

GLOBAL ECONOMIC OUTLOOK – JUNE

Monetary and Statistics Department
External Economic Relations Division

2014

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Cut-off date for data

9 - 13 June 2014

CF survey date

9 June 2014

GEO publication date

20 June 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.

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II.4 Japan	V. Commodity market developments			
III.2 India				
III.3 Brazil				

The June 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 assess the accuracy of the forecasts included in GEO for 2013. These forecasts expected, among other things, better economic performance and higher inflation rates in the euro area and Germany compared to the actual outcomes.

Economic developments in the euro area still indicate that the economic recovery will continue to be driven by the USA this year and the next, although the estimate of its performance for this year has been reduced. In Europe, economic growth should increase gradually in both the euro area as a whole and its most important part, the German economy, although the growth rate in the euro area is expected to be about half that in the US. The outlooks for the Japanese economy are still satisfactory, as confirmed by the leading indicator for Japanese industry, whose several-month decline has finally stopped. The inflation outlooks for advanced countries are still very low, with the exception of Japan, whose inflation rate reflects a recent tax hike. By contrast, the inflation outlooks for the euro area decreased further. This, together with low inflation outcomes in several previous months, led the ECB to further ease the monetary conditions.

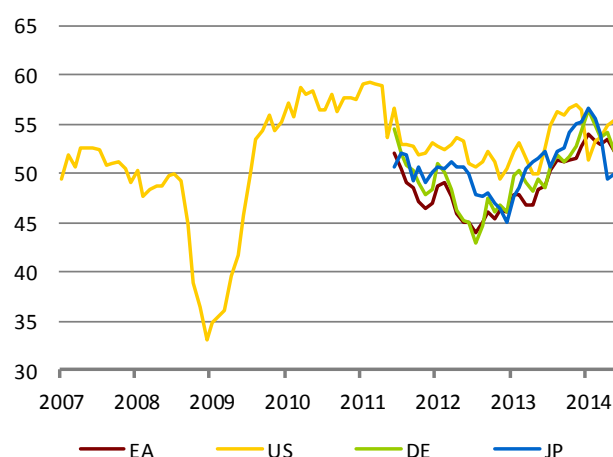
Developments in the BRIC countries are mixed as well. The Chinese economy is continuing to slow gradually. Its growth rate is expected to be slightly above 7% this year and the next, amid relatively low inflation. The outlooks for the Brazilian economy are still none too optimistic owing to domestic economic problems and unsuccessful reforms, but the football World Cup is expected to provide a positive economic stimulus. Turning to the Russian economy, the outflow of capital due to the political tensions between Russia and Ukraine slowed down, but Russia is on the brink of recession. 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, with no clear reversal in trend. 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.

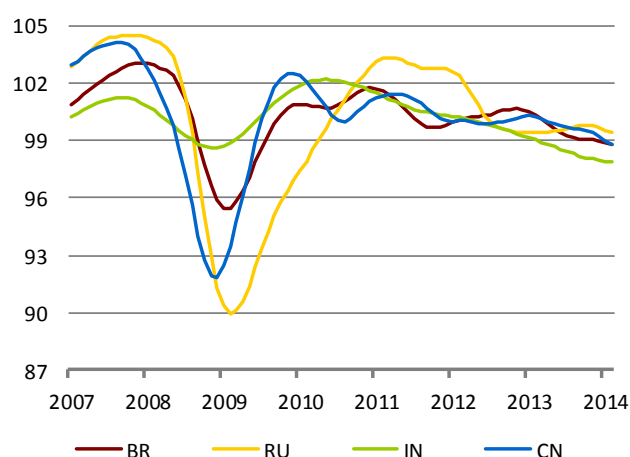
The outlooks for oil prices remain falling until the end of 2015, but these forecasts do not yet reflect the worsening security situation in Iraq. Commodity market developments remain mixed, although a falling price trend prevails in most markets. Very modest price growth is expected for industrial metals. Food commodity prices (wheat and corn) should show a similar trend, rising gradually despite a current price correction.

Available PMI time series for countries monitored in the GEO

PMI in manufacturing - advanced countries



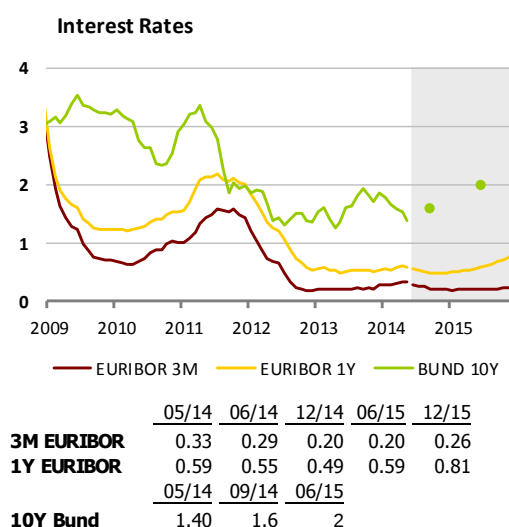
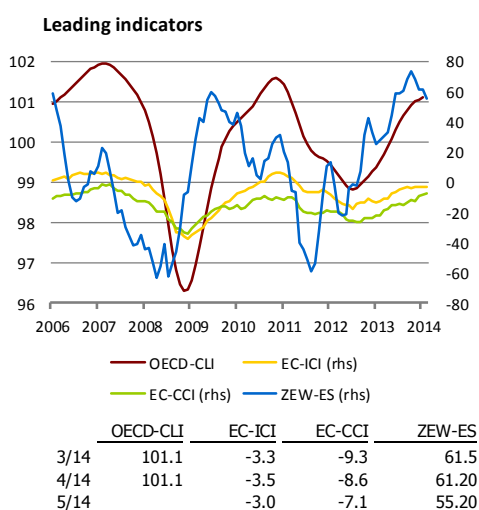
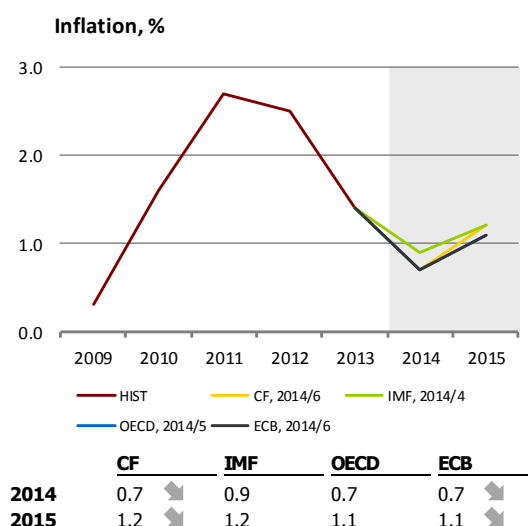
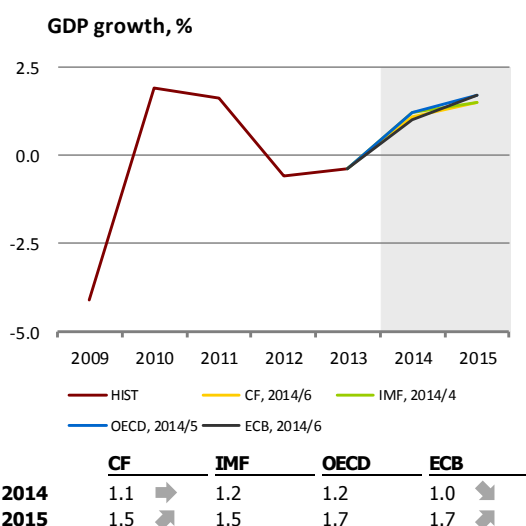
OECD CLI - BRIC countries



II.1 Euro area

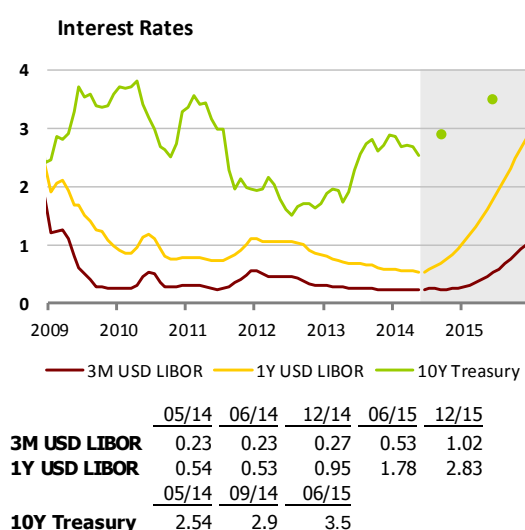
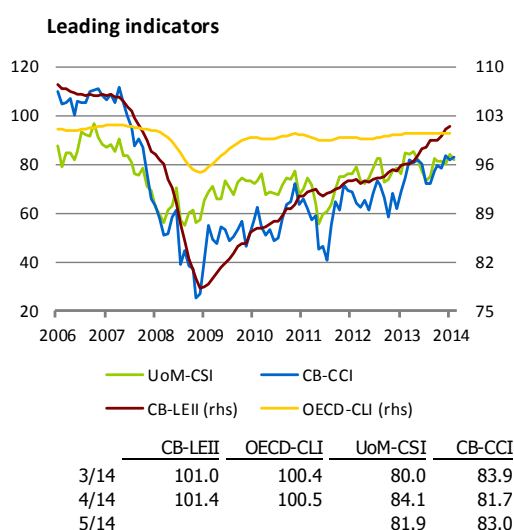
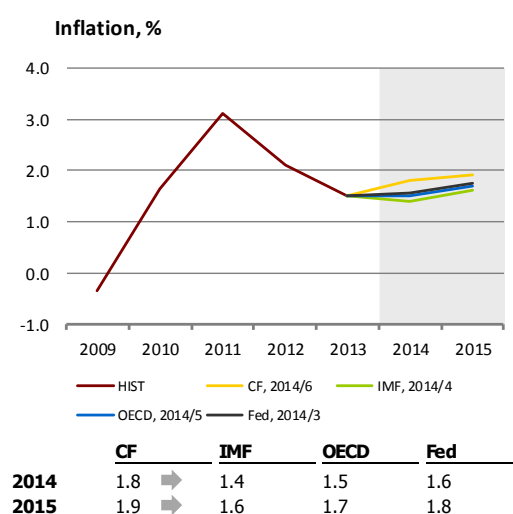
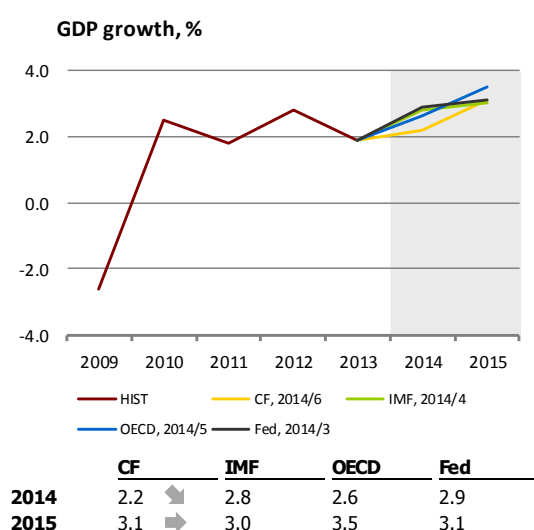
According to the second Eurostat estimate, euro area GDP rose by 0.2 pp in quarter-on-quarter terms in 2014 Q1. The growth was driven by domestic demand, whereas the contribution of net exports to growth was negative. A recovery is still expected in the euro area, supported, among other things, by solid April data on industrial production and retail sales growth. Most of the leading indicators monitored are also signalling a continuing recovery. The June CF expects the same growth as in May this year (1.1%) and has revised its forecast for next year slightly upwards (to 1.5%). In its June forecast, the ECB revised its growth outlook slightly downwards for this year (to 1%). In 2015 it expects growth of 1.7%. In 2016, economic growth should pick up to 1.8% according to the ECB.

According to Eurostat's flash estimate, HICP inflation dropped to 0.5% in May, following the trend of low figures observed in the last two months. Unlike in previous months, however, inflation was not affected by a negative contribution of energy prices, whose effect was neutral in May. At its June monetary policy meeting, the ECB introduced several measures to ease the monetary conditions in the euro area. It lowered its key interest rates (the deposit rate even to a negative level). According to Mario Draghi, policy rates thus reached their lower bound. The ECB also introduced, among other things, measures to support bank lending to non-financial corporations. These include targeted longer-term refinancing operations (TLTROs) and more intensive preparatory work related to outright purchases of asset-backed securities (ABS) by the ECB. The 3M and 1Y EURIBOR outlooks reacted to the rate cuts by declining over the entire horizon. The outlook for German bond yields also decreased slightly compared to the previous month. The new ECB forecast expects inflation to fall to 0.7% this year and to rise to 1.1% and 1.4% in 2015 and 2016 respectively. The June CF also slightly lowered its outlook to levels consistent with the ECB outlooks.



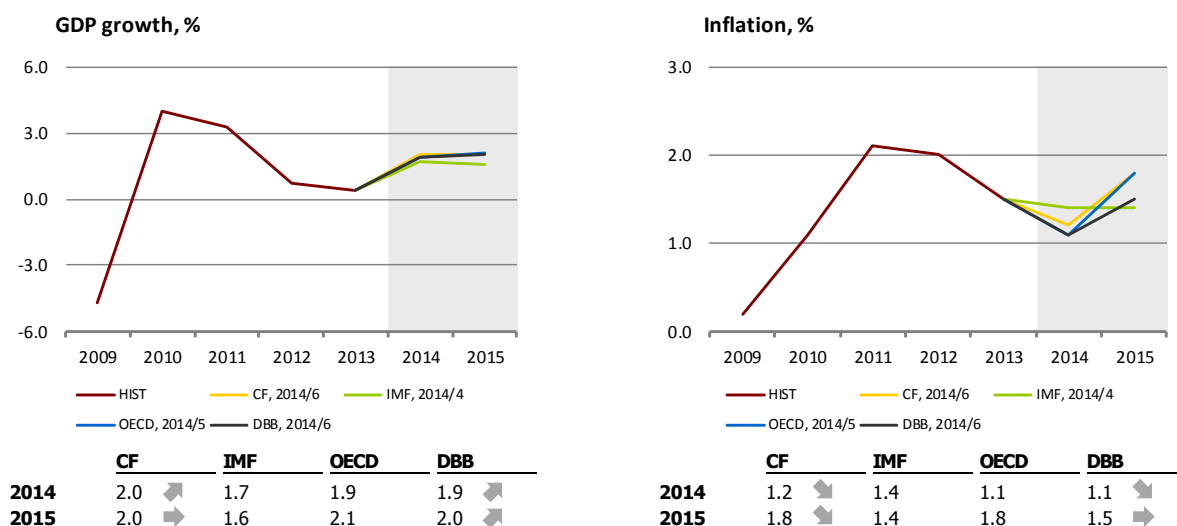
II.2 United States

US GDP fell slightly in 2014 Q1 compared to the previous quarter, partly because of the severe winter in North America this year. In Q2, however, GDP is expected to rise again. The June CF revised GDP growth for 2014 as a whole relatively strongly downwards to 2.2% and is now expecting the lowest growth of all the institutions we monitor. The US economy continues to be driven primarily by household consumption, as confirmed by favourable year-on-year nominal retail sales growth in May. Expectations regarding consumer price inflation remain flat for both 2014 and 2015 and – despite accelerating growth in actual inflation – are firmly anchored below the Fed's 2% target. The leading indicators are still generally positive, with the PMI in manufacturing and the consumer confidence indicator (Conference Board) improving further in May. The improving economic conditions are allowing the Fed to continue tapering its monthly bond and MBS purchases with a view to ending them completely this year. Discussions are being held only about discontinuing the rollover of maturing instruments in the Fed's balance sheet. The market interest rate outlooks suggest that rates are expected to start rising in mid-2015. The 10Y US government bond yield was relatively low and is expected to increase gradually to 3.5% at the one-year horizon. The dollar appreciated slightly against the euro after the June monetary policy easing by the ECB and is expected to strengthen by a further 3.8% at the one-year horizon.



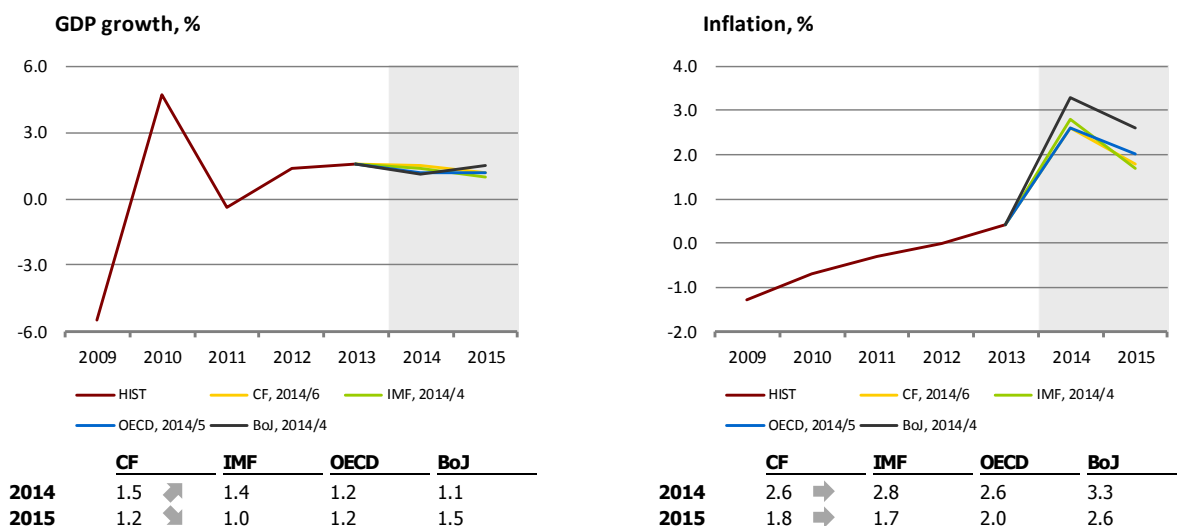
II.3 Germany

Economic growth in Germany increased significantly in both quarter-on-quarter and year-on-year terms in 2014 Q1 thanks to rising domestic demand. Growth was recorded mainly for household consumption and investment, which was significantly affected by the very mild winter. By contrast, external demand had a negative effect on economic growth. The June CF expects both quarterly and annual growth to slow in 2014 Q2. The leading indicators (Ifo, ZEW and the PMI in manufacturing) also fell slightly in May, confirming the expected slowdown. The June CF estimates GDP growth of 2% both this year and the next. Annual HICP inflation in Germany dropped by 0.4 pp to 0.9% in May, mainly because of a decline in energy prices and slower growth in food and services prices. The June CF decreased its outlook for average inflation to 1.2% this year, but still expects a rise to 1.8% in 2015.



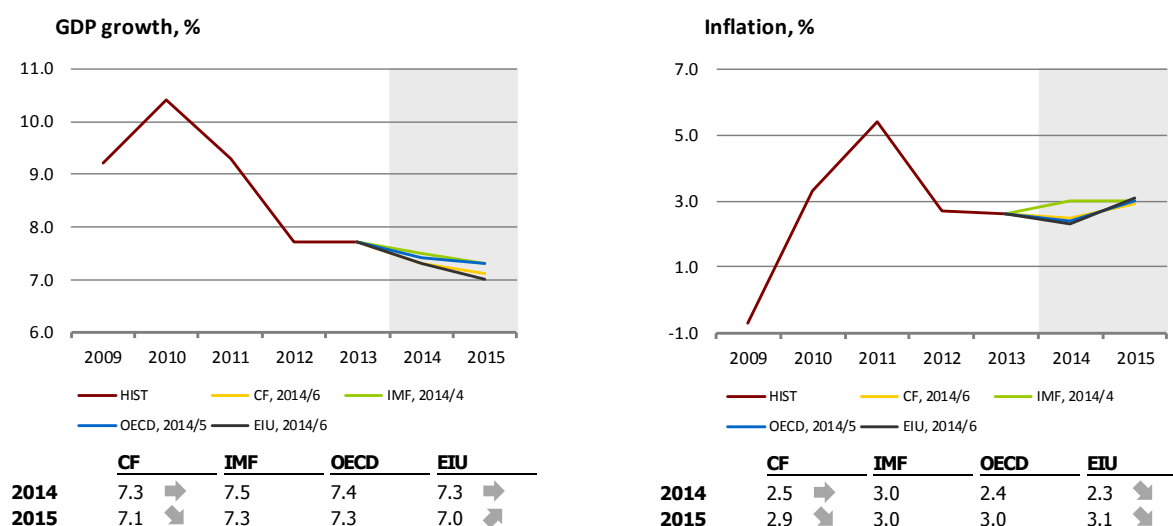
II.4 Japan

As expected, the April consumption tax hike led to a sharp increase in Japanese inflation to the highest level in 23 years (3.2% in the case of non-food inflation and 3.4% in the case of overall inflation). The central bank estimated the contribution of the higher tax at 1.7 pp in April and 2 pp in May. By contrast, retail sales recorded their largest year-on-year fall in two years, but consumer confidence remains stable. Industrial production growth also slowed in April, although the May PMI indicators suggest some stabilisation in industry. Falling export orders, indicating lower demand from Japan's main trading partners, is another source of concern. The pace of quarter-on-quarter GDP growth in Japan could thus be lower in 2014 Q2 than in Q1, when it reached 1.6% (after an upward revision of 0.1 pp). According to the central bank, however, consumer expenditure should recover quickly thanks to an improving labour market situation and rising wages. The June CF increased the GDP growth outlook for 2014 by 0.2 pp and lowered the outlook for 2015 by 0.1 pp. The inflation forecast from this institution was unchanged.



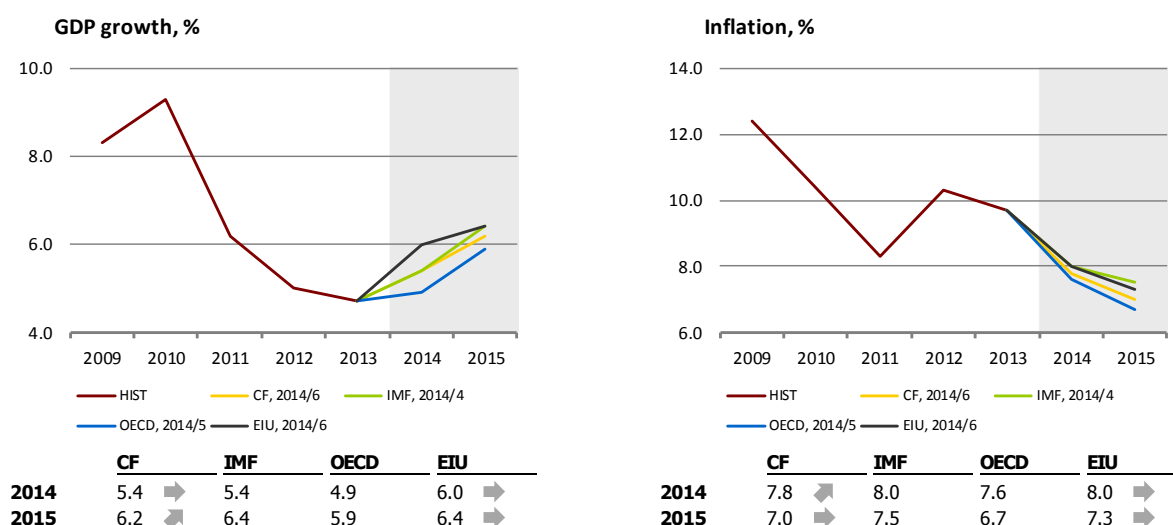
III.1 China

The short-term indicators of the Chinese economy suggest stabilisation, particularly in industry, where year-on-year production growth strengthened to 8.8% in May. Fixed investment rose by 17.2% in January to May. By contrast, growth of investment in real estate slowed. Sales of houses decreased by 9.2% and the value of houses fell by 10.2%. According to the new CF and EIU outlooks, GDP growth in China should stay at 7.3% this year and weaken to 7.0%–7.1% in 2015. The trade surplus recorded its biggest widening in five years in May, reaching USD 35.9 billion, owing to a rise in exports and an unexpected fall in imports. Following the release of these figures, the Chinese central bank shifted the fixing of the domestic currency by 0.2%. Despite the slower economic growth, the renminbi is expected to appreciate slightly at the two-year horizon on the back of net foreign investment inflows and favourable trade balance developments.



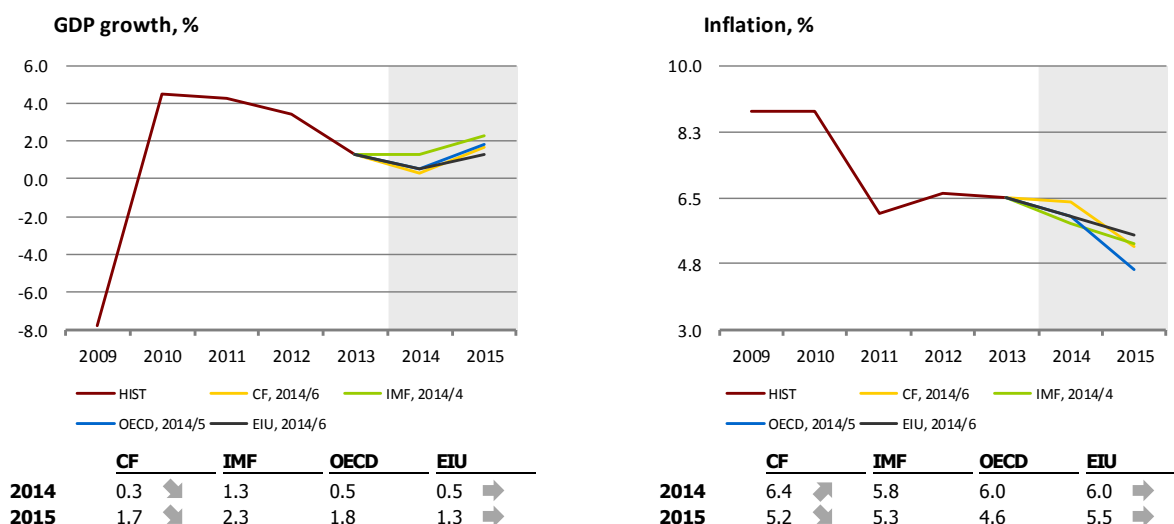
III.2 India

The new Indian government faces the important task of boosting weak economic growth and taming high inflation. According to its programme, it intends to focus on investment (including foreign investment), introduce a general sales tax and deregulate food prices. High food price volatility had caused numerous public protests in previous months. The central bank welcomed the generally anti-inflationary reforms, as the current inflation level (8.6% in May) is more than twice its 4% target. The central bank is almost out of options, as another increase of the basic rate above the current 8% level would endanger the fragile recovery. The June CF raised its GDP growth outlook for 2015 by 0.2 pp to 6.2% and its inflation outlook for this fiscal year by 0.1 pp to 7.8%. The EIU's forecast for economic growth in India was unchanged.



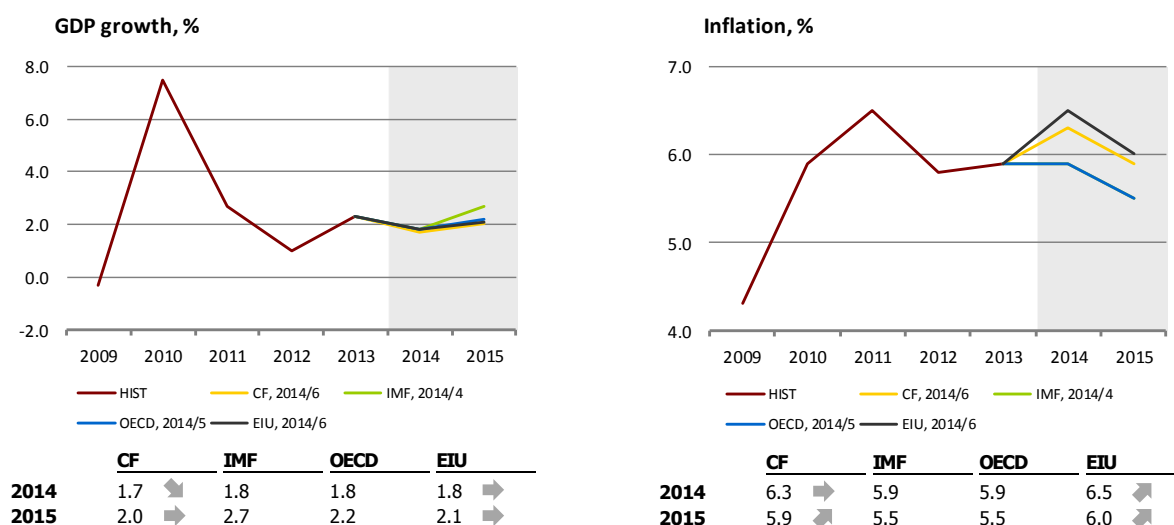
III.3 Russia

The geopolitical tensions linked with the situation in Ukraine are easing, but macroeconomic developments in Russia are still causing concerns. Industrial production rose by 1.4% in the first four months, but fixed investment decreased and domestic demand remained weak. The outflow of capital slowed, but could reach USD 90 billion for the year as a whole according to the Ministry of Economic Development. Annual GDP growth was only 0.9% in 2014 Q1 (preliminary estimate). CF and the EIU expect growth of 0.3%–0.5% for this year as a whole. The World Bank also decreased its outlook for this year to 0.5%. Inflation rose to 7.3% in April, reaching an 11-month high. Consumer price inflation in 2014 as a whole will be 6.0%–6.4% according to CF and the EIU. The Russian currency appreciated by 2.8% in May, partly offsetting its almost 5% depreciation against the dollar at the start of the year. The rouble is expected to weaken further at the two-year horizon (to RUB 37/USD).



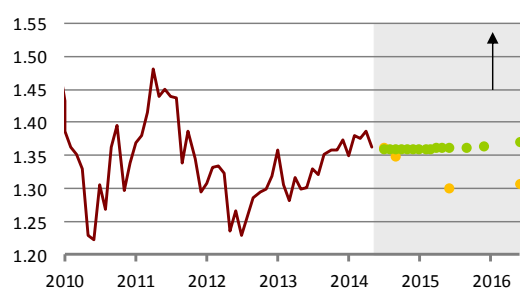
III.4 Brazil

Economic growth in Brazil slowed further year on year to 1.9% in 2014 Q1, with good performance in agriculture and rising government expenditure only slightly outweighing a fall in investment and production. Weak performance can also be expected in the remainder of 2014, as both investor confidence and consumer confidence have decreased again. With inflation still high (6.3% in May), public discontent is rising, as reflected in political protests in the past month. In addition to left-wing reforms, the government is being criticised for organising the World Cup instead of investing in infrastructure. Nonetheless, the football festival will probably give the domestic economy a much needed positive stimulus. The slowing growth rate was also reflected in a revision of the CF GDP growth outlook for 2014 of 0.1 pp to 1.7%. The inflation forecast for 2015 also recorded an upward shift of 0.1 pp to 5.9%. The EIU revised its inflation outlook only – by 0.3 pp to 6.5% for 2014 and by 0.1 pp to 6% for 2015.



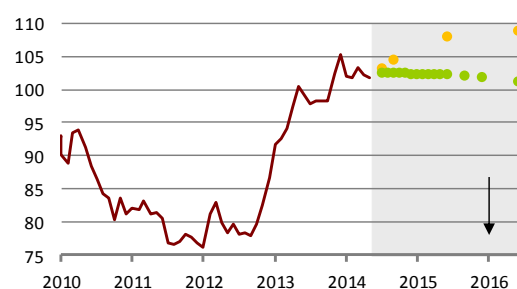
IV. Outlook of exchange rates vis-à-vis the US dollar

THE EURO



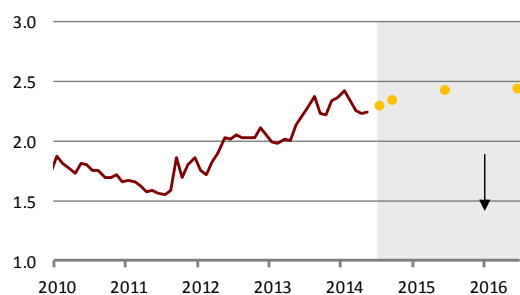
	09/06/14	07/14	09/14	06/15	06/16
spot rate	1.359				
CF forecast		1.362	1.348	1.301	1.306
forward rate		1.359	1.360	1.361	1.371

THE JAPANESE YEN



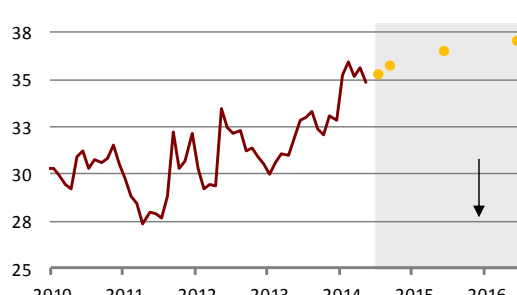
	09/06/14	07/14	09/14	06/15	06/16
spot rate	102.60				
CF forecast		103.20	104.50	108.00	108.90
forward rate		102.51	102.47	102.21	101.18

THE BRAZILIAN REAL



	09/06/14	07/14	09/14	06/15	06/16
spot rate	2.23				
CF forecast		2.29	2.35	2.43	2.44

THE RUSSIAN ROUBLE



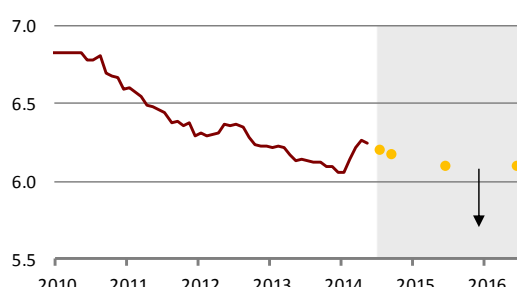
	09/06/14	07/14	09/14	06/15	06/16
spot rate	34.35				
CF forecast		35.30	35.75	36.51	37.03

THE INDIAN RUPIE



	09/06/14	07/14	09/14	06/15	06/16
spot rate	59.16				
CF forecast		59.84	59.75	60.68	60.18

THE CHINESE RENMINBI



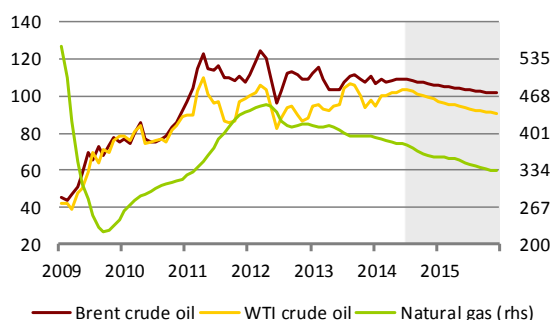
	09/06/14	07/14	09/14	06/15	06/16
spot rate	6.24				
CF forecast		6.20	6.17	6.10	6.10

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

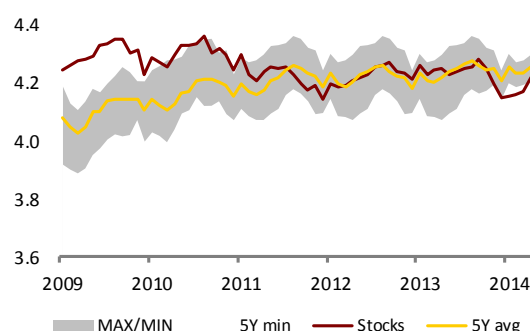
The Brent crude oil price rose slightly in mid-May and fluctuated close to USD 110 a barrel for the rest of the month. In early June it fell slightly in response to the new Ukrainian president's plan to calm the crisis in eastern Ukraine. Subsequently, however, the oil price was supported by favourable economic data from the USA and China. In mid-June, the price of Brent oil jumped to a ten-year high on concerns that the armed uprising by Islamic groups in northern Iraq might restrict oil extraction and exports from the country. However, the oil facilities are concentrated in the south and are not currently in danger. The price of WTI oil is being supported by a rapid drop in stocks at the Cushing inland terminal despite the fact that total reserves of oil and oil products are rising and are well above average. Gas prices in the USA continued falling from their February high thanks to successful replenishment of stocks after the harsh winter. Market prices of gas in Europe are also under pressure due to high stocks (60%, as against 50% on average in 2010–2013) as a result of the very mild winter there. Gas price growth in Europe is also being prevented by low coal prices and rising generation of electricity from renewable sources. These factors are outweighing concerns about a drop in supplies from Russia and Ukraine. The outlook for oil prices and prices of long-term natural gas contracts is thus still falling. The US EIA expects the price of Brent crude to be USD 108 and USD 102 a barrel and the Brent-WTI spread to be USD 9 and USD 11 a barrel on average this year and the next respectively. CF06 expects oil prices to fall to about USD 105 a barrel at the one-year horizon. However, these forecasts do not yet reflect the worsening security situation in Iraq.

OUTLOOK FOR PRICES OF OIL AND NATURAL GAS

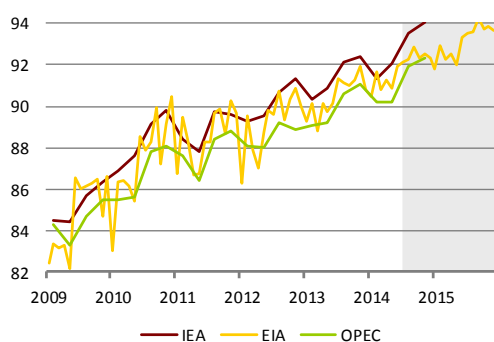


	<u>Brent</u>	<u>WTI</u>	<u>Natural gas</u>
2014	-0.71	2.81	-6.50
2015	-4.01	-6.89	-8.30

TOTAL STOCKS OF OIL AND OIL PRODUCTS IN OECD

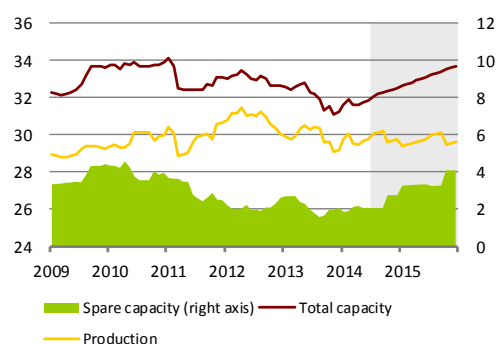


GLOBAL CONSUMPTION OF OIL AND OIL PRODUCTS



	<u>IEA</u>	<u>EIA</u>	<u>OPEC</u>
2014	1.45	1.45	1.28
2015		1.45	

PRODUCTION, TOTAL AND SPARE CAPACITY IN OPEC COUNTRIES



	<u>Production</u>	<u>Total capacity</u>	<u>Spare capacity</u>
2014	-0.36	-0.11	3.23
2015	-0.39	3.62	57.60

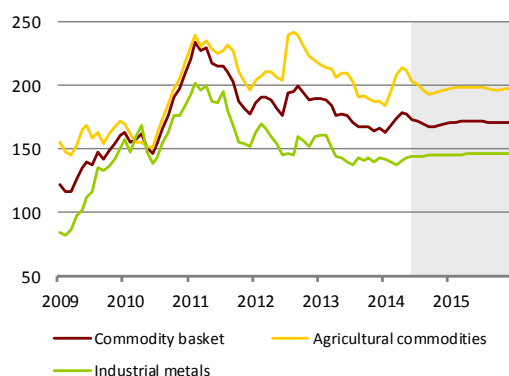
Note: Oil price in USD/barrel, price of Russian natural gas at German border in USD/1,000 m³ (IMF data, smoothed by the HP filter). Future oil prices (grey area) are derived from futures and future gas prices are derived from oil prices using model. Tables show annual percentage changes. Total oil stocks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

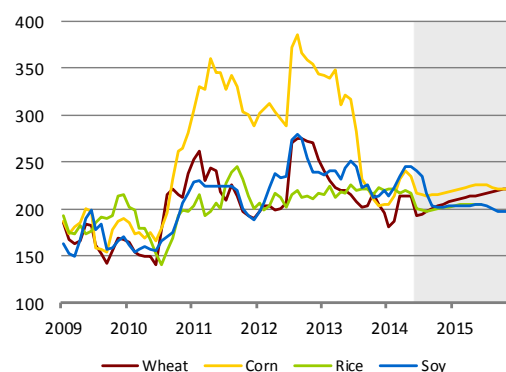
The average non-energy commodity price index fell slightly in May and rather more strongly in the first half of June thanks to a decline in food commodity prices, which outweighed an increase in the industrial metals index. Improving weather in the USA and a mild winter in the Black Sea region fostered expectations of a good global harvest. The question is, however, whether the conflict in the east of Ukraine will endanger the next harvest. As for food commodities, prices of wheat, corn and even rice fell significantly. A sharp fall in soy prices is expected in the near future. Pork prices should also drop significantly, but so far remain close to an all-time high. The same goes for beef prices, which, however, are not expected to decline markedly at the forecast horizon. The price of rubber was flat, ending its more-than-three-year-long downward trend. Cotton prices went down. Most industrial metals showed a modest upward trend last month owing to an improving outlook for industrial production in China and disruptions to supplies from key suppliers. The price of aluminium recorded the strongest growth (and its outlook is also still rising). The price of copper saw a growth correction at the start of June and its outlook is flat. Following strong growth in the previous two months due to the Indonesian government's ban on exports of unprocessed commodities, the price of nickel started to fall slightly. Higher growth in commodity prices is being counteracted by a stronger dollar and low imports to China due to high stocks there. The availability of bank financing of commodity imports to China also deteriorated, as commodities cannot be used as a collateral for lending.

PRICES OF NON-ENERGY COMMODITIES



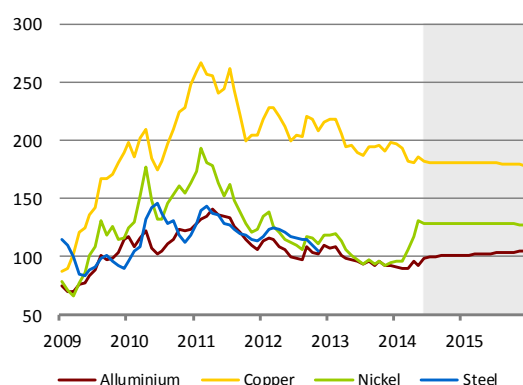
	Overall comm. basket	Agricultural comm.	Industrial metals
2014	-2.2	-1.1	-1.5
2015	0.2	-0.8	1.9

FOOD COMMODITIES



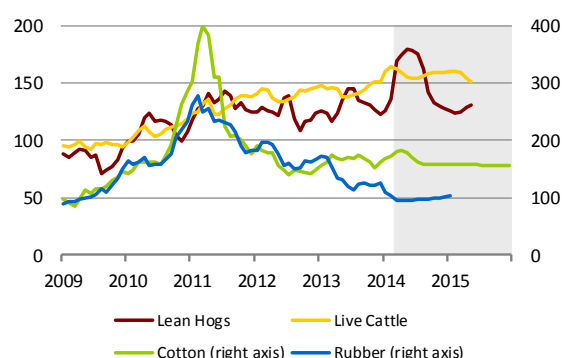
	Wheat	Corn	Rice	Soy
2014	-6.6	-20.9	-5.2	-4.4
2015	7.8	1.5	-1.8	-9.1

METALS



	Aluminium	Copper	Nickel
2014	-0.7	-7.5	18.1
2015	6.4	-1.9	6.4

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.

ANNUAL ASSESSMENT OF THE FORECASTS INCLUDED IN GEO¹

Our assessment of the accuracy of the forecasts for 2013 reveals that the institutions under review had expected economic activity to be better than what actually transpired, especially in the euro area and Germany. Consistent with this, inflation had been expected to be higher, as reflected in expectations of higher interest rates, particularly in the euro area. By contrast, the tapering of the QE programme announced in the USA led to an undershooting of the one-year outlooks for government bond yields. The exchange rate of the dollar turned out to be weaker than forecasted against all the currencies under review except the Japanese yen. Crude oil prices recorded a surprise in the upward direction.

Introduction

The aim of this article is to assess the accuracy of the forecasts of the economic variables regularly monitored in Global Economic Outlook (GEO) and to provide readers with feedback on how the individual monitored institutions, including Consensus Forecasts, and outlooks derived from market contracts reflected the ex post known outcomes.²

This assessment is conducted annually for the previous calendar year in the case of the forecasts for GDP growth and CPI inflation (fixed-event forecasts), i.e. we are now assessing the forecasts for 2013. In the case of the three-month outlooks for foreign interest rates, exchange rates against the dollar (USD) and oil prices, the assessment is conducted for the last 21 months for which the figures are known, i.e. from May 2012 to January 2014, and in the case of the one-year outlooks for the above variables, for the last 12 months, i.e. from May 2012 to April 2013 (rolling-event forecasts). The relevant date for the known outcomes is April 2014.

Owing to the short length of the time series assessed, the analysis uses simple descriptive methods. The forecast error e_t is calculated as the difference between the ex post known actual value a_t and the corresponding forecast f_t :

$$e_t = a_t - f_t \quad (1)$$

A positive forecast error therefore means that the forecasted value undershot the subsequent outcome, while a negative error means that it overshot it.

The mean forecast error (MFE), the mean absolute forecast error (MAFE) and the root mean square error (RMSE) are used as aggregate indicators of the accuracy of the forecast.

The text is structured as follows. Section 1 assesses the forecasts for GDP growth and CPI inflation for the individual foreign economies monitored. Section 2 goes on to assess the accuracy of the forecasts of foreign interest rates. Section 3 assesses the accuracy of the forecasts for the exchange rate of the dollar against major currencies. Section 4 closes the analysis by assessing the oil price forecast.

1 Assessment of the accuracy of the GDP growth and CPI inflation forecasts for 2013

The previous issues of GEO regularly monitored GDP growth and CPI inflation in four countries/territories: the euro area, the USA, Germany and China. The forecasts for all

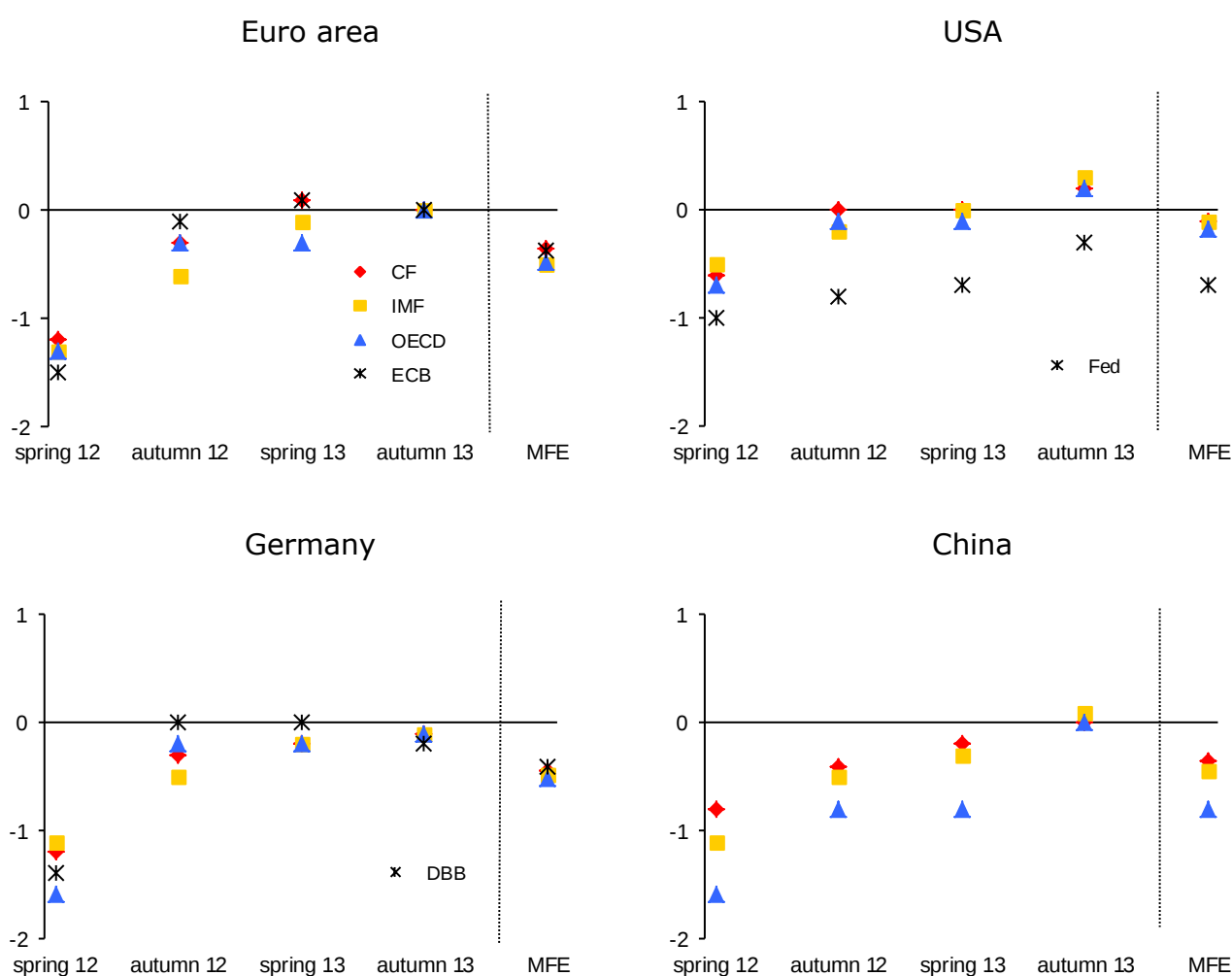
¹ Author: Filip Novotný (filip.novotny@cnb.cz). The opinions expressed in this article are those of the author and do not necessarily reflect the official position of the Czech National Bank.

² We assess the variables according to the 2012 GEO structure. The number of countries monitored was increased in January 2013. These new countries will be included in the next assessment.

the above territories are taken from Consensus Forecasts (CF), the International Monetary Fund (IMF) and the Organisation for Economic Cooperation and Development (OECD). The forecasts of these organisations are complemented with the European Central Bank's (ECB) forecast for the euro area, the Fed's forecast for the USA and the Deutsche Bundesbank's (DBB) forecast for Germany. For China, the forecasts of the Economist Intelligence Unit (EIU) started to be used in January 2013. These will not be assessed until next year, when the complete history of the outlooks for two years ahead will be available.

These institutions differ in the frequency and date of publication of their forecasts; the forecast updates range from monthly and quarterly through to half-yearly. For presentational reasons, only the half-yearly forecasts (i.e. the spring forecasts and the autumn forecasts) were assessed. The accuracy of the spring and autumn GDP growth forecasts for 2013 for each country is shown in Figures VI-1 to VI-4.

Figures VI-1 to VI-4 Forecast errors for GDP growth for 2013 (pp)

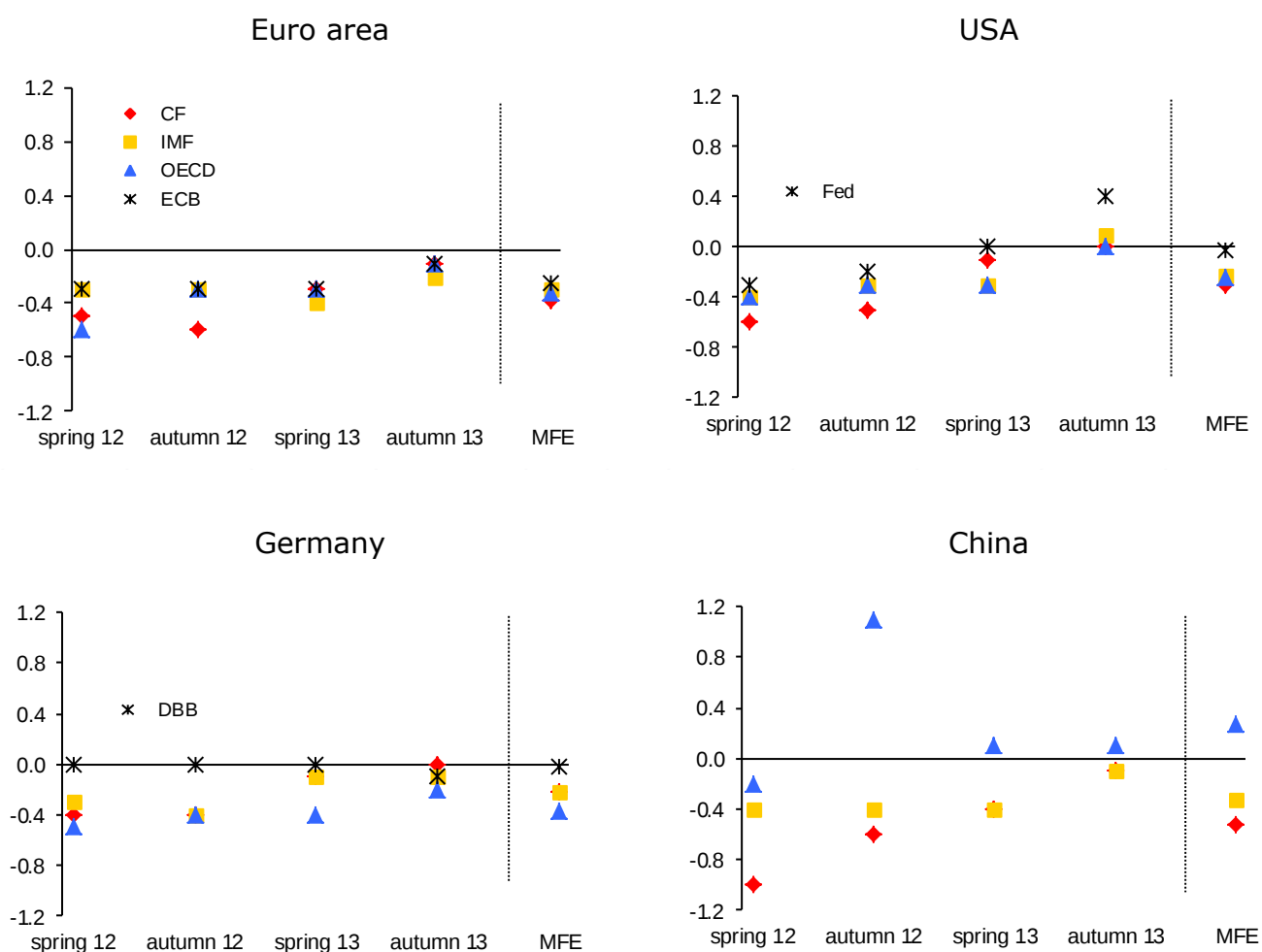


Note: CF – Consensus Forecasts, IMF – International Monetary Fund, OECD – Organisation for Economic Cooperation and Development, ECB – European Central Bank, Fed – Federal Reserve System of the USA, DBB – Deutsche Bundesbank. The source of the historical figures for 2013 is CF. MFE is the mean forecast error for the given year.

The euro area economy continued to contract last year. Germany, which is regarded as the motor of the euro area, recorded a slowdown in GDP growth to 0.4%. The USA was much better off, with GDP growth reaching 1.9% despite sequestration. Economic growth in China remained at 7.7% in 2013, the same as in 2012.

Overall, the forecasters had expected stronger GDP growth for all the countries compared to the actual outcomes. The same had been true of the forecasts for 2012, pointing to a poor ability of economists to predict an economic downturn or a turning point in the economy. According to Ahir and Loungani (2014),³ one reason may be an asymmetrically perceived greater loss for incorrectly calling a recession than benefits from correctly calling one. Moreover, this applies to the forecasts of both private institutions (e.g. those grouped in CF) and government institutions.

Figures VI-5 to VI-8 Forecast errors for consumer price inflation for 2013 (pp)



Note: CF – Consensus Forecasts, IMF – International Monetary Fund, OECD – Organisation for Economic Cooperation and Development, ECB – European Central Bank, Fed – Federal Reserve System of the USA, DBB – Deutsche Bundesbank. The source of the historical figures for 2013 is CF. MFE is the mean forecast error for the given year.

The first forecasts for 2013, published in spring 2012, were the worst performers. Gradually, as more information became available and the 2012 outcomes (which were not very positive) became known, the forecasts got noticeably more accurate.

The forecasters were most surprised by GDP in the euro area and Germany, whereas the outlooks for the USA were revised less. The forecast errors between the individual institutions were not significant. The Fed as usual overestimated growth in the USA most significantly, while the OECD strongly overestimated economic growth in China.

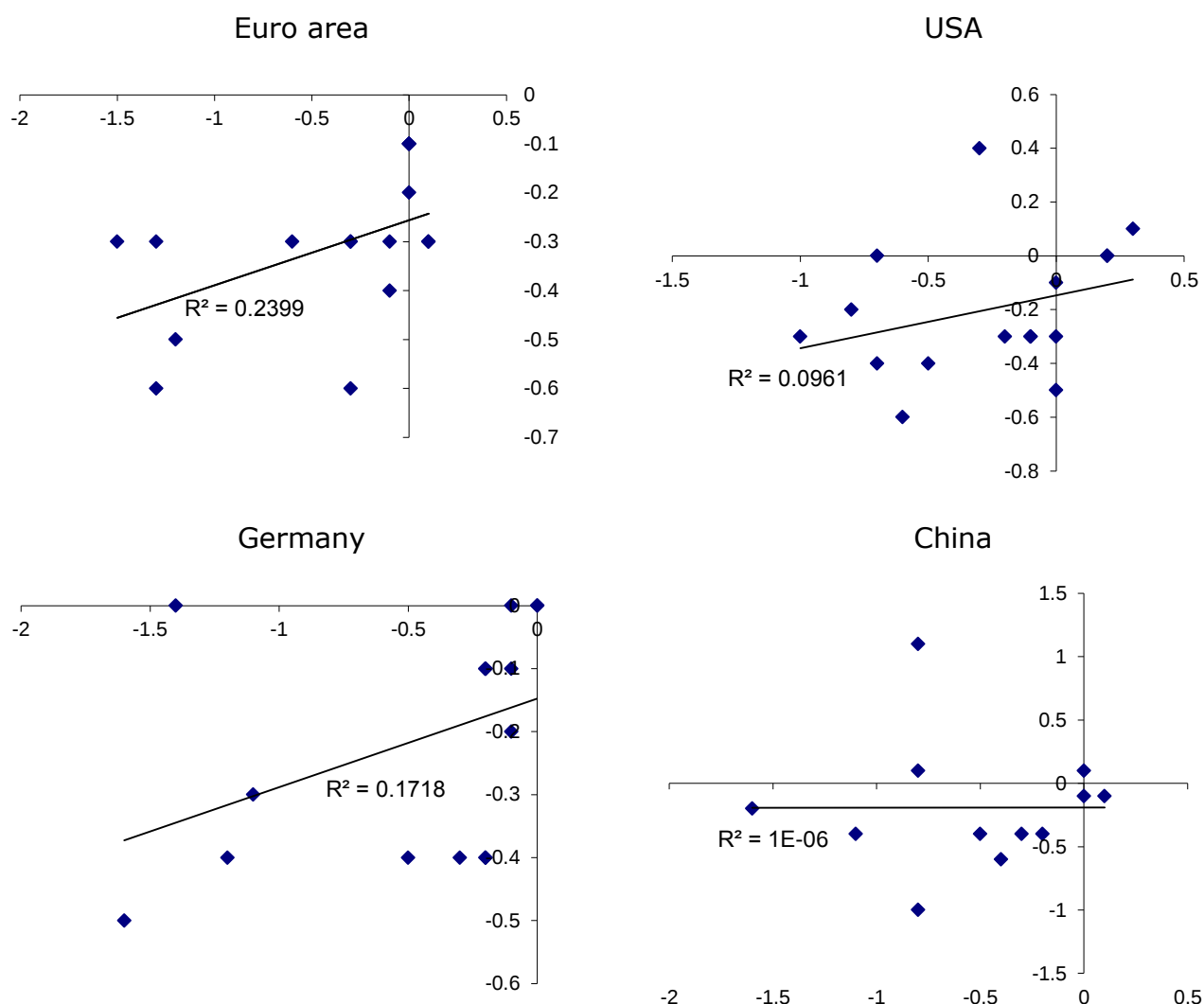
³ "There will be growth in the spring": How well do economists predict turning points? <http://www.voxeu.org/article/predicting-economic-turning-points>

Despite very small differences, when we compare the CF, IMF and OECD outlooks for all countries, the most accurate were CF forecasts, with the IMF and OECD forecasts in second and third place respectively.

Inflationary pressures were very subdued in 2013. Like the outlooks for GDP growth, most of the forecasts for 2013 expected higher consumer price inflation compared to the actual outcomes (see Figures VI-5 to VI-8). The exception was the OECD forecast, which had expected lower average inflation in China. By contrast, the Bundesbank forecast for Germany can be assessed as the most accurate, as it showed no errors over the entire forecast period.

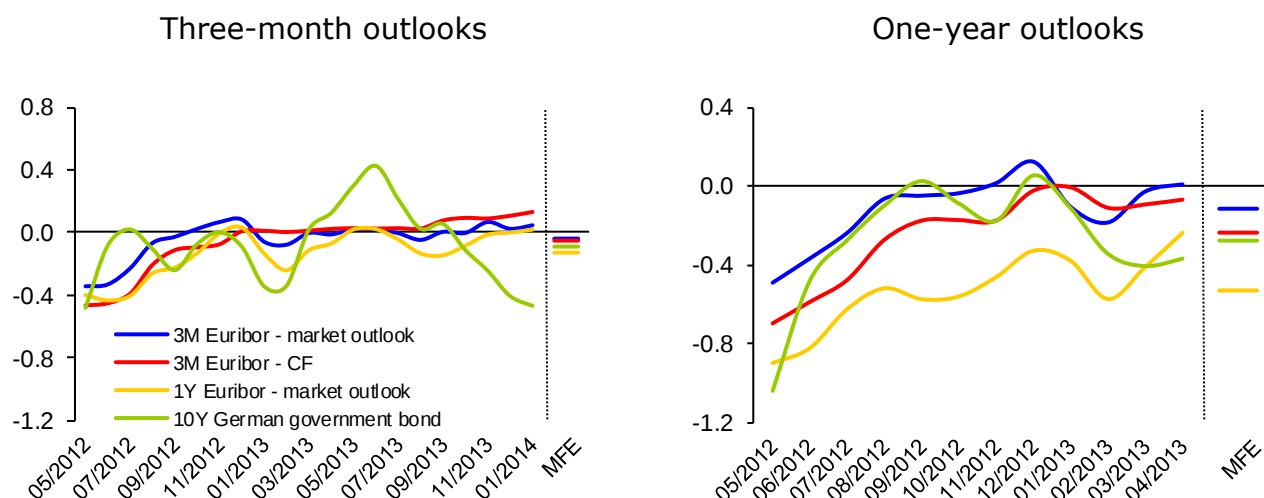
Figures VI-9 to VI-12 show the relationship between the forecast errors for GDP growth and CPI inflation. In line with intuition, this relationship is positive for the euro area, the USA and Germany, with lower-than-forecasted GDP growth accompanied by lower-than-forecasted inflation. The exception is China, where no such relationship is observed owing to an underestimated forecast for inflation from the OECD.

Figures VI-9 to VI-12 Relationship between the forecast errors for GDP growth and CPI inflation (pp)



2 Assessment of the accuracy of the forecasts for foreign interest rates

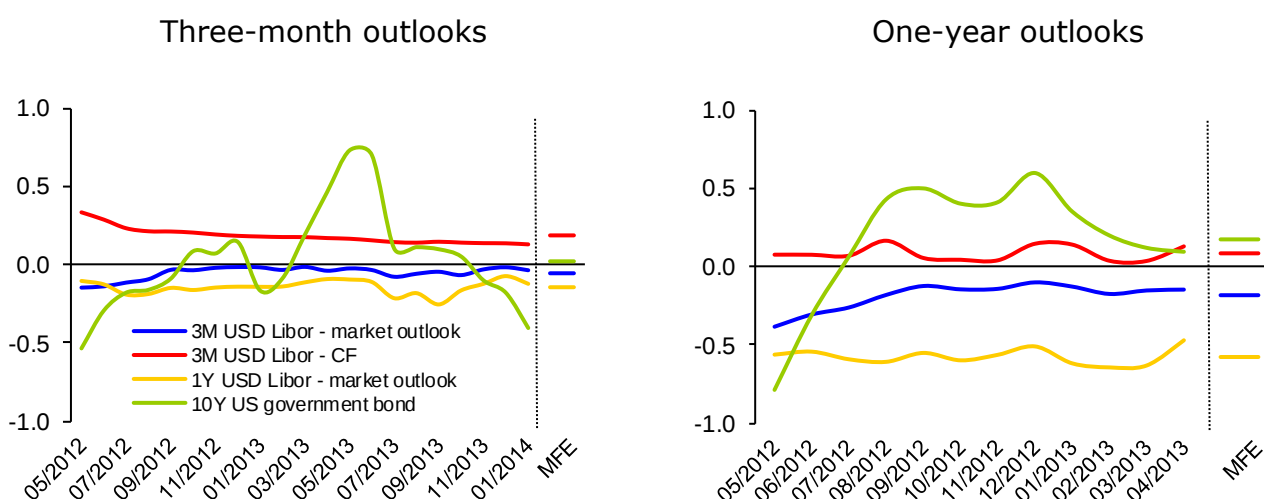
GEO regularly monitors the outlooks for short-term (3-month and 12-month) interest rates, which are derived from futures, and the outlooks for long-term (10-year)

Figures VI-13 and VI-14 Forecast errors for interest rates for the euro area (pp)

Note: The source of the actual data is Datastream. MFE is the mean forecast error for the given period.

government bond yields, which are taken from CF. The interest rate outlooks are monitored for the euro area and the USA only.

Like the expected better-than-actual GDP growth and inflation in the euro area, interest rates were expected to be higher on average than the subsequent actual outcomes recorded in the period under review (see Figures VI-13 and VI-14). The one-year outlooks were naturally less accurate than three-month outlooks. As regards the 3M EURIBOR rate, for which both CF forecasts and forecasts derived from the yield curve are available, the latter (the market outlook) were the more accurate.

Figures VI-15 and VI-16 Forecast errors for interest rates for the USA (pp)

Note: The source of the actual data is Datastream. MFE is the mean forecast error for the given period.

As in the euro area, the market outlook for three-month rates in the USA was more accurate than that of CF. However, this applied only to the outlooks three months ahead. The CF outlooks one year ahead were more accurate. Like in the euro area, the market outlooks on average expected higher rates compared to the actual outcomes. The situation was different in the case of the CF outlooks, which conversely were predicting lower rates/yields. The undershooting of the one-year outlooks for ten-year

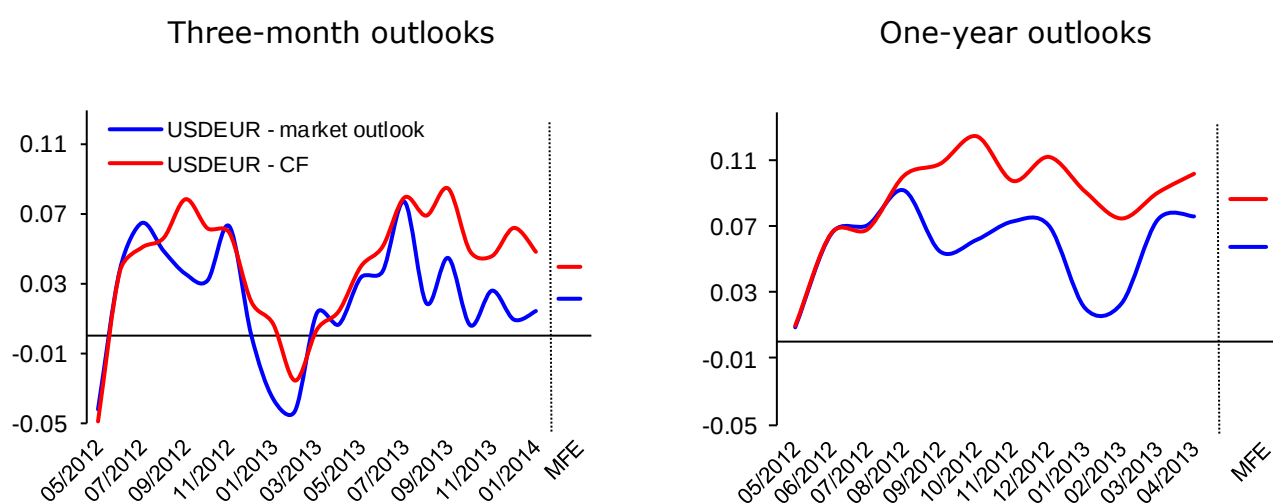
government bond yields was due to the Fed's announcement that it would gradually end its purchases of MBS and government bonds and to the related increase in yields.

3 Assessment of the accuracy of the forecasts for the dollar exchange rate

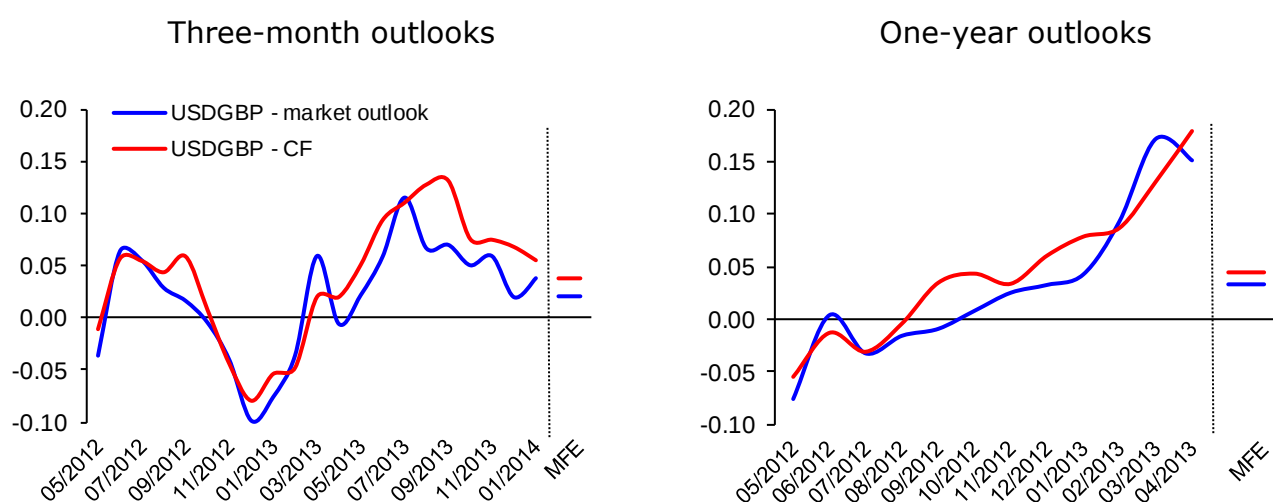
GEO provides outlooks for the exchange rate of selected currencies against the dollar based on CF forecasts as well as outlooks derived from futures.

As for the USD/EUR currency pair, the dollar was on average expected to be stronger than the actual outcomes at both the three-month and one-year horizons. The market outlook was more accurate than the CF outlook.

Figures VI-17 and VI-18 Forecast errors for the USD/EUR exchange rate

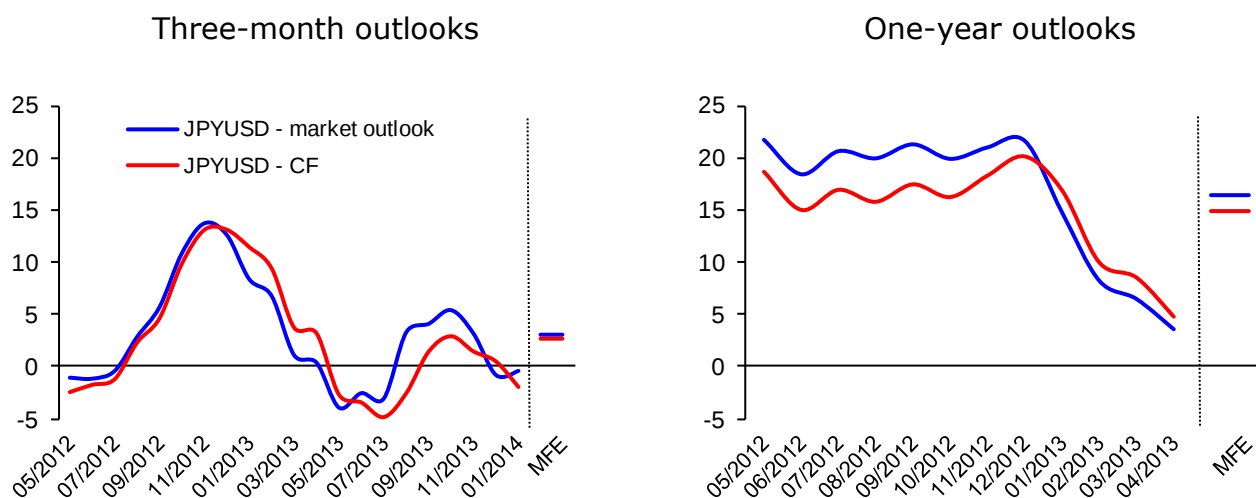
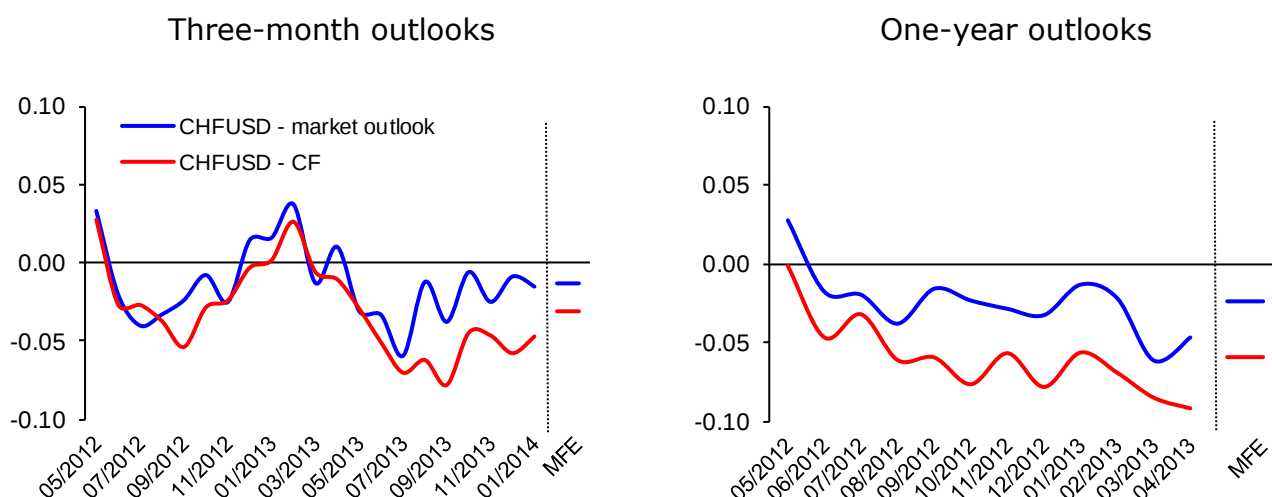


Figures VI-19 and VI-20 Forecast errors for the USD/GBP exchange rate



A stronger dollar was also expected on average against the British pound. The market outlooks were again slightly more accurate than the CF forecasts.

The forecast errors for the JPY/USD exchange rate were mainly influenced by the easing of monetary policy in Japan as from the end of 2012. This step took the currency markets by surprise not only at the one-year horizon, but also at the three-month horizon. The yen was thus expected to be stronger against the dollar on average for the period under review.

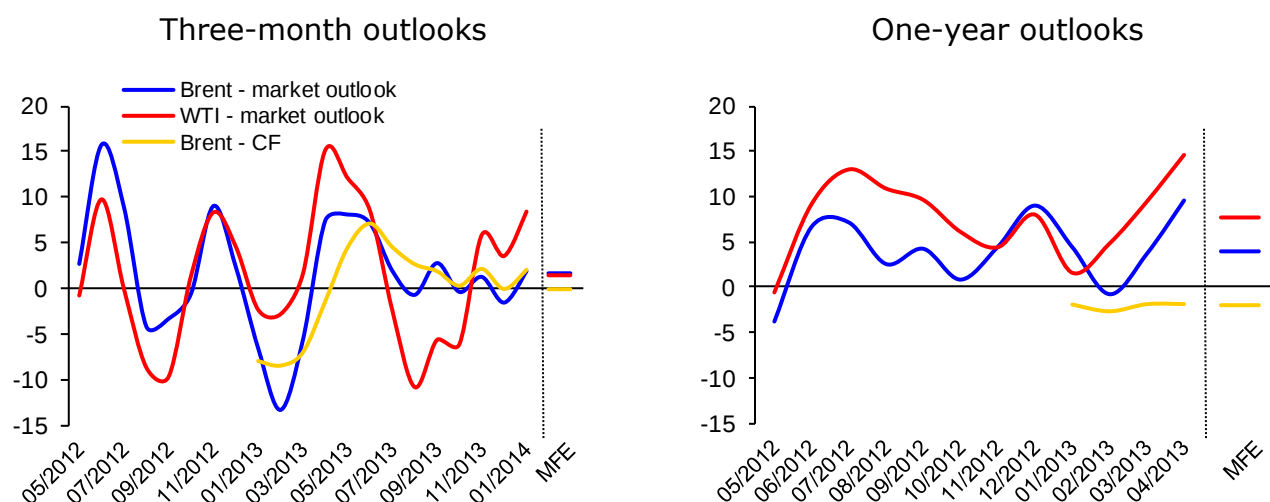
Figures VI-21 and VI-22 Forecast errors for the JPY/USD exchange rate**Figures VI-23 and VI-24** Forecast errors for the CHF/USD exchange rate

By contrast, a weaker Swiss franc, and thus a stronger dollar, was expected compared to the actual outcome.

4 Assessment of the accuracy of the oil price forecasts

The assessment of the outlooks for oil prices was affected by the fact that CF started to compile outlooks for the price of Brent crude oil instead of WTI in January 2013. The CF forecast errors for the Brent crude oil price thus cover a shorter period.

The market outlooks for the prices of both Brent and WTI crude oil predicted lower prices compared to the actual outcomes for the entire period assessed at both the three-month and one-year horizons. At the one-year horizon, the price of oil was undershot over almost the entire period under review.

Figures VI-25 and VI-26 Forecast errors for the oil price (USD a barrel)

Conclusion

Our assessment of the accuracy of the forecasts monitored in GEO reveals that 2013 surprised most forecasters with worse-than-expected GDP growth. The developments in the euro area and Germany were the biggest surprise. Turning to the accuracy of the individual GDP growth forecasts, CF recorded the lowest negative errors on average for all countries and forecast horizons. Similarly, the institutions under review overestimated the consumer price inflation outlooks for 2013 (except for the OECD forecasts for China – underestimation, and the Bundesbank forecasts – accurate forecasts).

Like the expected higher-than-actual GDP growth and inflation in the euro area, interest rates were expected to be higher than the subsequent actual outcomes in the period under review. The exchange rate of the dollar against the currencies under review (euro, British pound, Swiss franc) was predicted to be stronger compared to the actual outcomes. The exception was the Japanese yen – the dollar was expected to be weaker against it owing to a substantial easing of Japanese monetary policy at the end of 2012.

The forecast errors for oil prices three months ahead were volatile in the period under assessment. The market outlooks for the prices of both Brent and WTI crude oil expected lower prices compared to the actual outcomes for the entire period assessed.

A1. Change in GDP predictions for 2014

	CF		IMF		OECD		CB / EIU	
EA	0.0	2014/6 2014/5	0.2	2014/4 2014/1	0.2	2014/5 2013/11	-0.2	2014/6 2014/3
US	-0.3	2014/6 2014/5	0.0	2014/4 2014/1	-0.3	2014/5 2013/11	-0.1	2014/3 2013/12
DE	0.1	2014/6 2014/5	0.1	2014/4 2014/1	0.2	2014/5 2013/11	0.2	2014/6 2013/12
JP	0.2	2014/6 2014/5	-0.3	2014/4 2014/1	-0.3	2014/5 2013/11	-0.3	2014/4 2014/1
BR	-0.1	2014/6 2014/5	-0.5	2014/4 2014/1	-0.4	2014/5 2013/11	0.0	2014/6 2014/5
RU	-0.6	2014/6 2014/5	-0.7	2014/4 2014/1	-1.8	2014/5 2013/11	0.0	2014/6 2014/5
IN	0.0	2014/6 2014/5	0.0	2014/4 2014/1	-0.2	2014/5 2013/11	0.0	2014/6 2014/5
CN	0.0	2014/6 2014/5	0.0	2014/4 2014/1	-0.8	2014/5 2013/11	0.0	2014/6 2014/5

A2. Change in inflation predictions for 2014

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

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
Annual assessment of the forecasts included in GEO (Filip Novotný)	2014-6
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