

GLOBAL ECONOMIC OUTLOOK - FEBRUARY

Monetary and Statistics Department
External Economic Relations Division

2015

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Cut-off date for data

9 - 13 February 2015

CF survey date

9 February 2015

GEO publication date

20 February 2015

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	III.2 India III.4 Brazil	V. Commodity market developments Summary	Focus	

The February 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 summarise the ideas presented at a Swiss National Bank seminar on foreign currency lending in an article entitled *The crisis and post-crisis experience with Swiss franc loans outside Switzerland*. The seminar focused primarily on the macroeconomic aspects and context of this form of lending. It concluded that the monetary conditions in Switzerland and in the countries where these loans are most widespread, the financial literacy levels of bank clients and the behaviour of banks themselves were the determinants of this phenomenon.

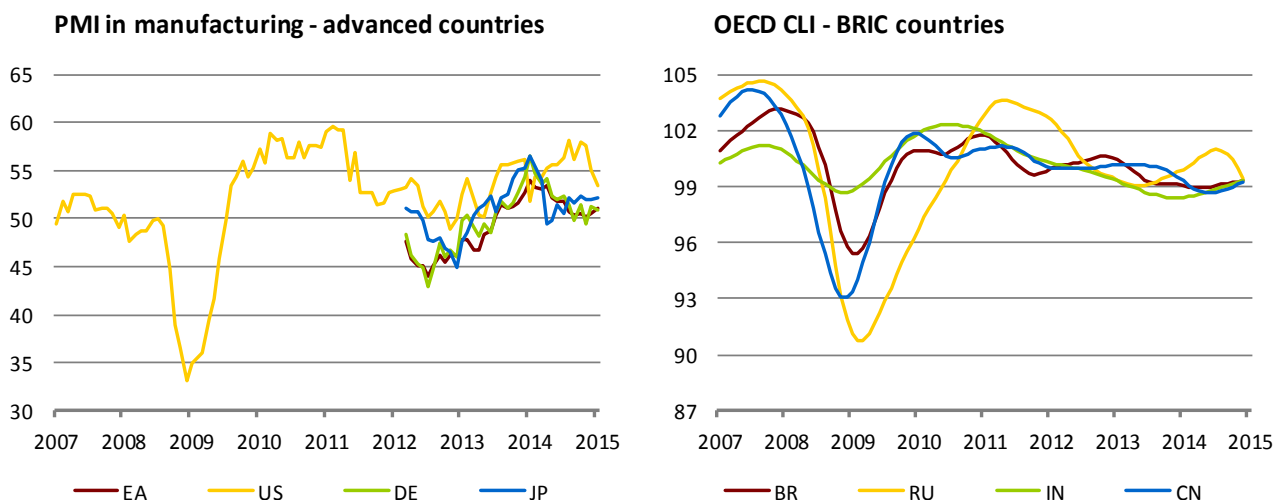
Oil prices will play an important role in the evolution of the global economy. Although various analyses differ on whether and to what extent low oil prices will support the expected economic recovery, they agree on a low outlook for both consumer and producer price inflation. Euro area GDP growth should accelerate only gradually this year and the next, as leading indicators do not suggest a marked recovery in industry. The euro area economy should be supported by a strong dollar, which will also dampen the deflation into which the euro area fell at the close of last year owing to the oil price plunge. The forecast for the US economy is much more favourable, especially this year. Growth should be driven chiefly by household consumption, which is reacting positively to cheap fuels and a good labour market situation. The outlook for industry is less favourable, owing to both the strong dollar and an expected monetary policy tightening. Prices in the USA should be virtually flat this year.

Among large emerging economies (the BRIC group) India has a positive economic outlook with slightly accelerating GDP growth. This growth might be boosted by an interest rate cut implemented by the central bank in reaction to an expected further drop in inflation. A similar scenario is foreseen for Brazil. In China, by contrast, economic growth and inflation should continue to edge down. However, the January decrease in Chinese imports, stemming among other things from weaker domestic demand, is particularly unpleasant for the global economy. The Russian economy currently has the worst outlook among the BRIC countries, as it is expected to fall into a deep recession with sharply rising inflation.

An additional monetary policy easing by the ECB was reflected in a decline in bond yields in most euro area countries in January. No increase in the ECB's rates is expected until at least mid-2016. In the USA, by contrast, the Federal Reserve is expected to raise rates this year, although the low inflation forecast for this year will shift this step later into 2015 H2. The US dollar responded to the ECB's measures by appreciating to an eleven-year high against the euro in January, but it reversed some of its gains in early February. Over the forecast horizon, the dollar is broadly flat against the euro and a further strengthening is expected against the Japanese yen, the Indian rupee and the Brazilian real. The dollar is expected to depreciate against the Russian rouble and the Chinese renminbi.

Oil prices were at their lowest level in almost six years in mid-January but then started to rise after a short stagnation. However, the uncertainty surrounding future developments has increased and the range of the forecasts is broad, with some predicting a further price decline stemming from persisting excess supply. Natural gas prices are falling worldwide in reaction to favourable weather and sufficient supply. In addition, prices of long-term contracts are mirroring the previous declines in oil prices with a lag. The food commodities and industrial metals price indices both dropped in January, but their decline came to a halt in early February and the market outlook is gradually rising.

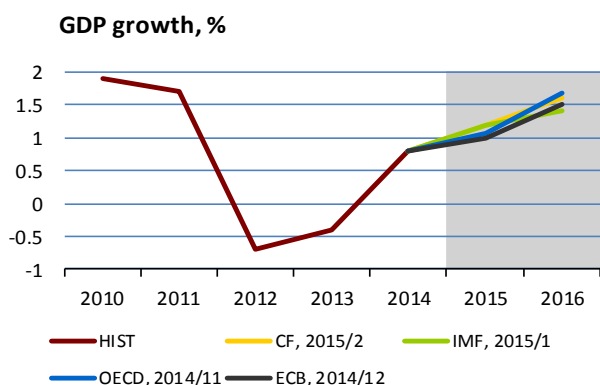
Leading indicators for countries monitored in the GEO



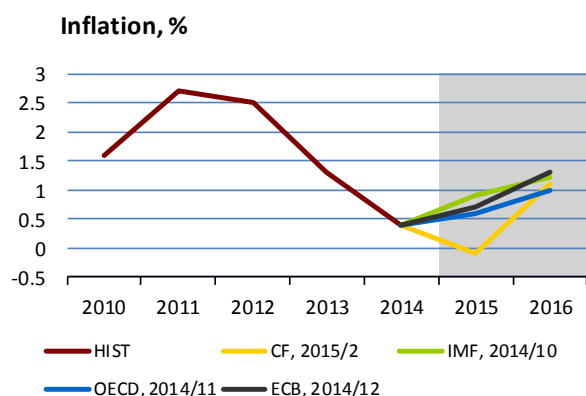
Source: Bloomberg, Datastream

II.1 Euro area

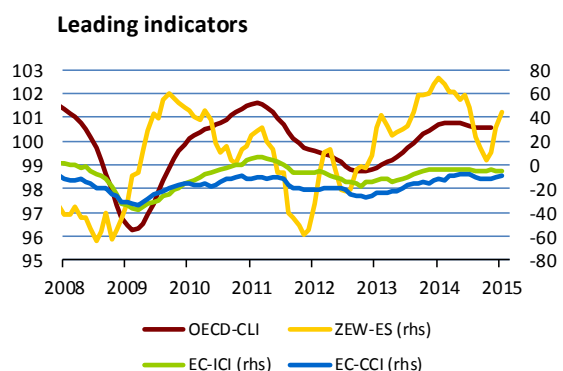
Economic growth in the euro area is expected to accelerate gradually towards 1.5% this year and the next. GDP growth recorded a slight quarterly increase in 2014 Q4, but remained very low. Annual GDP growth of 0.8% is expected for 2014 as a whole. Industrial production was flat year on year in 2014 Q4, and the PMI in manufacturing (at just above 50 points) indicated no marked future improvement in industry either. With the exception of the ZEW, which continued to rise in January, the other monitored leading indicators were broadly flat at their previous levels. Real retail sales recovered in 2014 Q4, probably also supported by the plunge in oil prices at the end of the year. The oil price decrease also caused the euro area to fall into deflation in December – consumer prices went down by 0.2% year on year and this decline deepened further in January 2015 according to preliminary estimates. The February CF therefore significantly revised expected inflation to -0.1% this year and just over 1% in 2016. At its January meeting, the ECB announced a long-planned substantial expansion of its existing bond purchase programme and lowered the interest rate for further TLTRO auctions to 0.05%. From March 2015 to September 2016 it will purchase bonds at a rate of EUR 60 billion a month, roughly EUR 50 billion of which will now be government bonds of euro area countries. The additional monetary policy easing was reflected in an immediate decline in bond yields in most euro area countries.



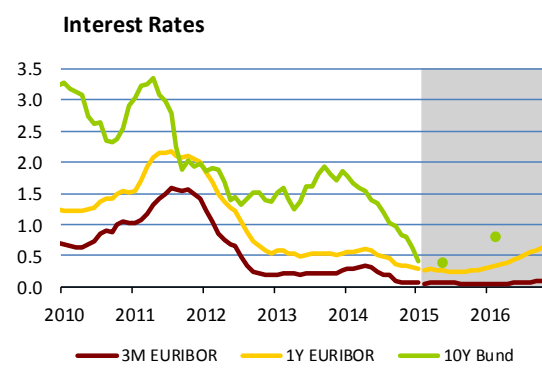
	CF	IMF	OECD	ECB
2015	1.2 ↗	1.2 ↘	1.1	1.0
2016	1.6 ↗	1.4 ↘	1.7	1.5



	CF	IMF	OECD	ECB
2015	-0.1 ↘	0.9	0.6	0.7
2016	1.1 ↘	1.2	1.0	1.3



	OECD-CLI	EC-ICI	EC-CCI	ZEW-ES
11/14	100.6	-4.3	-11.5	11.0
12/14		-5.2	-10.9	31.8
1/15		-5.0	-8.5	45.2

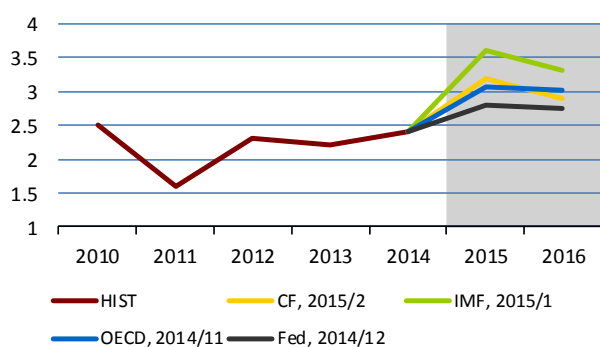


	01/15	02/15	06/15	12/15	06/16	12/16
3M EURIBOR	0.06	0.05	0.07	0.05	0.07	0.12
1Y EURIBOR	0.30	0.26	0.25	0.29	0.47	0.74
10Y Bund	0.42	0.40	0.80			

II.2 United States

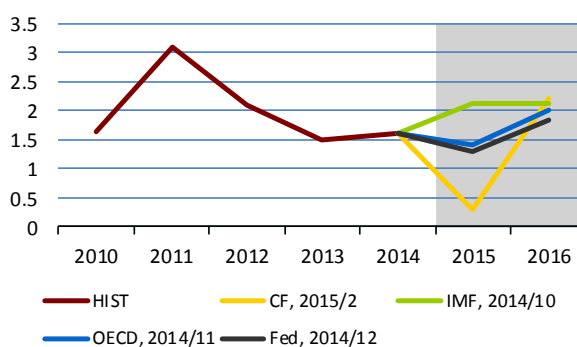
The January IMF forecast for 2015 offers a very favourable picture of economic growth in the USA (GDP growth of 3.6%). Although the growth is expected to slow slightly in 2016, it will remain much higher than in the euro area. GDP rose by 2.4% in 2014 as a whole and by 2.5% year on year in Q4. Household consumption was by far the biggest contributor to the overall growth, and its impact is expected to remain favourable in the future. This is suggested by leading indicators of consumer confidence and sentiment, which rose in December and January owing partly to the sharp decline in oil prices and also to positive labour market developments, as the unemployment rate was flat at 5.7% in January. Annual growth in industrial production rose further to 4.8% in 2014 Q4. However, the January PMI in manufacturing, which continued to fall, casts some doubt on the continuation of this upward trend. The oil price decline in late 2014 had a large effect on consumer prices, causing inflation to drop to 0.7% in December. The February CF expects prices to be almost flat this year, rising by just 0.3%. This will probably shift the timing of the Fed's first interest rate hike further into 2015 H2. The US dollar appreciated to its strongest level against the euro in eleven years, mainly because of the marked easing of euro area monetary policy and the better overall outlook for the US economy. In February, however, it partially reversed its previous gains against the euro.

GDP growth, %



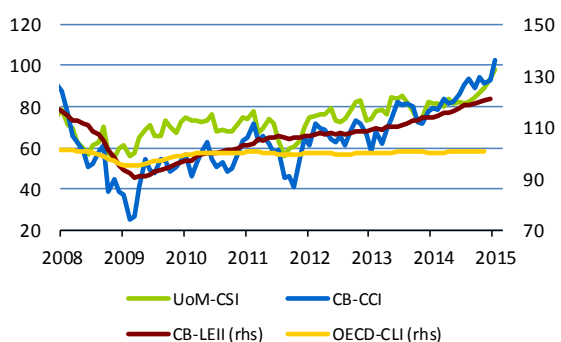
	CF	IMF	OECD	Fed
2015	3.2 →	3.6 ↗	3.1	2.8
2016	2.9 ↘	3.3 ↗	3.0	2.8

Inflation, %



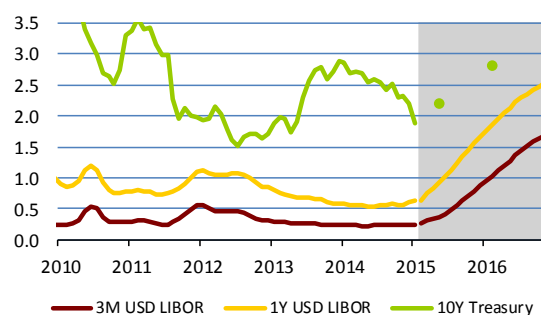
	CF	IMF	OECD	Fed
2015	0.3 ↘	2.1	1.4	1.3
2016	2.2 →	2.1	2.0	1.9

Leading indicators



	CB-LEII	OECD-CLI	UoM-CSI	CB-CCI
11/14	120.5	100.4	88.8	91.0
12/14	121.1		93.6	93.1
1/15			98.1	102.9

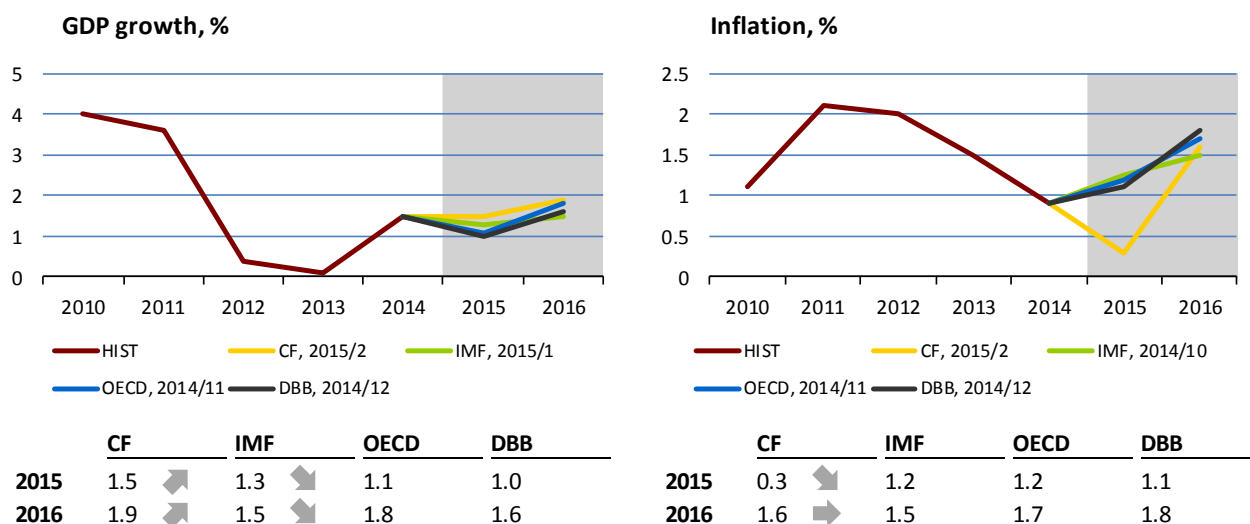
Interest Rates



	01/15	02/15	06/15	12/15	06/16	12/16
3M USD LIBOR	0.25	0.26	0.43	0.88	1.36	1.74
1Y USD LIBOR	0.62	0.64	1.03	1.66	2.21	2.58
10Y Treasury	1.88	2.20	2.80			

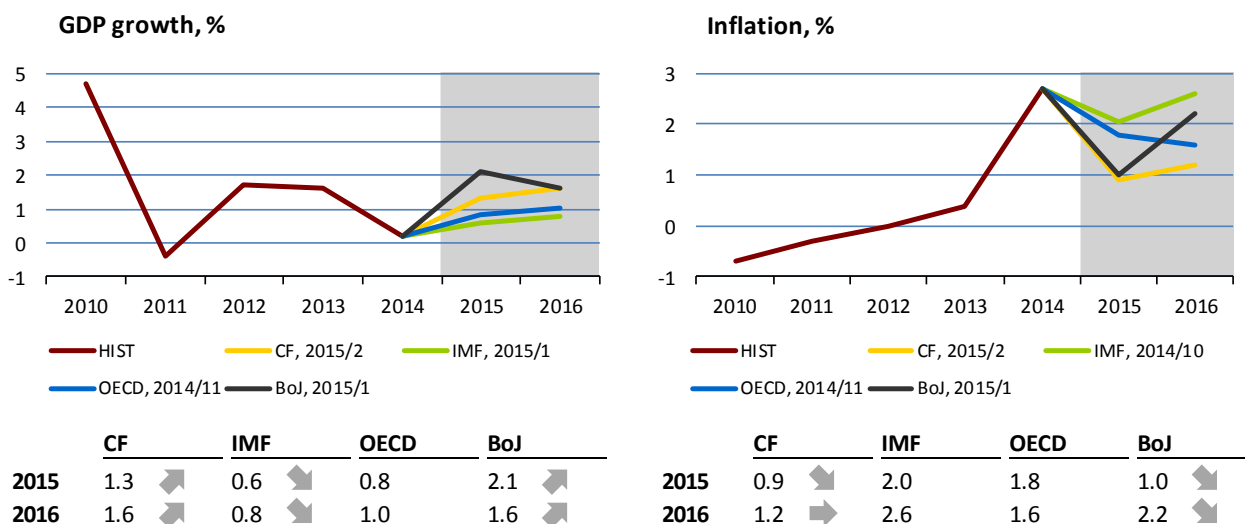
II.3 Germany

Following six months of broad stagnation, the quarterly growth rate of the German economy returned to strong growth in 2014 Q4, rising to 0.7% (0.8% in Q1). The higher economic growth was due to faster growth in household consumption and investment. Annual economic growth went up from 1.2% to 1.6% as well. The Federal Statistical Office increased its GDP growth estimate for 2014 as a whole to 1.6%. The February CF raised its forecast for economic growth this year to 1.6%. The German government's prediction also rose to 1.5% (from 1.3% in December). Leading indicators mostly increased in January, with the exception of the PMI in manufacturing, which went down to 50.9. Inflation fell by 0.5 pp to -0.3% in January, turning negative for the first time since 2009. The February CF substantially lowered inflation expected in 2015 as a whole to 0.3%.



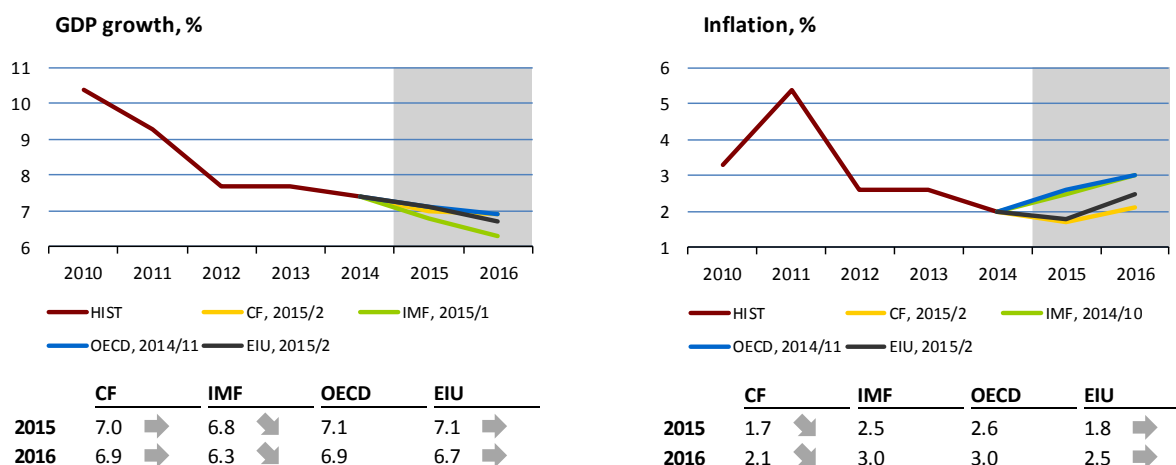
II.4 Japan

Despite some early signs of a recovery, Japan remains trapped in negligible price growth. Inflation excluding food prices slowed further in December (to 2.5% in annual terms including last year's indirect tax change), mainly due to the oil price plunge. New data prompted central bank governor Haruhiko Kuroda to postpone the expected moment of hitting the 2% inflation target until fiscal year 2016/2017. Still, industrial output recovered slightly (growth of 1% month on month) and unemployment fell further to 3.4% in December. The long-awaited improvement in the export sector is now visible. Stronger growth should be boosted by Prime Minister Abe's new structural measures in agriculture. Farmers are to gain more independence and import tariffs on dairy products are to be reduced. The February CF raised the GDP outlook by 0.1 pp in both 2015 and 2016. The inflation forecast was reduced by 0.3 pp for 2015 and left unchanged for 2016. The Japanese central bank revised its growth outlook upwards and its inflation outlook downwards for 2015.



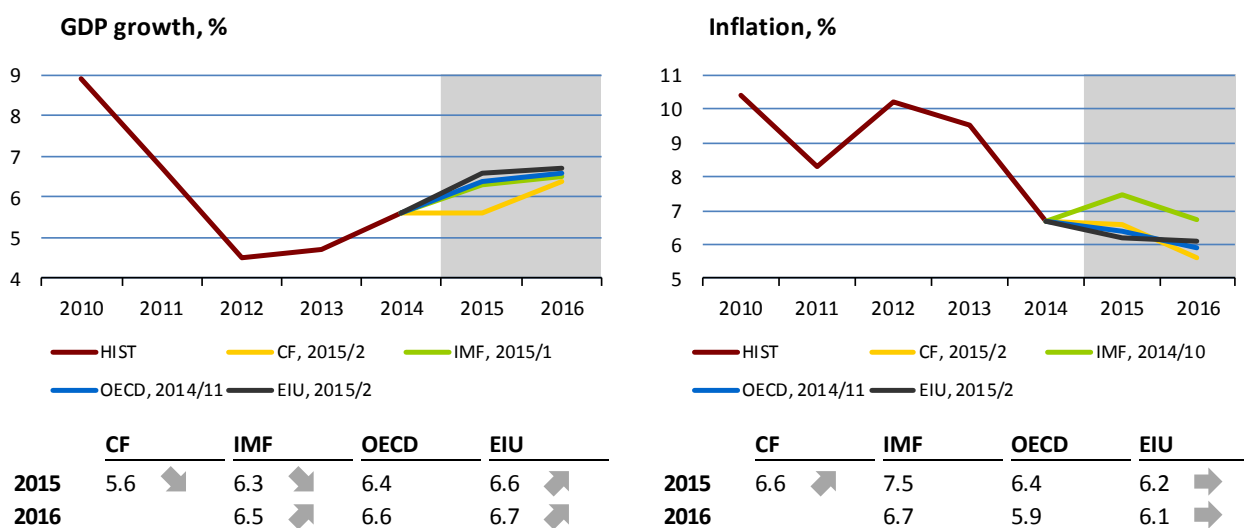
III.1 China

Annual GDP growth in China in 2014 Q4 remained at the previous quarter's level (7.3%), but the quarterly growth rate deteriorated slightly. Although the Chinese economy managed to avoid a hard landing, it slowed to 7.4% in 2014, the lowest growth rate in 24 years. The HSBC PMI in manufacturing was just below 50 for the second consecutive month (49.6 in December and 49.7 in January). Export growth fell by 3.3% in January, but imports dived by almost 20% on account of the oil price slump and weaker domestic demand. Annual consumer price inflation fell below 1% in January. The disinflationary pressures are being supported by a slight drop in industrial producer prices. The new CF, IMF and EIU outlooks expect economic activity to grow by 6.8%–7.1% this year. According to CF and the EIU, inflation will slow to 1.7%–1.8%.



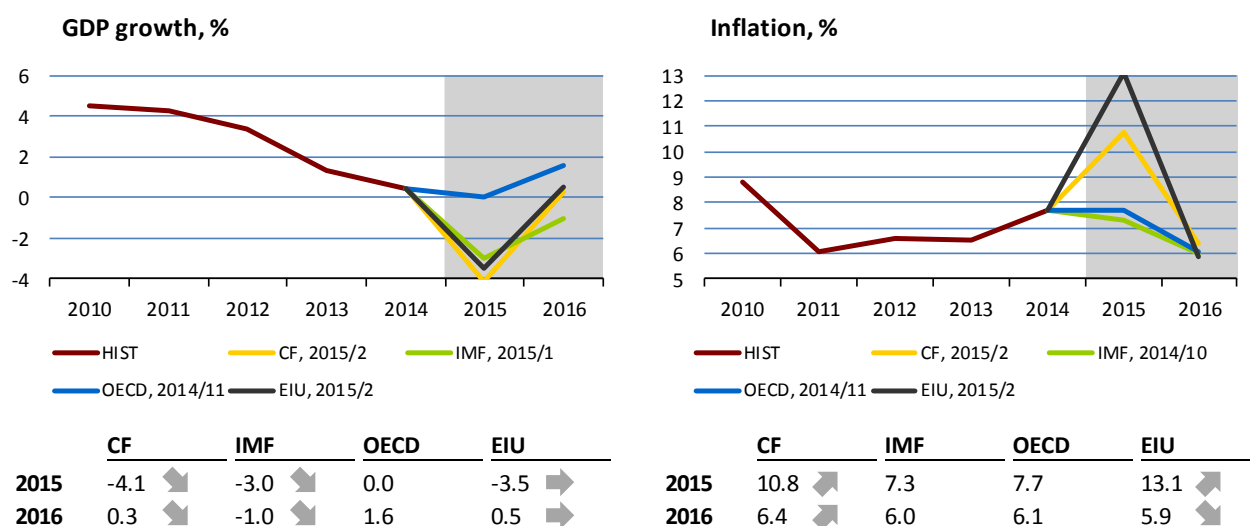
III.2 India

The Indian economy recorded unexpectedly high year-on-year growth in 2014 Q4 (7.5%). This reflected a change in the GDP calculation methodology in February, including a change in the reference year and the use of market prices. GDP growth in the previous fiscal year 2013/2014 was revised from 4.7% to 6.9%. Consumer price inflation rose to 5.1% in January from a revised level of 4.3% in December (this also involved a methodological change, consisting in changes to the reference year and consumer basket weights). However, inflation is lower than expected. Together with a slowdown in annual industrial production growth in December (to 1.7%), this gives the central bank room to cut interest rates further. Such action would provide the necessary stimulus to the economy. International institutions expect GDP growth of 6.3%–6.6% in 2015/2016 (under the original methodology).



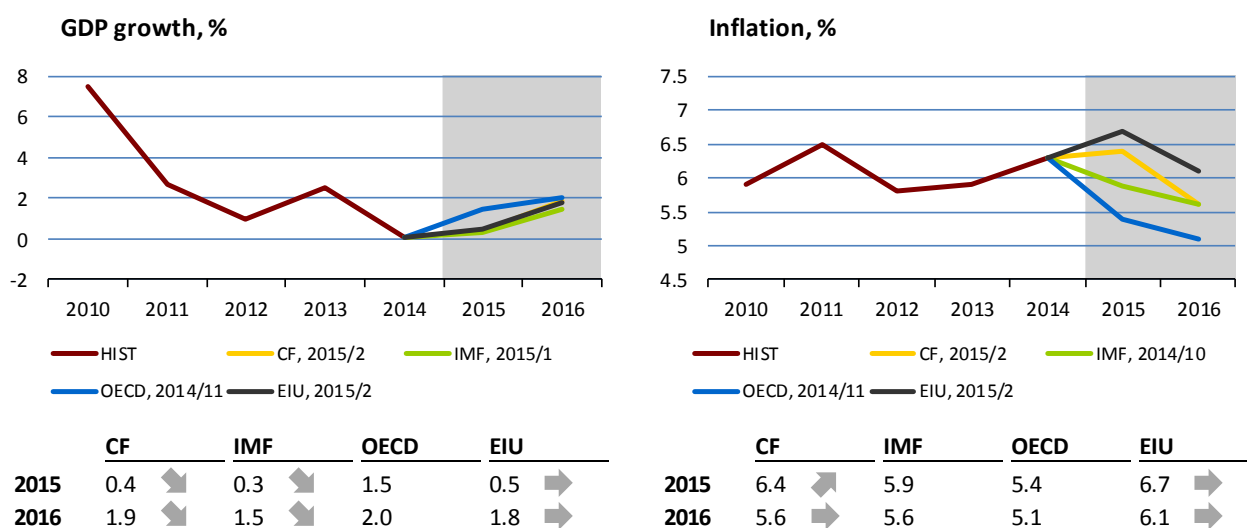
III.3 Russia

Annual GDP growth in Russia turned negative in 2014 Q4. According to the flash estimate, growth of only 0.6% was achieved for the year as a whole. Growth in industrial production remained weak at the end of the year. The slight rise in economic activity observed in December was due to a seasonal factor and to growth in demand for durable goods following a rise in inflation expectations. The HSBC PMI fell from 48.9 in December to 46.7 in January (the sharpest decline since June 2009), indicating a worsening situation in manufacturing. In early February, the CBR unexpectedly lowered its key interest rate by 2 pp to 15%. Despite this, annual inflation reached a record high of 15% in January (and 11.4% in 2014 as a whole). The CBR expects GDP to contract by 3.2% in 2015 H1. The new CF, EIU and IMF outlooks expect GDP to fall by 3.0%–4.1% this year, and CF and the EIU predict that inflation will almost halt (0.3%–0.5%).



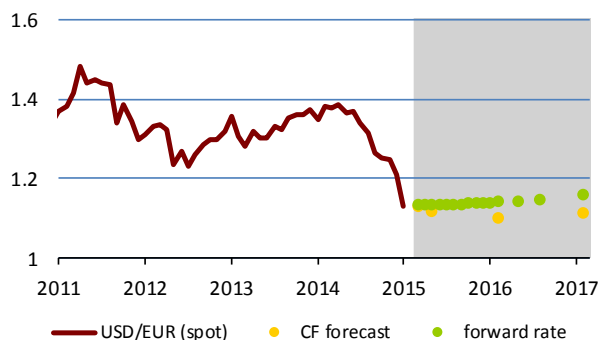
III.4 Brazil

Brazil's central bank raised its interest rate by a further 0.5 pp to 12.25% in January. As expected, inflation went up to 7.1% in January, mainly on the back of a rise in administered prices (public transport, food and energy), which, together with an announced rise in selected taxes, was aimed at reducing the budget deficit. The deficit reached 0.6% of GDP in 2014 as a whole, whereas the government had originally been expecting a surplus. The government's measures, however, are weakening consumer confidence, which in January fell to its lowest level since 2005. The Brazilian economy is also endangered by a persisting drought in the three largest metropolitan areas. These negative factors are reflected in the predictions of international institutions, which expect GDP growth of 0.3%–0.5% in 2015 rising to 1.5%–1.9% next year. CF was alone in raising its inflation forecast for this year by 0.1 pp.



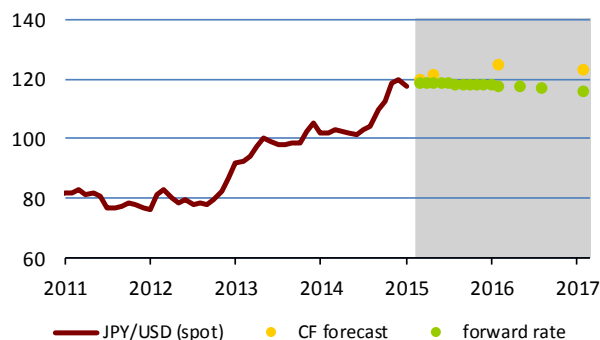
IV. Outlook of exchange rates vis-à-vis the US dollar

The euro



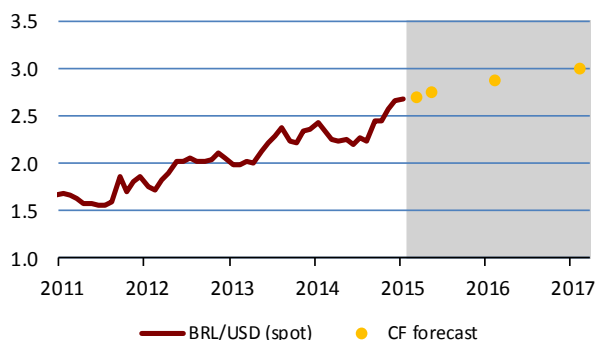
	9/2/15	03/15	05/15	02/16	02/17
spot rate	1.134				
CF forecast		1.130	1.117	1.101	1.115
forward rate		1.133	1.134	1.140	1.159

The Japanese yen



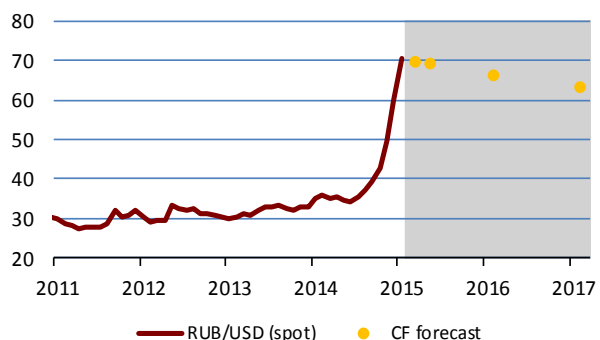
	9/2/15	03/15	05/15	02/16	02/17
spot rate	118.6				
CF forecast		119.7	121.5	124.6	123.3
forward rate		118.6	118.5	117.8	115.7

The Brazilian real



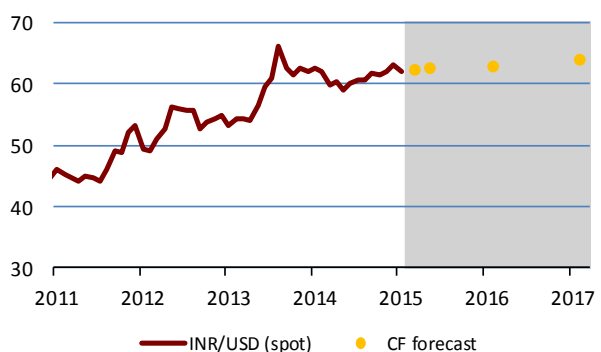
	9/2/15	03/15	05/15	02/16	02/17
spot rate	2.787				
CF forecast		2.693	2.750	2.868	3.000

The Russian rouble



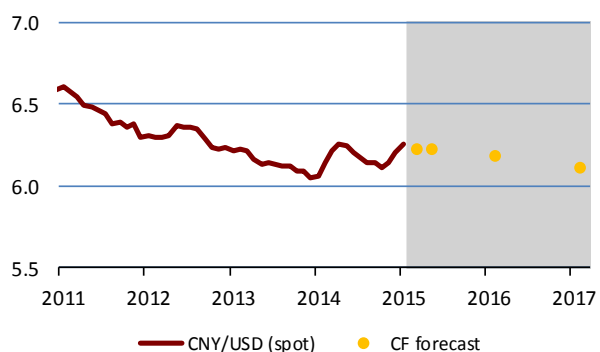
	9/2/15	03/15	05/15	02/16	02/17
spot rate	65.67				
CF forecast		69.51	69.45	66.39	63.46

The Indian rupee



	9/2/15	03/15	05/15	02/16	02/17
spot rate	62.16				
CF forecast		62.23	62.48	62.94	63.94

The Chinese renminbi



	9/2/15	03/15	05/15	02/16	02/17
spot rate	6.247				
CF forecast		6.220	6.220	6.186	6.116

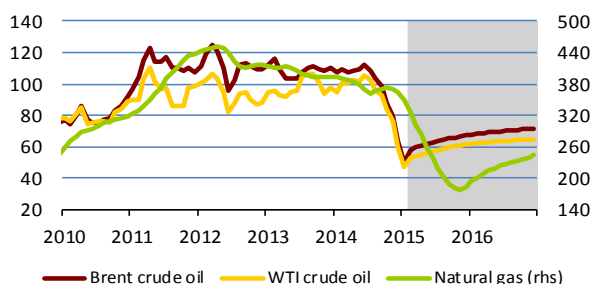
Exchange rates as of last day of month. Forward rate does not represent outlook; it is based on covered interest parity, i.e. currency of country with higher interest rate is depreciating. Forward rate represents current (as of cut-off date) possibility of hedging future exchange rate.

V.1 Oil and natural gas

In mid-January the price of Brent crude oil was at its lowest level since March 2009 (USD 46.6/bbl). It then stayed just below USD 50/bbl before rising above USD 55/bbl in early February, buoyed by a similar trend in the US dollar exchange rate, which at the close of January started to weaken from its strongest level since August 2003. Now that the downward trend in oil prices has halted, financial investors are covering their short positions on the futures market, and this in turn is bolstering the rise in prices on the oil market. From the fundamental perspective the excess supply of oil will continue for some time, but large agencies monitoring the oil market are gradually increasing their demand growth expectations and reducing their extraction growth outlooks. The increased uncertainty regarding future developments is reflected in high oil price volatility and a wide spread in the forecasts of various institutions, some of which expect oil prices to drop further. The analysts surveyed in the February CF expect a Brent price of USD 40–78/bbl (USD 56.2/bbl on average) in late May and USD 45–88/bbl (USD 66.1/bbl on average) one year ahead.

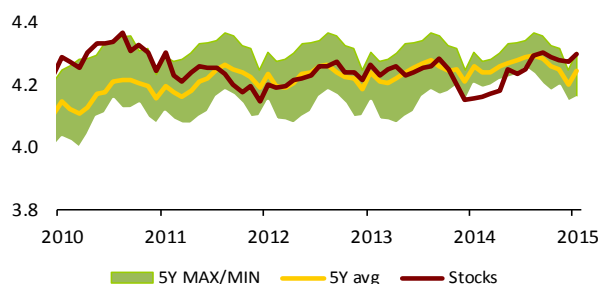
The price of natural gas in Europe fell, with long-term contracts reflecting the oil price decline with a lag. Prices were also pushed down by mild weather and by gas stocks, which in late January were up 14% on a year earlier. Gas prices in the USA dropped owing to lower drawing from reservoirs amid stable production and warmer-than-usual weather. The largest decline, however, was recorded by Asian LNG prices, with futures even falling below prices in Europe. Mild temperatures should further reduce gas prices, and the monetary conditions (which are easy in Europe and gradually being tightened in the USA) will foster a strong dollar and keep commodity prices low.

Outlook for prices of oil and natural gas (USD/1000m3)

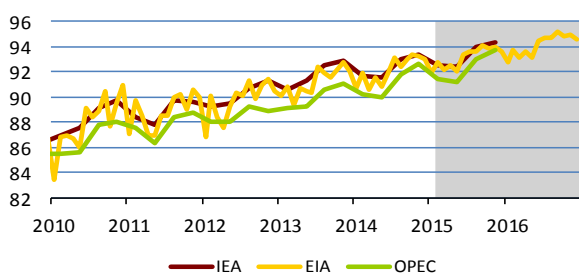


	Brent	WTI	Natural gas
2015	62.16 ↘	56.88 ↘	242.67 ↘
2016	69.83 ↗	63.70 ↗	222.86 ↗

Total stocks of oil and oil products in OECD (bil. barrel)

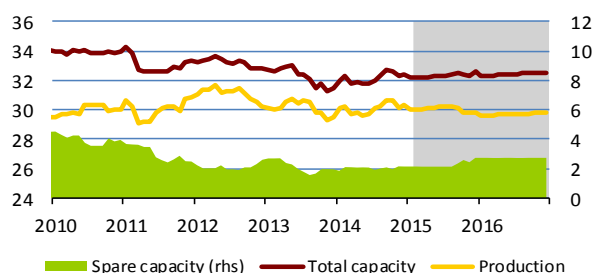


Global consumption of oil and oil products (mil. barrel / day)



	IEA	EIA	OPEC
2015	93.33 ↘	93.15 ↗	92.35 ↗
2016		94.15 ↗	

Production, total and spare capacity in OPEC countries (mil. barrel / day)



	Production	Total capacity	Spare capacity
2015	30.05 ↘	32.32 ↗	2.26 ↗
2016	29.70 ↗	32.43 ↗	2.73 ↗

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. 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).

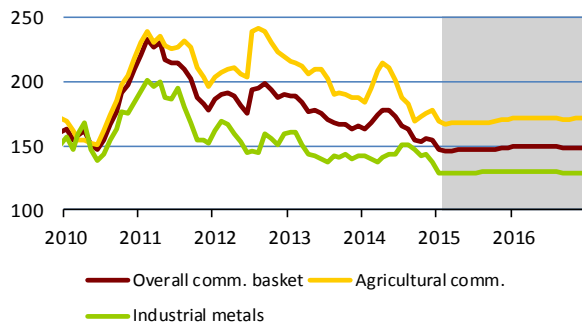
Source: Bloomberg, IEA, EIA, OPEC, CNB calculations

V.2 Other commodities

The decline in the non-energy commodity price index accelerated further in January. Both of its components contributed to this trend. A renewed strengthening of the US dollar in reaction to the further monetary policy easing by the ECB had a generally downward effect on dollar prices of commodities. The basic metals price index remained under pressure owing to continued weakness in manufacturing, with the PMI rising only slightly in the euro area, Japan and China and dropping sharply in the USA. Falling energy prices also contributed to the price decline. The copper price accounted for a large part of the drop in the index, recording its biggest monthly decline since 2011 as a result of strong growth in stocks at the LME and a continuing fall in new house prices in China. After a sharp decrease, prices of aluminium stabilised and have been edging up since the start of January. Their outlook is also gradually rising. Prices of nickel, lead, zinc and steel also stabilised. Most metals were showing modest price growth in early February.

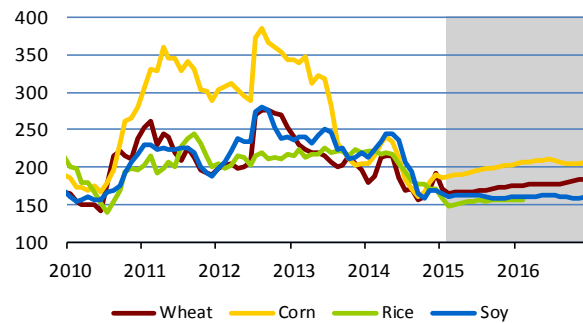
The agricultural commodity price index fell in January due to improving weather in South America, fading concerns over production shortfalls and high stocks of some commodities in the USA. Wheat prices plunged, as supply is now sufficient despite possible export restrictions by Russia. Corn prices edged down, with lower ethanol prices leading to lower producer margins. Flat soy prices were replaced by a drop in January thanks to good (wet) weather in Brazil and a USDA forecast of record-high global production. Prices of rice and lean hogs have been falling for three months now. Live cattle prices also dropped in January. The price of rubber stabilised after a fall.

Non-energy commodities price indices



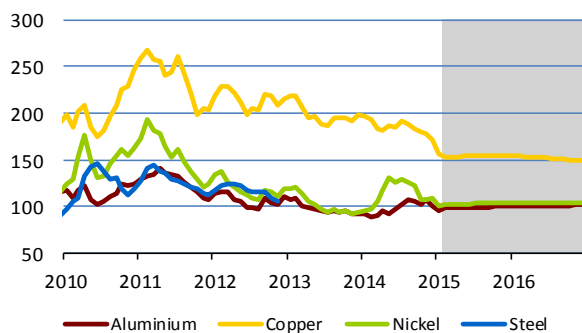
	Overall	Agricultural	Industrial
2015	147.0 ↘	168.3 ↘	129.2 ↘
2016	149.0 ↘	171.3 ↘	129.5 ↘

Food commodities



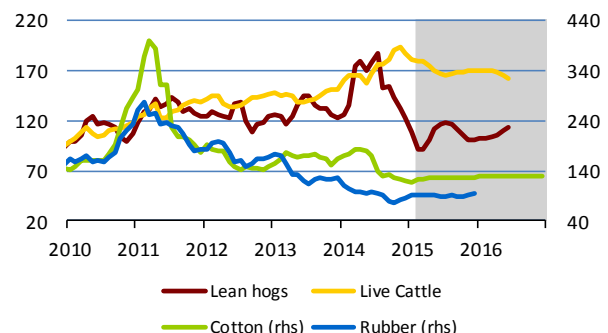
	Wheat	Corn	Rice	Soy
2015	169.3 ↘	194.9 ↘	154.6 ↘	161.5 ↘
2016	178.4 ↘	207.0 ↘	157.5 ↘	160.7 ↘

Metals



	Aluminium	Copper	Nickel
2015	98.8 ↘	154.1 ↘	102.9 ↘
2016	100.9 ↘	151.8 ↘	103.6 ↘

Meat, non-food agricultural commodities



	Lean hogs	Live Cattle	Cotton	Rubber
2015	105.9 ↘	171.3 ↘	125.1 ↘	91.1 ↘
2016	106.1 ↘	167.3 ↘	129.2 ↘	

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.

The crisis and post-crisis experience with Swiss franc loans outside Switzerland¹

A seminar organised by the Swiss National Bank and devoted to a broad range of problems concerning foreign currency loans focused primarily on the macroeconomic aspects and context of this form of lending. Unsurprisingly, the monetary conditions in Switzerland and in the countries where these loans are most widespread, the financial literacy levels of bank clients and the behaviour of banks themselves were identified as the main determinants of this problematic phenomenon.

1 Introduction: The context of CHF-denominated loans

On 20–21 November 2014, the Swiss National Bank held an international seminar called *Foreign Currency Lending in Europe since the Financial Crisis*. Despite its very broad title, the seminar focused primarily on a single world currency – the Swiss franc. The main foreign debtors discussed were those who faced the largest losses, problems in applying policies (monetary, fiscal and regulatory) and international disputes.

It is no surprise, therefore, that most space was devoted to a discussion of the experience of Hungary. A long way behind in second place was Poland, followed by Austria, Romania and Latvia. This country ranking does not fully match the ranking according to non-banking sector debt in francs. Although Hungary has been the clear leader in terms of the ratio of CHF loans to GDP since the start of the millennium, it has ranked third in terms of the absolute amount of loans outstanding at least since 2013. First spot according to this criterion has long been held by Austria, ahead of Poland (in the latter case, however, these loans are mainly old loans which will gradually disappear from the statistics; see section 3 for details); Greece is fourth, followed by the states of the former Yugoslavia. See Chart 1 for details.

Several presentations focused on the broader context of the eurofranc phenomenon in Central and Eastern Europe, for example the total international volume of CHF-denominated assets and the related issue of the foreign currency exposures of the Swiss banking sector (Bénétrix and Lane, 2014). This study concludes that the global financial crisis reduced the aggregate size of the long CHF position outside Switzerland, but that the opposite holds true for developing and post-communist countries. Furthermore, the exposure of the rest of the world to eurofranc instruments is not an isolated specific phenomenon, but is related to investors' overall willingness to buy instruments in world currencies.

Another study presented (Hale et al., 2014) concludes that bank lending in francs, especially mortgages, is in fact running counter to the trend of the last ten years in the area of bond issues, where instruments in the debtor's domestic (non-world) currency have conversely been gaining strength.

2 Monetary conditions

The very first lecture of the seminar was devoted to the effect of the monetary conditions in Switzerland on the attractiveness of loans in francs in eleven Central and Eastern European countries. Two economists from the SNB's research department, Signe Krogstrup and Cédric Tille, presented the results of estimates according to which, unsurprisingly, interest in CHF-denominated debt is not directly related to minor adjustments in SNB monetary policy (the fact that this interest as a whole is driven by the long-standing low interest rates in Switzerland is somewhat factored out, but it is important not to forget this crucial factor in the sea of explanatory variables measuring higher-order effects). Interest in the Swiss franc is strongly affected by global economic and financial developments and risk perceptions, and the rise and fall of such interest among financial institutions is highly correlated with interest in USD. In this respect, the use of CHF or USD as a reference currency for payments and securities in CEE countries differs considerably from the use of the euro in the same region. The degree of use of EUR-denominated instruments is insensitive to economic and monetary developments in the euro area and internationally, exactly as one might expect of a "quasi-domestic" currency that partially performs reserve and transaction functions.

Unfortunately, this study does not distinguish between the use of "deliverable" and "non-deliverable" instruments in CHF, although the Swiss monetary conditions must have fundamentally different effects on these two categories of financial assets. Whereas deliverables must be funded in francs by the buyer, and are therefore directly affected by the availability and price of franc liquidity, the results of the study correspond more to non-deliverables, which are basically speculative transactions/bets using the Swiss price of money and the CHF exchange rate as mere reference variables. It follows from many of the statistics presented by Krogstrup and Tille that elements of uncovered speculation have dominated the issuance of most CHF debt in Southern and Eastern Europe. For example, the share of bank assets (i.e. loans) in francs not covered by franc funding was 80% in Greece, 60% in Bulgaria, Hungary and Austria and over 50% in Croatia and Serbia (data for 2014 Q2).

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Another issue which remained unclear (as stressed, among other things, in the discussion of the presentation) were the determinants of the choice of CHF as the funding currency for investments bearing exchange rate risk in the face of competition from other currencies with similarly low interest rates. As the study does not sufficiently differentiate between financial institutions' speculative CHF positions arising purely from their own trading on world markets (above all classic *carry trades*, where competition from other currencies cannot be overlooked) and uncovered positions stemming from incomplete hedging of exchange rate risk on client loans (as in the well-known case of mortgages in francs, where the Swiss franc started to dominate gradually for specific historical reasons), no clear-cut conclusion can be made regarding the sensitivity of demand for the Swiss currency to exchange rate volatility and other financial risks.

3 Market imperfections and regulation

Probably the most interesting research contribution at the seminar was a study by economists Elisabeth Beckmann and Helmut Stix from Oesterreichische Nationalbank, which discussed the relationship between lending in foreign currencies, including EUR and CHF, in CEE countries and the level of financial literacy (see Beckmann and Stix, 2014). The study is based on a survey of financial literacy in general and of agents' understanding of the risks of exchange rate movements in particular. The survey was conducted in nine Southern and Eastern European countries in 2011. Special attention was paid to persons planning to take out a loan during the next 12 months. The conclusions can be divided into expected ones and surprising ones. One of the expected conclusions is that the subjective attractiveness of foreign currency borrowing decreases with rising financial literacy, especially in the area of exchange rates. Much more difficult to explain is the finding that the measured level of understanding of exchange rate issues is much higher than that consistent with the actual amount of foreign currency loans unsecured by income in the relevant currency. This means that the popularity of foreign currency loans in the countries under review, which has not declined much since the onset of the global financial crisis, cannot be explained primarily by low financial literacy of the population. Although the study does not offer alternative explanatory factors, it does suggest a credible hypothesis, namely that the supply side, i.e. active promotion of such loans by banks, plays a major role. This can only be verified by further research, among other things because the financial literacy of bankers in CEE countries was not investigated in the survey.

Poland has a rather specific position among the CEE countries with sizeable foreign currency lending to households. The Polish zloty did not experience such a marked weakening due to the financial crisis as many other currencies in the region, so defaults on these loans as a result of exchange rate movements were not a primary macroeconomic problem. However, regulatory intervention against the spread of such loans, in particular those denominated in Swiss francs (and euros), was deemed necessary, as the transmission of the central bank's monetary policy was at risk. A representative of the NBP provided a detailed overview of the measures taken by his institution (starting in February 2006) to suppress the non-bank sector's motivation to borrow in foreign currency. These were macroprudential measures aimed at the LTV and DTI ratios of debtors facing exchange rate risk. The measures were generally successful: the amount of new mortgages in currencies other than the zloty, especially CHF, which peaked in 2008, is now negligible. The excessive aggregate risk of a deterioration in loan portfolio quality owing to exchange rate risk was mitigated among other things by restricting the provision of foreign currency mortgages, especially to low-income households.

Almost every discussion of FX loans to households and of the deterioration of their quality after the onset of the global financial crisis uses the example of Hungary. This is natural given the well-known problems with Hungarian mortgages in Swiss francs. Of course, this seminar also paid greatest attention and devoted the largest amount of time to the Hungarian case. Several of the contributions dealt with econometric exercises attempting to integrate foreign currency lending into the broader macroeconomic context, primarily using data on corporate loans (Ongena et al., 2014). However, the currency structure of corporate loans in Hungary differs significantly from that of loans to households; in particular, the Swiss franc plays a secondary role to the euro. In addition, corporate foreign currency loans follow a relatively predictable pattern, rising rapidly in response to a monetary easing concerning the relevant currency (the euro or the franc) and falling in the event of a monetary easing by the MNB. No strong specific features were recorded on the supply side (i.e. among banks) in the case of corporate debt.

As is well known, the crucial problem of the Hungarian economy was unchecked growth in foreign currency mortgages. A detailed presentation by Daniel Pallotai from Magyar Nemzeti Bank (MNB) provided an overview of institutional developments relating to the conduct of Hungarian banks in this market segment.

Among other things, the Hungarian case points to an ambiguous relationship between the global financial crisis and people's willingness to borrow in a foreign currency in a small open economy outside the epicentre of the crisis: the data show that the foreign currency lending boom continued for almost two years after the fall of Lehman Brothers.

Right from the start of the crisis, the situation of Hungarian households with debt in CHF (and to a lesser extent in EUR), coupled with the falling quality of bank loan portfolios, was much more serious than in other countries, mainly because of a marked depreciation of the Hungarian currency. On the other hand, the specific political situation in Hungary associated with the results of the 2010 election (a constitutional

majority for the winning party) enabled, in addition to conventional macroprudential regulation, a series of resolute administrative interventions in the functioning of banks and credit markets starting in that year. Since the summer of 2010, new foreign currency mortgages have been virtually banned in Hungary, while existing foreign currency loans on the balance sheets of Hungarian banks have undergone gradual compulsory conversion into HUF following a series of legislative measures. The MNB is also providing assistance to banks in closing such forced FX positions by offering them participation in tenders for the purchase of the relevant currencies under conditions known in advance (i.e. under significantly reduced exchange rate volatility).

The MNB presentation provided plenty of information on the properties of the supply of foreign currency loans to households in Hungary. On the one hand, examples of very aggressive and imprudent marketing by many banks were given, associated primarily with offers of foreign currency mortgages, and on the other hand, data were presented showing dishonest manipulation of spreads on contractual interest rates and the exchange rate of the forint. This manipulation started to occur on a massive scale at a time when unfavourable exchange rate developments and a rise in non-performing loans began to pose a risk to banks' lending income. The opportunity for manipulation was provided by the ambiguous wording of typical credit terms and conditions, which meant a contractual situation bordering on the illegal. These circumstances enabled the Hungarian authorities to use national and European consumer protection legislation as a legal basis for implementing the forced conversion of FX loans and the option of early repayment. It is probably the disputable conduct of banks (mostly owned by Austrian parent banking groups) in terms of observing consumer rights which explains why no international arbitration case has so far been launched against Hungary due to its non-standard legislation. The government's legislative steps will lead to international banking groups being cautious in further expanding their operations in Hungary. However, as these banks were burnt by the financial crisis in other markets to various degrees as well, it is by no means certain that a more accommodating approach by the Hungarian government would have encouraged qualitatively different conduct.

4 Conclusion: unresolved issues

Standard economic theories and statistical models can only partly explain the increase in the problem of CHF loans in Central Europe. In such cases, it is often useful to first determine the roots and historical development of the phenomenon in question, so that technical tools for deeper analysis can be better chosen. In this respect, the case of the country where CHF-denominated mortgages originated, i.e. Austria, was undeservedly overlooked. The subsequent explosion of interest in the same product in neighbouring Hungary probably cannot be satisfactorily explained without discussing the previous Austrian experience. However, the SNB seminar gave exactly the opposite impression: some of the studies formulated and tested large econometric models without giving due consideration to the institutional context necessary for correct interpretation of the results.

Every observer acquainted with the challenges facing the authorities in Austria, Hungary, Poland, Romania, Croatia and other countries jeopardised by massive debtor insolvency and bank losses connected with poorly secured foreign currency loans to households knows that the quality of statistical estimates and the robustness of the tests used are not the most pressing of these challenges. None of the econometric exercises discovered any new phenomenon or any relationship that was previously unknown. On the contrary, many important issues in the area of institutional economics and political economy raised by the franc's offshore role in many CEE countries were undeservedly left at the periphery of interest. First, somewhat surprisingly for a seminar held at the SNB, no overview was given of the evolution of this central bank's normative views regarding the use of its currency in neighbouring countries. Furthermore, although the problems of the lending banks were addressed to some extent, this only happened in the context of yet another econometric estimate concerning a marginal issue. More specifically, a study was presented on movements in the share prices of the banks involved after they used the CHF swap lines offered by the SNB. The effects of other regulatory steps and other policies on the soundness of these banks remained unexplored. The same was true of the opinions of CEE central banks and supervisory authorities on exchange rate risk assessment in the years when the CHF loan bubble was gradually growing in their jurisdictions. Attempts to compare CHF loans in Europe with similar phenomena outside Europe, e.g. the dollarised countries of Latin America, and the use of the low-interest Japanese yen for similar speculative investments in Asia, were also completely missing.

These and related issues will no doubt be the subject of further studies, for which the seminar served as a mere initial step and source of inspiration.

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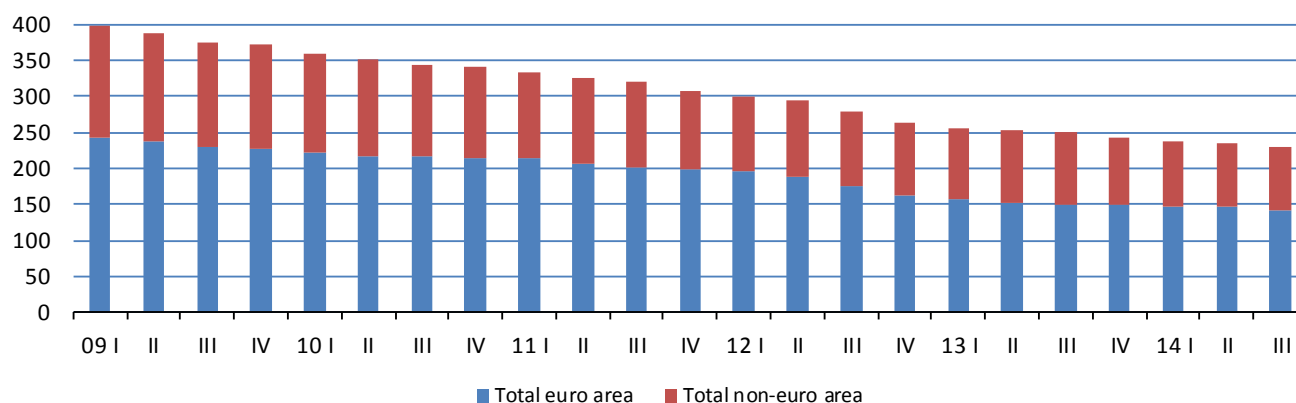
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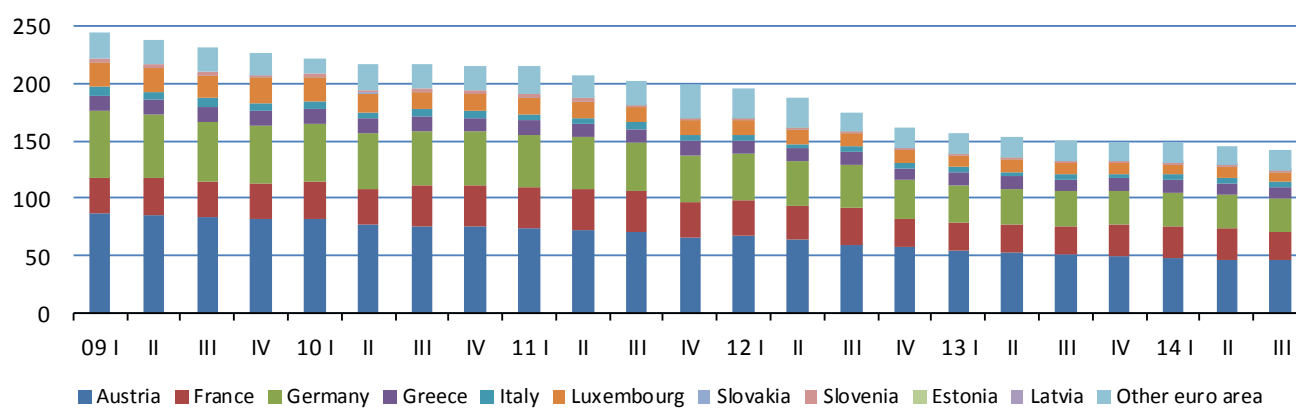
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Chart 1 Swiss franc loans to non-banks in Europe

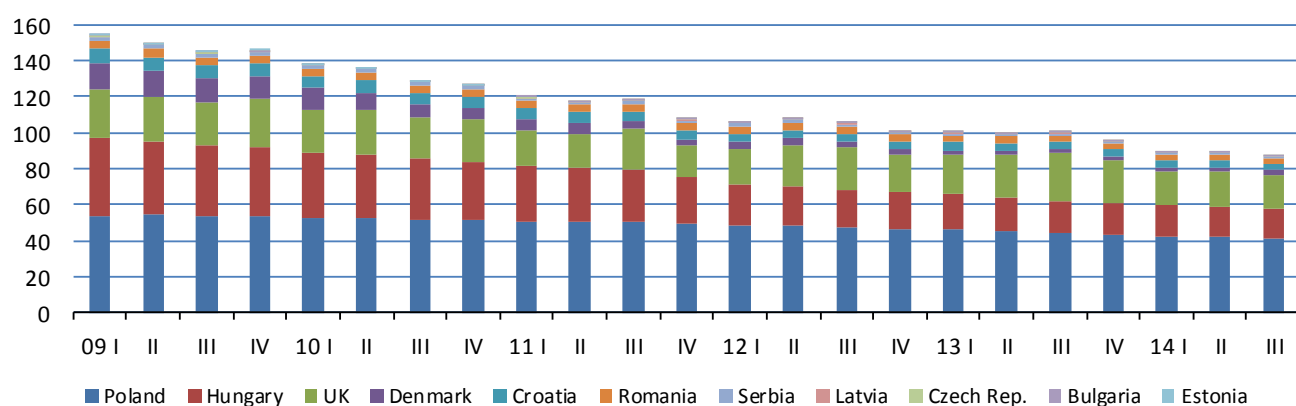
a) Outstanding volume of CHF loans to the non-bank sector



b) CHF loans to non-banks in the euro area



c) CHF loans to non-banks in the non-euro area



Note.: Outstanding volume of CHF loans to the non-bank sector, CHF billions

Source: Swiss National Bank

A1. Change in GDP predictions for 2015

	CF		IMF		OECD		CB / EIU	
EA	0.1	2015/2	-0.1	2015/1	0.0	2014/11	-0.6	2014/12
		2015/1				2014/10		
US	0	2015/2	0.5	2015/1	0.0	2014/11	0.0	2014/12
		2015/1				2014/10		
DE	0.1	2015/2	-0.2	2015/1	-0.4	2014/11	-1.0	2014/12
		2015/1				2014/10		
JP	0.1	2015/2	-0.2	2015/1	-0.3	2014/11	0.6	2015/1
		2015/1				2014/10		
BR	-0.2	2015/2	-1.1	2015/1	0.1	2014/11	0.0	2015/2
		2015/1				2014/10		
RU	-3.2	2015/2	-3.5	2015/1	-1.8	2014/11	0.0	2015/2
		2015/1				2014/10		
IN	-0.7	2015/2	-0.1	2015/1	0.5	2014/11	0.1	2015/2
		2015/1				2014/10		
CN	0	2015/2	-0.3	2015/1	-0.2	2014/11	0.0	2015/2
		2015/1				2014/10		

A2. Change in inflation predictions for 2015

	CF		IMF		OECD		CB/EIU	
EA	-0.2	2015/2	-0.3	2014/10	-0.5	2014/11	-0.4	2014/12
		2015/1				2014/4		
US	-0.4	2015/2	0.5	2014/10	-0.3	2014/11	-0.5	2014/12
		2015/1				2014/4		
DE	-0.4	2015/2	-0.2	2014/10	-0.6	2014/11	-0.4	2014/12
		2015/1				2014/4		
JP	-0.3	2015/2	0.3	2014/10	-0.2	2014/11	-1.4	2015/1
		2015/1				2014/4		
BR	0.1	2015/2	0.4	2014/10	-0.1	2014/11	0.0	2015/2
		2015/1				2014/4		
RU	3.2	2015/2	2.0	2014/10	3.1	2014/11	1.3	2015/2
		2015/1				2014/4		
IN	0.7	2015/2	0.0	2014/10	-0.3	2014/11	0.0	2015/2
		2015/1				2014/4		
CN	-0.1	2015/2	-0.5	2014/10	-0.4	2014/11	0.0	2015/2
		2015/1				2014/4		

A3. List of abbreviations

ABS	asset-backed securities	HICP	harmonised index of consumer prices
BoJ	Bank of Japan	CHF	Swiss franc
BR	Brazil	ICE	Intercontinental Exchange
BRIC	countries of Brazil, Russia, India and China	IFO	Institute for Economic Research
BRL	brazilian real	IFO-BE	IFO Business Expectations
CB-CCI	Conference Board Consumer Confidence Index	IMF	International Monetary Fund
CB-LEII	Conference Board Leading Economic Indicator Index	IN	India
CBOT	Chicago Board of Trade	INR	Indian rupee
CBR	Central Bank of Russia	IRS	Interest Rate swap
CF	Consensus Forecasts	JP	Japan
CN	China	JPY	Japanese yen
CNB	Czech National Bank	LI	leading indicators
CNY	Chinese renminbi	LIBOR	London Interbank Offered Rate
DBB	Deutsche Bundesbank	MER	Ministry of Economic Development (of Russia)
DE	Germany	OECD	Organisation for Economic Co-operation and Development
EA	euro area	OECD-CLI	OECD Composite Leading Indicator
EC	European Commission	PMI	Purchasing Managers' Index
ECB	European Central Bank	PPI	producer price index
EC-CCI	European Commission Consumer Confidence Indicator	RU	Russia
EC-ICI	European Commission Industrial Confidence Indicator	RUB	Russian rouble
EIA	Energy Information Administration	TLTRO	targeted longer-term refinancing operations
EIU	Economist Intelligence Unit	UoM	University of Michigan
EIU	The Economist Intelligence Unit database	UoM-CSI	University of Michigan Consumer Sentiment Index
EU	European Union	US	United States
EUR	the euro	USD	US dollar
EURIBOR	Euro Interbank Offered Rate	WEO	World Economic Outlook
Fed	Federal Reserve System (the US central bank)	WTI	West Texas Intermediate (crude oil used as a benchmark in oil pricing)
FRA	forward rate agreement	ZEW-ES	ZEW Economic Sentiment
GBP	pound sterling		
GDP	gross domestic product		

A4. List of thematic articles published in the GEO

2015

	Issue
The crisis and post-crisis experience with Swiss franc loans outside Switzerland (Alexis Derviz)	2015-2
The effect of oil prices on inflation from a GVAR model perspective (Soňa Benecká and Jan Hošek)	2015-1

2014

	Issue
Applicability of Okun's law to OECD countries and other economies (Oxana Babecká Kucharčuková and Luboš Komárek)	2014-12
Monetary policy normalisation in the USA (Soňa Benecká)	2014-11
Changes in FDI inflows and FDI returns in the Czech Republic and Central European countries (Vladimír Žďárský)	2014-10
Competitiveness and export growth in selected Central European countries (Oxana Babecká Kucharčuková)	2014-9
Developments and the structure of part-time employment by European comparison (Eva Hromádková)	2014-8
The future of natural gas (Jan Hošek)	2014-7
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
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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
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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
International integration of the Chinese stock market (Jan Babecký, Luboš Komárek and Zlatuše Komárková)	2011-1