10.6	80.7	0.6	81.1	0.4	23.5
Clothing and footwear	66.4	101	34.7	119	18.1	89.2	-30	93.6	4.3	27.2
Housing, energy and fuels	39.6	44	4.4	49.1	5.1	44.6	-4.4	41.7	-2.9	2.1
Household equipment and furnishings	61.3	72	10.6	80.6	8.6	61.2	-19.4	56.6	-4.6	-4.7
Health care	32.9	41.8	8.9	46	4.2	32.3	-13.7	31.5	-0.8	-1.4
Transport	63.4	71.7	8.3	75.8	4.1	67.9	-8	66.4	-1.4	3
Communications	81.1	105	24.1	100	-5	76.6	-23.6	73	-3.6	-8.1
Recreation, culture and sport	54.1	68.4	14.3	64.2	-4.1	55	-9.2	50.7	-4.3	-3.3
Education	25.7	22.5	-3.1	25.1	2.5	25.4	0.3	25.5	0.1	-0.2
Restaurant and hotel services	58.4	73	14.5	81.8	8.9	74	-7.8	71.2	-2.8	12.8
Other goods and services	42.3	54	11.7	57.1	3.1	52.7	-4.5	51	-1.6	8.7
Slovakia	2004	2006	Change¹	2008	Change²	2010	Change³	2012	Change⁴	Total⁵
Actual private consumption	46.7	51.3	4.5	58.6	7.3	58.8	0.2	59	0.2	12.3
Household expenditure on final consumption	53.2	56.9	3.7	66.5	9.6	66.8	0.4	66.8	0	13.6
Food and non-alcoholic beverages	57.3	61	3.7	70.2	9.2	70.8	0.6	72.6	1.7	15.3
Alcoholic beverages, tobacco	66.8	65.7	-1.1	77.8	12.1	91.9	14	88.8	-3.1	22
Clothing and footwear	78.6	81.2	2.6	94.9	13.8	94.5	-0.4	96	1.5	17.4
Housing, energy and fuels	39.7	44.6	4.8	55.3	10.7	56	0.7	54.8	-1.2	15
Household equipment and furnishings	68.4	73.6	5.2	82.6	8.9	77.7	-4.8	76.4	-1.3	8
Health care	32.9	43.4	10.5	43.3	-0.1	34.9	-8.4	35.2	0.3	2.2
Transport	65	67.4	2.3	75.9	8.5	71.3	-4.6	72.8	1.4	7.7
Communications	91.6	110	18	123	13.7	132	8.9	131	-1.5	39
Recreation, culture and sport	49.5	58	8.5	65.2	7.3	65.6	0.4	65	-0.7	15.5
Education	21.4	19.4	-2	21.1	1.7	26.2	5.1	26.5	0.3	5.1
Restaurant and hotel services	47.6	48	0.3	57.8	9.9	68.1	10.2	67.3	-0.8	19.7
Other goods and services	43.1	51.2	8.1	56	4.8	60.7	4.7	61.5	0.8	18.4

Note: Because of a methodological change made in 2005, the 2004 and 2006 data are not fully comparable. Actual private (final) consumption includes households' expenditure on final consumption and social transfers in kind. ¹⁾ change between 2006 and 2004; ²⁾ change between 2008 and 2006; ³⁾ change between 2010 and 2008; ⁴⁾ change between 2012 and 2010; ⁵⁾ change for 2004–2012. The 2012 data are preliminary. The totals may not add up due to rounding.

Source: Eurostat (2014), authors' calculation.

A1. Change in GDP predictions for 2014

	CF		IMF		OECD		CB / EIU	
EA	-0.1	2014/5 2014/4	0.2	2014/4 2014/1	0.2	2014/5 2013/11	0.1	2014/3 2013/12
US	-0.2	2014/5 2014/4	0.0	2014/4 2014/1	-0.3	2014/5 2013/11	-0.1	2014/3 2013/12
DE	0.0	2014/5 2014/4	0.1	2014/4 2014/1	0.2	2014/5 2013/11	0.2	2013/12 2013/6
JP	0.0	2014/5 2014/4	-0.3	2014/4 2014/1	-0.3	2014/5 2013/11	-0.3	2014/4 2014/1
BR	0.0	2014/5 2014/4	-0.5	2014/4 2014/1	-0.4	2014/5 2013/11	0.0	2014/5 2014/4
RU	-0.4	2014/5 2014/4	-0.7	2014/4 2014/1	-1.8	2014/5 2013/11	-0.7	2014/5 2014/4
IN	0.0	2014/5 2014/4	0.0	2014/4 2014/1	-0.2	2014/5 2013/11	-0.1	2014/5 2014/4
CN	0.0	2014/5 2014/4	0.0	2014/4 2014/1	-0.8	2014/5 2013/11	0.0	2014/5 2014/4

A2. Change in inflation predictions for 2014

	CF		IMF		OECD		CB/EIU	
EA	-0.1	2014/5 2014/4	-0.6	2014/4 2013/10	-0.5	2014/5 2013/11	-0.1	2014/3 2013/12
US	0.1	2014/5 2014/4	-0.1	2014/4 2013/10	-0.3	2014/5 2013/11	0.1	2014/3 2013/12
DE	-0.1	2014/5 2014/4	-0.4	2014/4 2013/10	-0.7	2014/5 2013/11	-0.2	2013/12 2013/6
JP	0.0	2014/5 2014/4	-0.1	2014/4 2013/10	0.3	2014/5 2013/11	0.0	2014/4 2014/1
BR	0.3	2014/5 2014/4	0.1	2014/4 2013/10	0.9	2014/5 2013/11	0.0	2014/5 2014/4
RU	0.3	2014/5 2014/4	0.1	2014/4 2013/10	0.3	2014/5 2013/11	0.0	2014/5 2014/4
IN	0.0	2014/5 2014/4	-0.9	2014/4 2013/10	-1.4	2014/5 2013/11	0.1	2014/5 2014/4
CN	-0.1	2014/5 2014/4	0.0	2014/4 2013/10	0.0	2014/5 2013/11	0.0	2014/5 2014/4

A3. List of abbreviations

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

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

A4. List of thematic articles published in the GEO

2014

	Issue
How far the V4 countries are from Austria: A detailed look using CPLs (Václav Žďárek)	2014-5
Heterogeneity of financial conditions in euro area countries (Tomáš Adam)	2014-4
The impacts of the financial crisis on price levels in Visegrad Group countries (Václav Žďárek)	2014-3
Is the threat of deflation real? (Soňa Benecká and Luboš Komárek)	2014-2
Forward guidance – another central bank instrument? (Milan Klíma and Luboš Komárek)	2014-1

2013

	Issue
Financialisation of commodities and the structure of participants on commodity futures markets (Martin Motl)	2013-12
The internationalisation of the renminbi (Soňa Benecká)	2013-11
Unemployment during the crisis (Oxana Babecká and Luboš Komárek)	2013-10
Drought and its impact on food prices and headline inflation (Viktor Zeisel)	2013-9
The effect of globalisation on deviations between GDP and GNP in selected countries over the last two decades (Vladimír Žďárský)	2013-8
Competitiveness and determinants of travel and tourism (Oxana Babecká)	2013-7
Annual assessment of the forecasts included in GEO (Filip Novotný)	2013-6
Apartment price trends in selected CESEE countries and cities (Michal Hlaváček and Luboš Komárek)	2013-5
Selected leading indicators for the euro area, Germany and the United States (Filip Novotný)	2013-4
Financial stress in advanced economies (Tomáš Adam and Soňa Benecká)	2013-3

Natural gas market developments (Jan Hošek)	2013-2
Economic potential of the BRIC countries (Luboš Komárek and Viktor Zeisel)	2013-1

2012

	Issue
Global trends in the services balance 2005–2011 (Ladislav Prokop)	2012-12
A look back at the 2012 IIF annual membership meeting (Luboš Komárek)	2012-11
The relationship between the oil price and key macroeconomic variables (Jan Hošek, Luboš Komárek and Martin Motl)	2012-10
US holdings of foreign securities versus foreign holdings of securities in the US: What is the trend? (Narcisa Kadlčáková)	2012-9
Changes in the Czech Republic's balance of payments caused by the global financial crisis (Vladimír Žďárský)	2012-8
Annual assessment of the forecasts included in the GEO (Filip Novotný)	2012-7
A look back at the IIF spring membership meeting (Filip Novotný)	2012-6
An overview of the world's most frequently used commodity indices (Jan Hošek)	2012-5
Property price misalignment around the world (Michal Hlaváček and Luboš Komárek)	2012-4
A macrofinancial view of asset price misalignment (Luboš Komárek)	2012-3
The euro area bond market during the debt crisis (Tomáš Adam and Soňa Benecká)	2012-2
Liquidity risk in the euro area money market and ECB operations (Soňa Benecká)	2012-1

2011

	Issue
An empirical analysis of monetary policy transmission in the Russian Federation (Oxana Babecká)	2011-12
The widening spread between prices of North Sea Brent crude oil and US WTI crude oil (Jan Hošek and Filip Novotný)	2011-11
A look back at the IIF annual membership meeting (Luboš Komárek)	2011-10
Where to look for a safe haven currency (Soňa Benecká)	2011-9
Monetary policy of the central bank of the Russian Federation (Oxana Babecká)	2011-9
Increased uncertainty in euro area financial markets (Tomáš Adam and Soňa Benecká)	2011-8
Eurodollar markets (Narcisa Kadlčáková)	2011-8
Assessment of the forecasts monitored in the GEO (Filip Novotný)	2011-7
How have global imbalances changed during the crisis? (Vladimír Žďárský)	2011-6
Winners and losers of the economic crisis in the eyes of European investors (Alexis Derviz)	2011-5
Monetary policy of the People's Bank of China (Soňa Benecká)	2011-4
A look back at the IIF spring membership meeting (Jan Hošek)	2011-3
The link between the Brent crude oil price and the US dollar exchange rate (Filip Novotný)	2011-2

	Issue
International integration of the Chinese stock market (Jan Babecký, Luboš Komárek and Zlatuše Komárková)	2011-1