Globální ekonomický výhled - listopad 2014

Česká národní banka; Sekce měnová a statistiky; Odbor vnějších ekonomických vztahů
2014

GLOBAL ECONOMIC OUTLOOK - NOVEMBER

2014

Monetary and Statistics Department
External Economic Relations Division

CNB CZECH NATIONAL BANK

The November 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 focus our attention on the "normalisation" of monetary policy by the US Fed, i.e. the exit from its monetary stimulus and the switch to standard monetary policy.

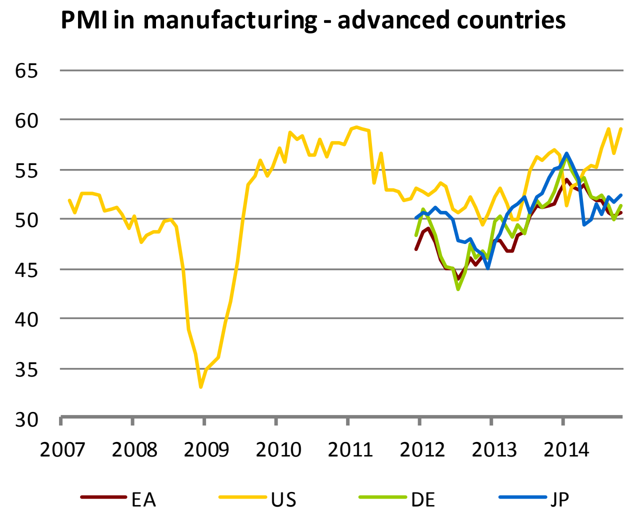
The outlooks for advanced economies continue to show two opposite tendencies. The first indicates continuing prosperity of the US economy, which will show robust GDP growth for the fourth consecutive year and whose prospects are even more favourable. Among the G7 countries, Canada and the UK are also recording solid economic growth. The second tendency consists in gradually worsening economic outlooks for a number of other advanced countries, particularly the economically strong euro area countries such as Germany, France and Italy. Deteriorating outlooks are evident not only in terms of economic growth (including leading indicators), but also in terms of subdued inflation. The outlooks for the Japanese economy are still a cause for some concern, as the optimistic outlook for an economic recovery has not yet materialised. The Bank of Japan responded to this situation by implementing a new monetary stimulus.

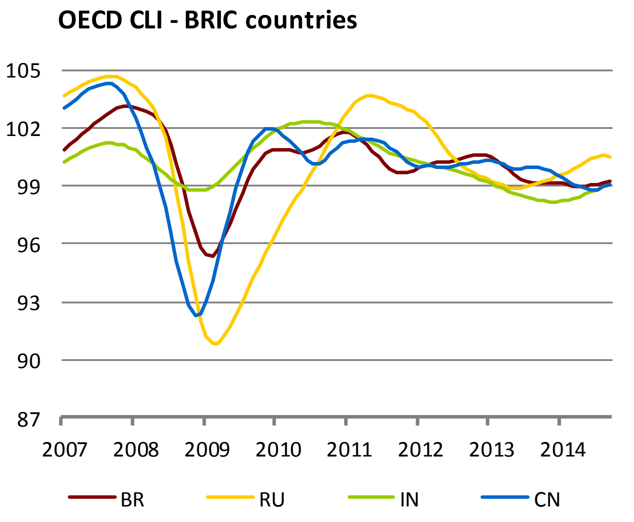
The outlooks for emerging economies, represented by the BRIC countries, remain mixed. Despite some none-too-optimistic news, the Chinese economy is best off, as it will remain able to keep the highest rate of growth (above 7%) amid relatively low inflation. By contrast, Russia is showing the weakest growth of the emerging economies under review. This mainly reflects the sanctions imposed on it by the international community. The Russian economy is thus on the brink of recession in a situation of rising inflation and a steadily depreciating rouble. The macroeconomic situation is similar in Brazil. Its GDP growth rate will remain very low (below 1%) amid fairly high inflation and a weakening real. By contrast, the outlooks for the Indian economy are still mostly positive, with growth expected to increase gradually and the disinflationary trend expected to continue into 2015, when inflation should approach the 6% level from above.

The outlooks for euro area interest rates are very low and there is no sign of them rising before the end of 2015. Rates are being kept down by weak economic growth, the threat of deflation and unconventional instruments aimed at further easing the ECB's monetary policy. In the USA, interest rates might start to increase in a matter of months (roughly in the second half of 2015). According to CF, the US dollar will appreciate against all the monitored currencies over the one-year horizon, except for a modest weakening against the Chinese renminbi.

The outlook of oil prices shifted visibly downwards at the end-2015 forecast horizon and are not expected to exceed USD 90 a barrel at the one-year horizon. However, owing to a stronger dollar, the effects of cheaper oil will be smaller for consumers who do not pay in dollars. The outlooks also suggest a pronounced decline in natural gas prices, which normally lag behind oil prices. However, this decline may be offset by the impacts of a potential escalation of the Russian-Ukrainian conflict. Agricultural commodity markets recorded a decline in prices thanks to a good harvest worldwide, although the current developments and outlook are slightly rising at the end-2015 horizon, particularly for wheat and corn prices. Industrial metals prices also stopped decreasing and their outlooks are stable.

Leading indicators for countries monitored in the GEO



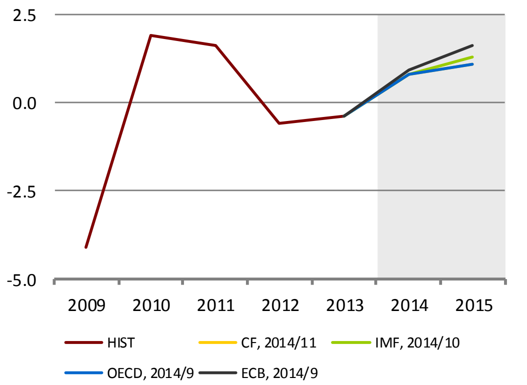


II.1 Euro area

According to Eurostat's flash estimate, euro area GDP rose by 0.2% quarter on quarter in 2014 Q3 (0.1% in Q1). Unlike in the previous quarter, economic growth in Germany was positive (0.1%) and the French economy showed higher-than-expected positive growth of 0.3%. The southern states of the euro area recorded positive growth, except for Italy, whose economy contracted for the second quarter in a row (by 0.1%). The leading indicators in the euro area confirm sluggish growth. For example, the PMI in manufacturing in October recouped its September decline (thanks to a strongly positive contribution from Germany) but remains only slightly above the level signalling stagnation (50.6). Within this index, new orders were particularly worrisome, falling for the second consecutive month. According to the November CF, this year's outlook for GDP growth remains unchanged from the previous month (0.8%), but the forecast for 2015 was revised slightly downwards (to 1.1%). In November, the ECB published the results of the Survey of Professional Forecasters (SPF). The growth outlook shifted downwards compared to the survey conducted three months ago and is roughly in line with the November CF.

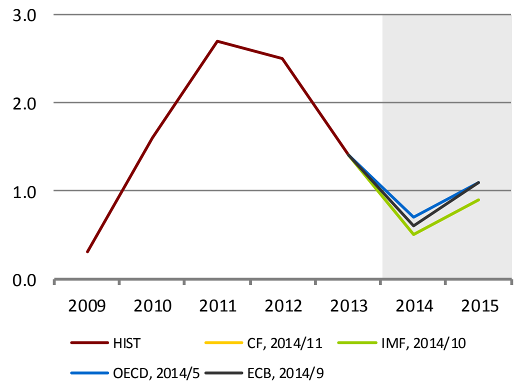
HICP inflation in the euro area rose to 0.4% in October (from 0.3% in September). This modest rise was due to higher services and food price inflation. Based on the November CF, the inflation outlook for this year is the same as in October (0.5%) and that for next year has shifted slightly downwards (to 0.9%). The SPF forecasters expect lower inflation at the forecast horizon than in the previous survey: 0.5% this year, increasing to 1% and 1.4% respectively in the next two years. SPF-based long-term inflation expectations also shifted slightly downwards to 1.8% in 2019. At the end of October, the ECB launched a covered bond purchase programme (CBPP3). By the end of the year it is also expected to start purchasing asset-backed securities (ABSs). The ECB expects these programmes, together with targeted longer-term refinancing operations (TLTROs), to help increase its balance sheet to the level it had at the beginning of 2012.

GDP growth, %



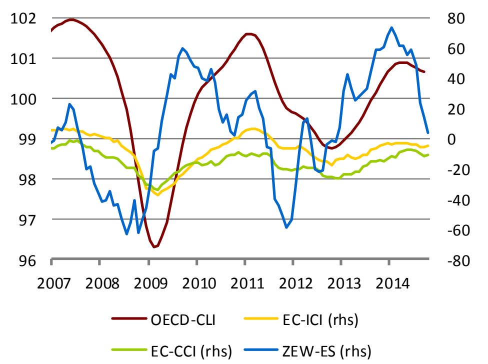
	CF	IMF	OECD	ECB
2014	0.8	0.8	0.8	0.9
2015	1.1	1.3	1.1	1.6

Inflation, %



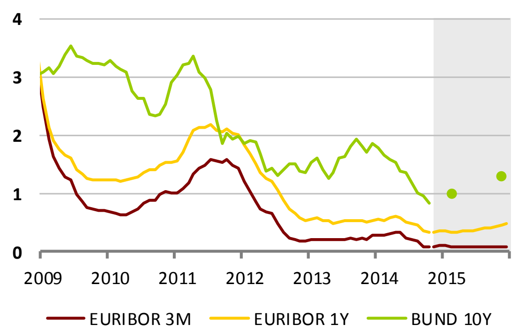
	CF	IMF	OECD	ECB
2014	0.5	0.5	0.7	0.6
2015	0.9	0.9	1.1	1.1

Leading indicators



	OECD-CLI	EC-ICI	EC-CCI	ZEW-ES
8/14	100.7	-5.3	-10.0	23.7
9/14	100.7	-5.5	-11.4	14.20
10/14		-5.1	-11.1	4.10

Interest Rates

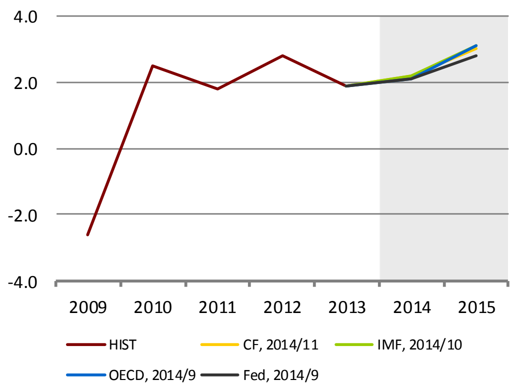


	10/14	11/14	06/15	12/15
3M EURIBOR	0.08	0.08	0.08	0.09
1Y EURIBOR	0.34	0.34	0.37	0.50
	10/14	02/15	11/15	
10Y Bund	0.83	1.0	1.3	

II.2 United States

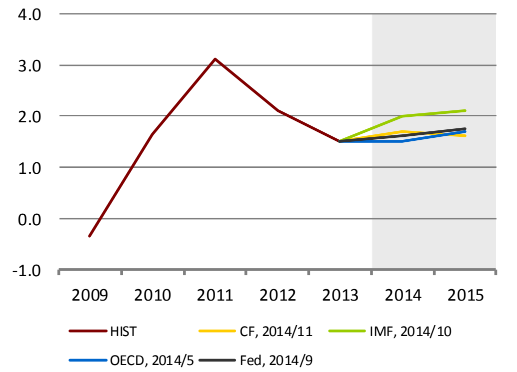
Compared to the other advanced economies, GDP maintained a fast rate of growth in the USA in 2014 Q3, rising by 3.6% compared to Q2 in annual terms. All components of GDP, including government expenditure, contributed to the growth. The outlooks also remain positive for next year, when GDP growth is expected to pick up further by about 1 pp. Industrial production also gathered strength in Q3, with a further increase suggested by the PMI in manufacturing leading indicator, which improved significantly in October. The leading indicators of consumption also performed well in October. Retail sales and household consumption will additionally be favourably affected by an improving labour market situation. The unemployment rate dropped again to 5.8% in October. Current consumer price inflation does not pose any marked threat to financial stability (1.8% year on year in Q3). The October CF therefore slightly reduced its inflation estimate for this year and the next. The Fed is thus not yet under pressure to tighten monetary policy quickly. At its October meeting the Fed announced the termination of its bond and MBS purchases as expected. The liquidity provided by the Fed has thus stabilised at present. According to its statement, the Fed will start to reduce it some time after the first key interest rate increase. Based on the outlooks derived from market yield curves, this increase is expected to occur roughly in mid-2015. The widening gap between the Fed's monetary policy course on the one hand and the ECB's on the other led to further appreciation of the dollar against the euro to USD 1.24 at the start of November. According to CF, the dollar is expected to appreciate by a further 3.3% at the one-year horizon, to USD 1.20.

GDP growth, %



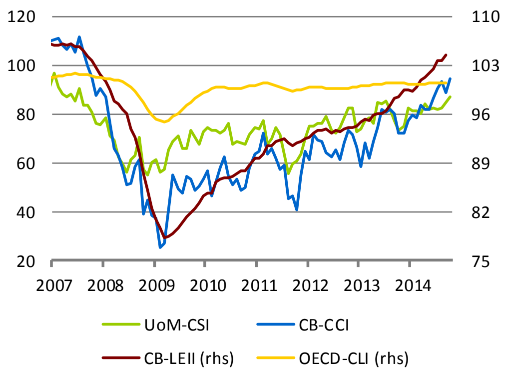
	CF	IMF	OECD	Fed
2014	2.2	2.2	2.1	2.1
2015	3.0	3.1	3.1	2.8

Inflation, %



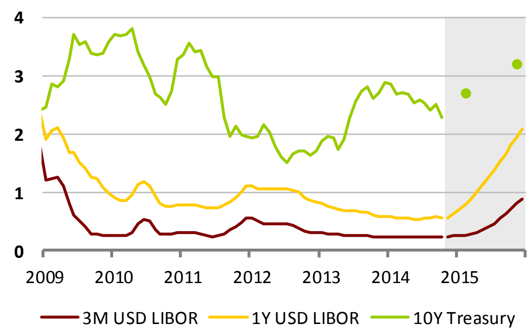
	CF	IMF	OECD	Fed
2014	1.7	2.0	1.5	1.6
2015	1.6	2.1	1.7	1.8

Leading indicators



	CB-LEII	OECD-CLI	UoM-CSI	CB-CCI
8/14	103.6	100.4	82.5	93.4
9/14	104.4	100.4	84.6	89.0
10/14			86.9	94.5

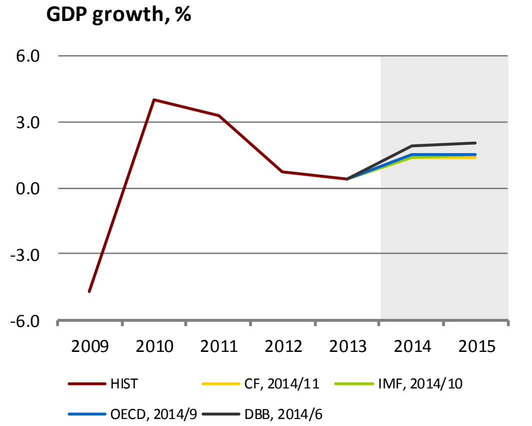
Interest Rates



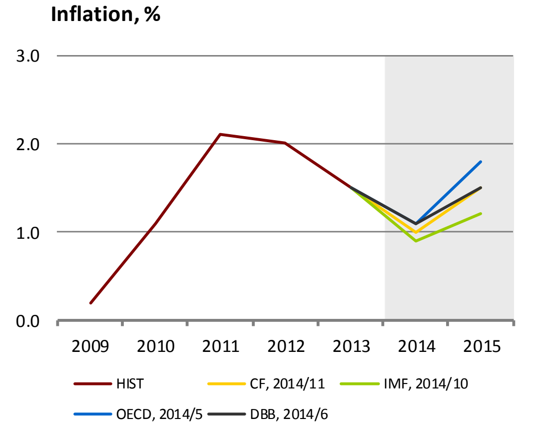
	10/14	11/14	06/15	12/15
3M USD LIBOR	0.23	0.23	0.41	0.88
1Y USD LIBOR	0.55	0.56	1.25	2.08
	10/14	02/15	11/15	
10Y Treasury	2.29	2.7	3.2	

II.3 Germany

The quarterly growth of the German economy remained low in 2014 Q3 (0.1%) according to the flash estimate, following a modest decline (of 0.1%) in Q2. Annual growth slowed from 1.4% to 1.2%. According to the November CF, the weak economic growth will continue into Q4. The low growth is mostly due to an economic downturn in some major economies and to the Ukrainian crisis. The November CF expects GDP growth of 1.4% in both 2014 and 2015. The estimates of the German government and economic institutes are around 1.2% for next year. The predictions of the panel of economic advisers to the German government are even lower at 1%. Weak growth is also suggested by the leading indicators, which mostly decreased or stayed flat at low levels. Inflation stayed at 0.8% for the fourth consecutive month. According to CF, inflation is expected to reach 1% in 2014 as a whole and accelerate to 1.5% in 2015.



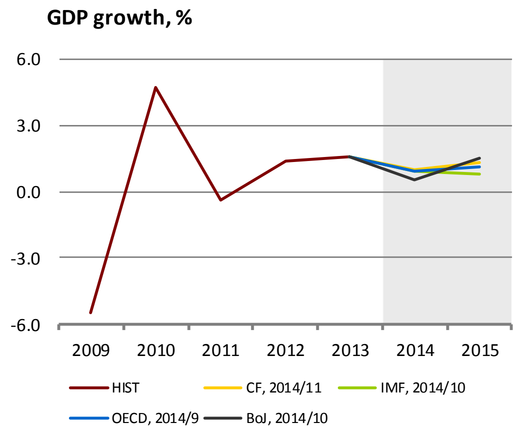
	CF	IMF	OECD	DBB
2014	1.4	1.4	1.5	1.9
2015	1.4	1.5	1.5	2.0



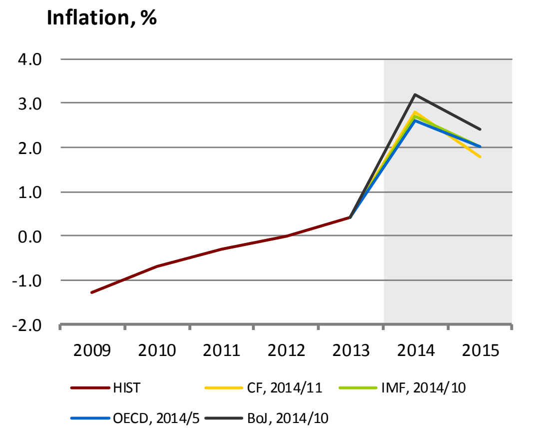
	CF	IMF	OECD	DBB
2014	1.0	0.9	1.1	1.1
2015	1.5	1.2	1.8	1.5

II.4 Japan

On 31 October, the BoJ surprised the global financial markets by deciding to expand its monetary stimulus. The BoJ announced it would increase its asset purchases at an annual pace of JPY 80 trillion, tripling its purchases on real estate trust markets and expanding its government bond purchases. The bank decided to ease monetary policy for the first time in 18 months in an effort to hit the inflation target. According to the BoJ governor, however, this is not an admission that the economic recovery plan has failed. The Nikkei 225 jumped to its highest level since 2007, while the yen depreciated sharply against the dollar. Demand for risky assets should be fostered by purchases focused on Exchange-traded funds (ETFs) and Real Estate Investment Trusts (REITs). The decision by the Government Pension Investment Fund (GPIF) to increase the proportion of Japanese and foreign shares in its overall portfolio from 12% to 25% will act in the same direction. While sentiment on the Japanese financial markets rose sharply, household confidence (and consumption) dropped to a six-month low. CF lowered its GDP growth outlook for 2014 by 0.1 pp and increased that for 2015 by 0.1 pp, while leaving the inflation forecast unchanged.



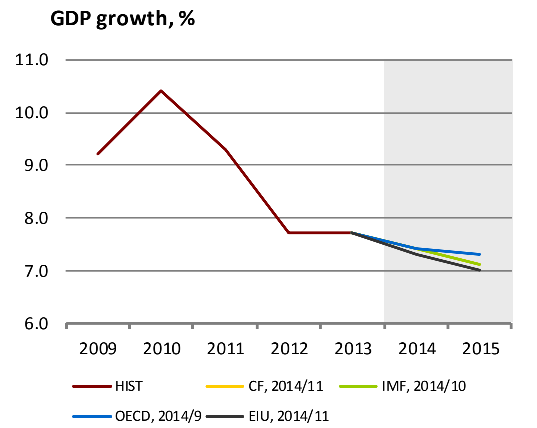
	CF	IMF	OECD	BoJ
2014	1.0	0.9	0.9	0.5
2015	1.3	0.8	1.1	1.5



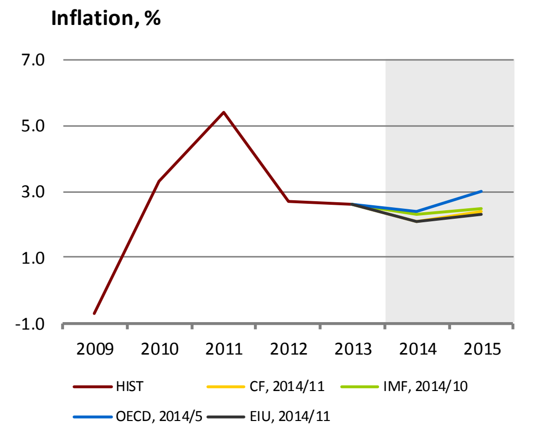
	CF	IMF	OECD	BoJ
2014	2.8	2.7	2.6	3.2
2015	1.8	2.0	2.0	2.4

III.1 China

Although the published Chinese GDP growth estimate for Q3 was higher than expected, annual GDP growth weakened by 0.2 pp compared to the previous quarter, to 7.3%. The slowdown of the Chinese economy is confirmed by short-term indicators. The Chinese PMI was only slightly above the 50-point level and industrial production growth slowed to 7.7%. Overall economic growth this year is expected to be the lowest since 1990. In November, Chinese government officials discussed lowering the GDP growth target for next year. According to the October Bloomberg survey, economists estimate the target growth in 2015 at around 7%. According to the new CF and EIU outlooks, growth will remain slightly below the target this year (7.3%–7.4%, as against the target of 7.5%). The new EC outlook also expects growth of just 7.3% this year. The new outlooks for 2015 expect the Chinese economy to slow further, with GDP growth not exceeding 7.1%. Inflation will stay in the range of 2.1%–2.4% this year and the next according to CF and the EIU.



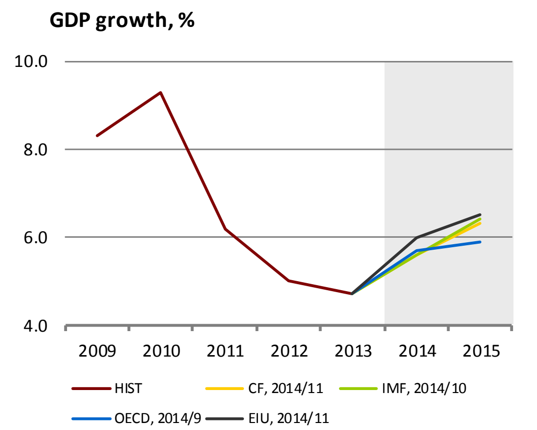
	CF	IMF	OECD	EIU
2014	7.4	7.4	7.4	7.3
2015	7.1	7.1	7.3	7.0



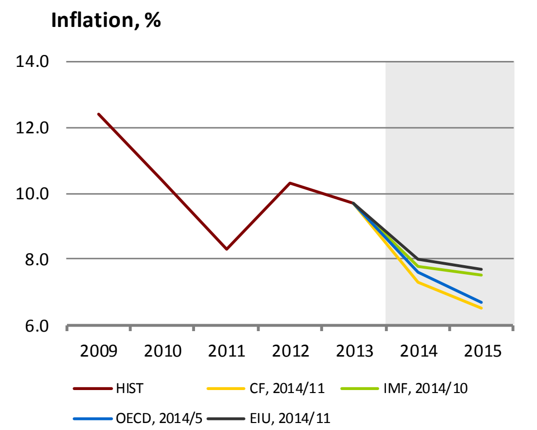
	CF	IMF	OECD	EIU
2014	2.1	2.3	2.4	2.1
2015	2.4	2.5	3.0	2.3

III.2 India

Consumer price inflation in India continued falling to 5.5% in October, its lowest level since January 2012. The central bank is thus now considering whether the easing of inflation pressures is already allowing it to cut interest rates and thereby stimulate domestic demand. A recovery in industrial production, whose annual growth rate rose to 2.5% in September, is more good news. In addition, the PMI in manufacturing indicates growth for October as well. To reduce the public finance deficit, the government made use of the falling oil prices on global markets in October, abolishing subsidies on diesel and raising the administered price of natural gas by one-third. The October CF left its outlook for Indian GDP growth unchanged, but lowered the inflation outlook by 0.4 pp for this fiscal year and by 0.3 pp for the next. The EIU left its forecast for the Indian economy at the September levels.



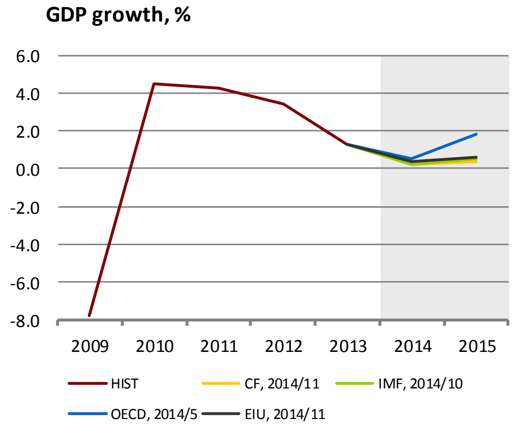
	CF	IMF	OECD	EIU
2014	5.6	5.6	5.7	6.0
2015	6.3	6.4	5.9	6.5



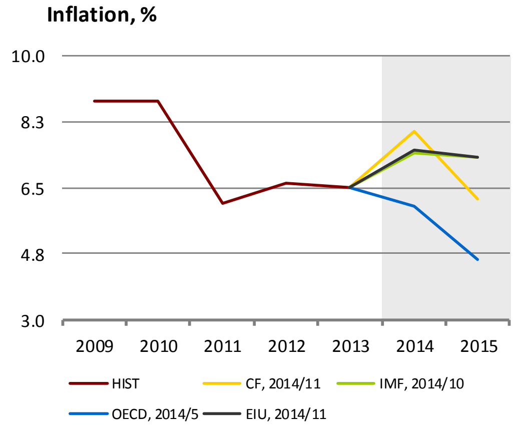
	CF	IMF	OECD	EIU
2014	7.3	7.8	7.6	8.0
2015	6.5	7.5	6.7	7.7

III.3 Russia

At the end of October, the Russian central bank (CBR) raised its key interest rate to 9.5%, and on 10 November it announced a change to the exchange rate mechanism and the termination of regular interventions to keep the rouble within the admissible range against the currency basket (USD, EUR). However, the rouble kept depreciating after these changes. In November, the CBR published Guidelines for the Single State Monetary Policy in 2015 and for 2016 and 2017. According to the Guidelines, monetary policy will be conducted within an inflation targeting regime with the objective to reduce inflation to 4% in 2017 and then keep it close to this level. CF and the EIU expect consumer price inflation of 7.5%–8.0% this year amid almost zero GDP growth (0.2%–0.4%). Economic growth is expected to strengthen slightly next year (to 0.4%–0.6%), while inflation is expected to slow to 6.2%–7.3%.



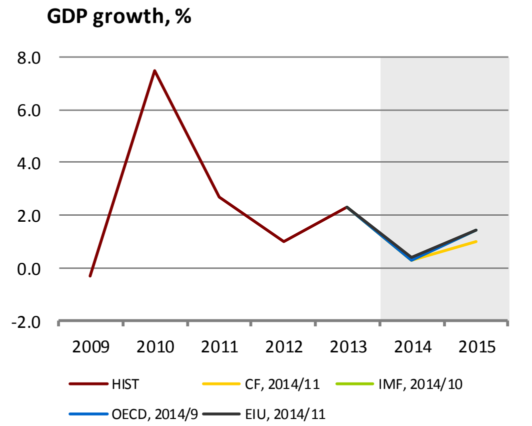
	CF	IMF	OECD	EIU
2014	0.2	0.2	0.5	0.4
2015	0.4	0.5	1.8	0.6



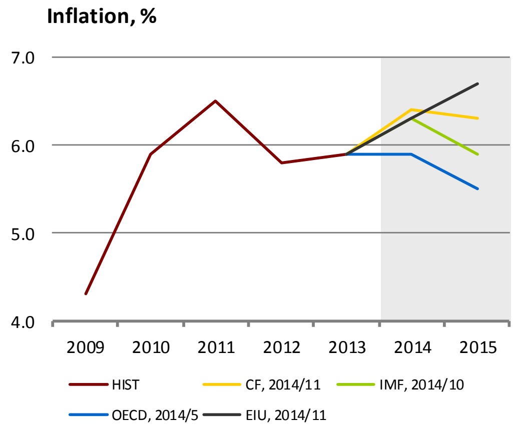
	CF	IMF	OECD	EIU
2014	8.0	7.4	6.0	7.5
2015	6.2	7.3	4.6	7.3

III.4 Brazil

The incumbent president Dilma Rousseff won the Brazilian presidential elections. She faces the difficult task of boosting the country's minimal economic growth, reducing the public finance deficit and taming inflation. By choosing a new economic team, she will try to restore the confidence of the markets, which are worried that she will continue her policy of high government expenditure. Inflation in Brazil edged down to 6.6% in October, but is still above the limit of the tolerance band set by the central bank, which raised the interest rate to 11.25% at the end of October (the fourth hike this year). The poor condition of the Brazilian economy is also evidenced by industrial production, which dropped again year on year in September (by 2.1%) but also fell unexpectedly compared to the previous month (by 0.2%). CF decreased its outlook for economic growth in Brazil by 0.1 pp for this year and the next and increased its inflation prediction by 0.1 pp for both years. The EIU's forecasts were unchanged.



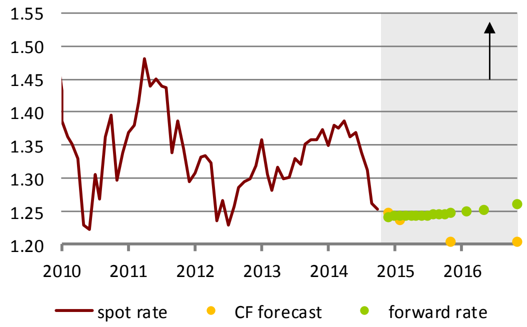
	CF	IMF	OECD	EIU
2014	0.3	0.3	0.3	0.4
2015	1.0	1.4	1.4	1.4



	CF	IMF	OECD	EIU
2014	6.4	6.3	5.9	6.3
2015	6.3	5.9	5.5	6.7

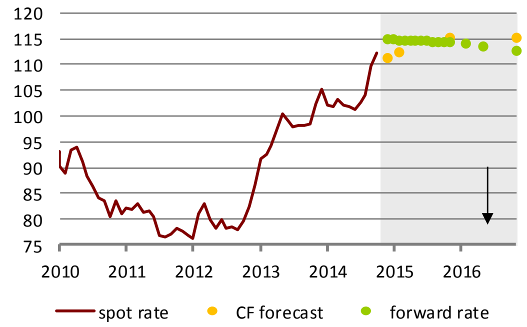
IV. Outlook of exchange rates vis-à-vis the US dollar

THE EURO



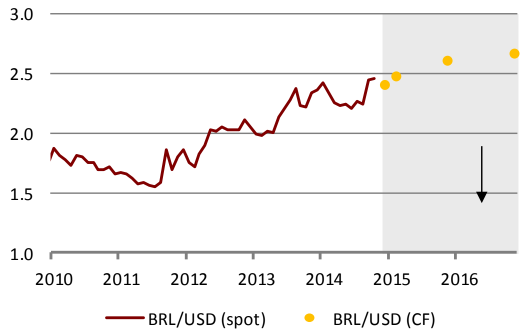
	10/11/14	12/14	02/15	11/15	11/16
spot rate	1.244				
CF forecast		1.249	1.238	1.204	1.204
forward rate		1.242	1.243	1.247	1.262

THE JAPANESE YEN



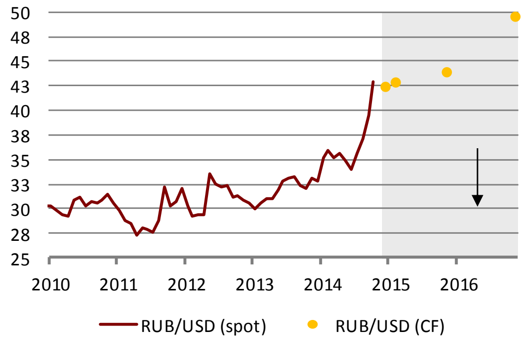
	10/11/14	12/14	02/15	11/15	11/16
spot rate	114.70				
CF forecast		111.20	112.30	115.10	115.10
forward rate		114.84	114.74	114.25	112.52

THE BRAZILIAN REAL



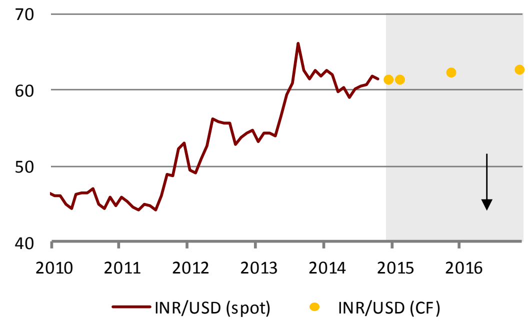
	10/11/14	12/14	02/15	11/15	11/16
spot rate	2.54				
CF forecast		2.40	2.47	2.61	2.66

THE RUSSIAN ROUBLE



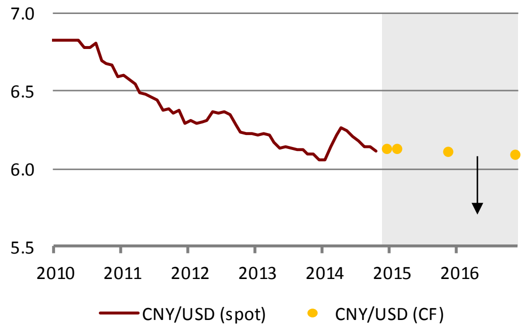
	10/11/14	12/14	02/15	11/15	11/16
spot rate	45.66				
CF forecast		42.41	42.84	43.83	49.58

THE INDIAN RUPIE



	10/11/14	12/14	02/15	11/15	11/16
spot rate	61.47				
CF forecast		61.31	61.39	62.34	62.60

THE CHINESE RENMINBI



	10/11/14	12/14	02/15	11/15	11/16
spot rate	6.12				
CF forecast		6.13	6.13	6.11	6.09

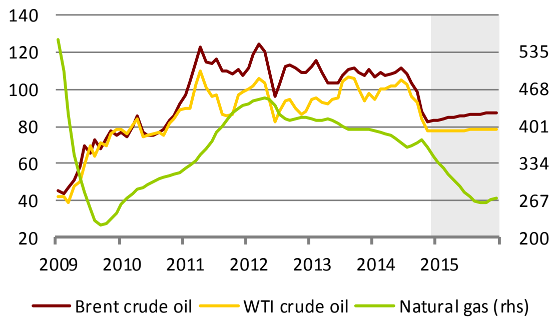
Arrow indicates currency appreciation against US dollar. Exchange rates as of last day of month. Forward rate does not represent outlook; it is based on covered interest parity, i.e. currency of country with higher interest rate is depreciating. Forward rate represents current (as of cut-off date) possibility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

V.1 Oil and natural gas

The Brent crude oil price stabilised close to USD 85 a barrel (bbl) in the second half of October after a previous strong decline. However, the downward trend renewed at the start of November, and in the middle of the month the price fell below USD 80 bbl for the first time since September 2010. The WTI price fell below USD 75 bbl. The reasons have long been the same: rapid extraction growth (especially in the USA), weak demand growth, the appreciating US dollar and the declared unwillingness of Saudi Arabia and other OPEC countries to cut extraction. Oil producers hedging against falling oil prices by buying options are now exercising these options to a larger extent, further accelerating the price decline. By contrast, speculative futures trades (according to an OPEC report) are no longer reducing the Brent price, as net long positions rose by almost 50% from their record low in September. This means investors expected a floor of below USD 85 bbl. By contrast, speculative net long positions in WTI continued to decline in October, as money managers expect the price of US light crude to fall even further given the current narrow Brent-WTI spread.

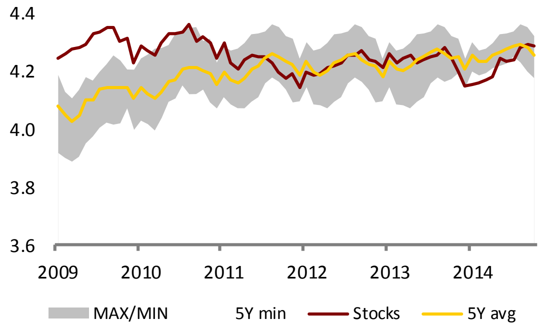
Prices of long-term contracts for Russian natural gas (at the German border) have so far fallen only slightly, but should also reflect the marked fall in oil prices with a lag of roughly six months. Spot prices of natural gas in Europe rose in late September despite rising stocks and have been virtually flat since then. They remain at higher levels on concerns about a drop in Russian gas supplies and the start of the winter heating season. Conversely, market gas prices in the USA decreased, as unusually warm weather and strong extraction allowed stocks to be replenished faster than expected.

OUTLOOK FOR PRICES OF OIL AND NATURAL GAS

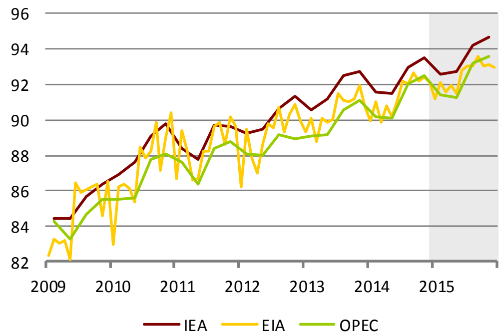


	Brent	WTI	Natural gas
2014	-6.76	-3.39	-7.21
2015	-15.22	-17.54	-22.83

TOTAL STOCKS OF OIL AND OIL PRODUCTS IN OECD

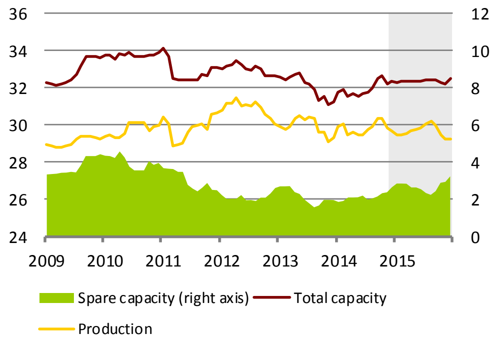


GLOBAL CONSUMPTION OF OIL AND OIL PRODUCTS



	IEA	EIA	OPEC
2014	0.71	0.99	1.33
2015	1.22	1.22	1.29

PRODUCTION, TOTAL AND SPARE CAPACITY IN OPEC COUNTRIES



	Production	Total capacity	Spare capacity
2014	-0.34	-0.28	0.47
2015	-0.52	1.24	25.80

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

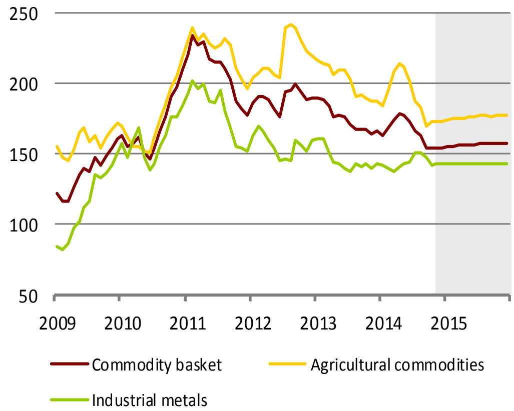
V.2 Other commodities

The non-energy commodity price index fell slightly further in October, mainly due to a further decline in the industrial metals index, which remained under pressure from the strong dollar and weak demand (mainly from Chinese industry). Prices of most food commodities have now stabilised, and some rose modestly. An increase, albeit only slight, was recorded by all indices in the first half of November.

Wet weather in the USA hampered the corn and soy harvest there, and prices were boosted by strong export demand due to the previous price decline. The downward trend in corn and soy prices halted in the second half of September, and prices went up in October. Bad weather also hindered the harvest in Russia and Ukraine, further contributing to the growth in grain prices. Rice prices were the only item to continue falling in the past period. The price of sugar surged in late September/early October due to drought in Brazil and to rising production of ethanol in that country. Prices of coffee went up as well. Pork prices dropped sharply again in mid-October and have been flat since then, although a further sharp fall is expected. By contrast, beef prices rose to another historical high in October, but are expected to start falling in early 2015. Cotton prices were flat in October and the price of rubber also remained close to the lows observed in late 2008.

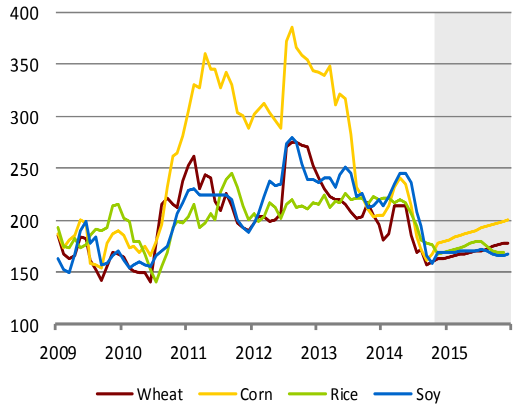
As regards industrial metals, only the price of aluminium rose in October, reversing its September decline. After previously falling, the price of copper was flat. The price of nickel fell sharply in September and October. The ban on exports of nickel from Indonesia remains in force, but the previous price increase led to growth in exports from the Philippines. The price of tin stopped falling, and prices of zinc and lead were flat. The price of steel declined at the start of November after being flat in September and October. The iron ore price dropped as well.

PRICES OF NON-ENERGY COMMODITIES



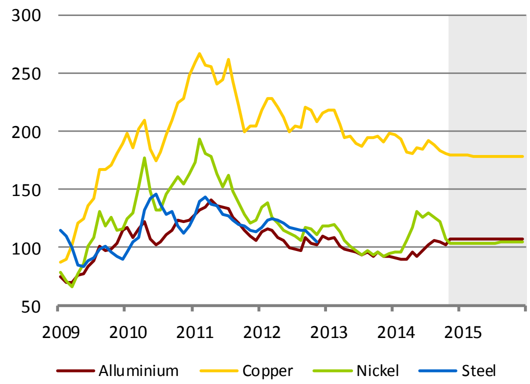
	Overall	Agricultural	Industrial
2014	-5.5	-6.0	-1.1
2015	-5.1	-7.0	-0.3

FOOD COMMODITIES



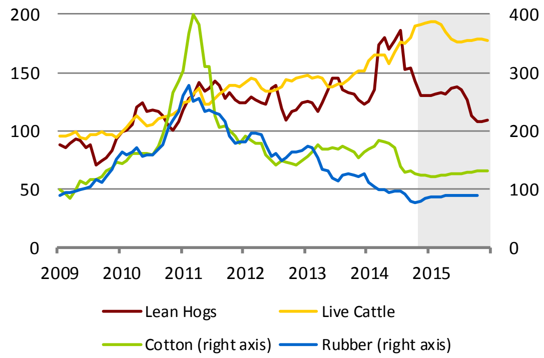
	Wheat	Corn	Rice	Soy
2014	-15.4	-28.6	-10.1	-11.5
2015	-5.8	-3.5	-12.0	-17.5

METALS



	Aluminium	Copper	Nickel
2014	1.6	-6.6	11.6
2015	8.6	-3.7	-8.6

MEAT, NON-FOOD AGRICULTURAL COMMODITIES



	Lean hogs	Live Cattle	Cotton	Rubber
2014	18.8	20.1	-8.1	-31.8
2015	-19.3	4.8	-16.8	-4.1

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.

Monetary policy normalisation in the USA[1]

This article examines the biggest challenge facing the US Federal Reserve (Fed) – the exit from its monetary stimulus and the return to standard monetary policy. Monetary policy will be normalised within a flexible framework taking into account how the unconventional tools have changed the functioning of the US financial market and its response to central bank communication. The exit from zero rates will be the first step towards tightening monetary policy regardless of the current asset portfolio. New money market instruments have been introduced to ensure a smooth and successful exit, and forward guidance will also play a stabilising role as an instrument for anchoring expectations about short-term rates. The portfolio reduction process will start some time after the exit. Further swings on the markets cannot be ruled out, but the central bank has little way of predicting those.

The Fed's unconventional tools and the choice of exit strategy

The Fed started cutting interest rates in autumn 2007, when the US mortgage market crisis began to turn into a crisis engulfing the entire financial system and spilling over to other countries. By late 2008, the key federal funds rate (FFR) had been reduced to its effective lower bound, i.e. it was being allowed to fluctuate within a range of 0–0.25%. The room for easing the monetary conditions by lowering short-term interest rates had thus been exhausted and in the years that followed the Fed started using unconventional tools. They were originally intended to support the functioning of the financial system, but the slowdown of the US economy meant that they had to be continued. The Fed's unconventional tools can be divided generally into:

1) Tools affecting the central bank's balance sheet (quantitative easing, QE), in particular three large-scale asset purchase (LSAP) programmes focused on various assets (mainly government bonds and mortgage bonds) and a maturity extension programme for bonds held by the Fed (Operation Twist). The first two LSAP programmes each had fixed total asset purchases, whereas the last one – LSAP III – had a fixed monthly size. The Fed has been reducing the monthly amounts since January 2014 and announced the discontinuation of the programme at the end of October 2014.
2) Communication tools ("forward guidance") – the publication of information on the future path of rates in order to stabilise financial market expectations and thereby affect the slope of the yield curve.

A whole range of articles have studied the impacts of the Fed's QE programme. Their conclusions suggest that QE has had some effect on the financial markets (for example Glick & Leduc, 2012), but the views regarding its impact on the US economy as a whole are mixed (Weale & Wieladek, 2014). Either way, the economic situation in the USA has been improving steadily in recent years, and it was this improvement that led to the first considerations about tapering the monetary stimulus. When Ben Bernanke, chairman of the Fed's Board of Governors, mentioned this possibility for the first time in May 2013, financial markets around the world were hit by a wave of sell-offs and panic (a "taper tantrum"). Hardest hit were the "fragile" markets of Brazil, India, Indonesia, South Africa and Turkey, which were suffering from twin (current account and fiscal) deficits. The worrying performance and rising external and internal imbalances of these economies led to a revision of expected revenues by investors and a reversal in capital flows.

The actual tapering of asset purchases by the Fed a year later caused no panic. It was clear, however, that the financial markets' reaction to changes in monetary policy was to some extent unpredictable. When subsequently planning the switch to standard monetary policy, the Fed deemed it necessary to opt for a transparent strategy. Given the Fed's dual statutory mandate of maximum employment and price stability, this was the most effective possible approach.

The Fed had two exit strategy options: (i) to discontinue unconventional measures in the first step, i.e. first reduce its asset holdings and then raise rates, or (ii) to raise rates regardless of the current portfolio. Given the Fed's dual mandate and the USA's specific position as a major financial centre, option (ii) was chosen. This strategy will probably make it possible to create more monetary policy room, to better control the slope of the yield curve, and to return to a normally functioning money market. In addition, ceasing reinvestments before raising the rate might complicate communication and indicate a tightening of the conditions without the FOMC meaning to do so. On the other hand, distortions will persist on the bond markets and rising interest expenses will affect the central bank's finances.

The first official exit document had been issued in June 2011, but the new conditions (higher excess reserves, a larger and more complex portfolio with longer maturity, etc.) and the much stronger market response to the Fed's measures necessitated a gradual revision. The latest update of the *Policy*

[1] Written by Soňa Benecká (Sona.Benecka@cnb.cz). The views expressed in this article are those of the author and do not necessarily reflect the official position of the Czech National Bank. The exit from unconventional monetary policy tools was analysed on a wider level in the September Central Bank Monitoring (available here), whereas this article deals with the Fed's return to standard monetary policy in more detail.

Normalization Principles and Plans was published in September 2014. The exit principles can be summarised as follows:

- The timing and pace of policy normalization must support the dual mandate. There is thus no fixed time schedule, and adjustments can be made in response to the current economic and financial market situation (flexibility is preserved).
- Of key importance is the return to monetary policy functioning via the key short-term rate and the normalisation of money markets. The exit from zero rates will therefore be the first step towards tightening policy. Given the current economic conditions, the markets expect rates to be raised as early as 2015.

The asset portfolio created by the LSAPs will be reduced in a gradual and predictable manner some time after the exit from zero rates.

The exit is a challenge for a central bank with a balance sheet total of USD 4.5 billion and the largest financial market in the world. To ensure a smooth and successful exit, the Fed has introduced new money market instruments and tested its control of the key market rate, which cannot be kept fixed in the new conditions. Central bank communication will play a similar role. Let's now examine these two parts of the normalisation process.

Part 1: New money market instruments and the exit from zero rates

As in the pre-crisis period, standard monetary policy functioning after the exit will be based on the money market, i.e. the overnight liquidity provision/deposit market, and on its key market rate, the federal funds rate (see Box 1). In recent years this market has been strongly affected by asset purchases by the Fed. The LSAPs have increased the Fed's reserves (see Chart 1). Money market funds, which – unlike banks – did not have the option of remunerated reserve balances, were hardest hit. Some foreign banks were able to profit from this situation by obtaining liquidity from money market funds at minimal interest and receiving interest on excess reserves from the Fed virtually risk-free.

Box 1: An overview of overnight liquidity provision/deposit rates in the USA

The federal funds rate (FFR) is the rate at which depository institutions actively trade balances held at the Federal Reserve with each other (the effective FFR). In the pre-crisis period, the Fed set a target FFR achieved through open market operations (OMOs) as its main monetary policy tool. These OMOs took the form of reverse repos in case of temporary need or securities transactions in case of rising money supply.

The rate of interest on excess reserves (IOER) is the rate that the Fed pays to deposit institutions on their reserve balances. This facility was introduced in 2008 in order to increase the Fed's control of money market rates. It stands at 0.25% at present.

The overnight reverse repo facility (ON RRP) rate is a fixed rate at which the central bank sells assets to selected entities with an agreement to repurchase them in the future. Unlike the IOER, the ON RRP is available – in addition to banks and primary dealers – to money market funds (the biggest recipients) and to government-sponsored enterprises (GSEs – Fannie Mae, Freddie Mac, etc.). This facility has been tested since September 2013 and its size and rate have gradually been adjusted.

The Fed responded to this situation by introducing reverse repo operations in September 2013. Money market funds are the biggest clients of these operations. The reverse repos became so popular that they gave rise to concerns about whether the Fed was going to partially substitute for the money market. A ceiling was therefore set on the total size of the operations (USD 300 billion). On the other hand, following their introduction the Fed's control of the market rate improved and the opportunities for arbitration shrank. There is no longer any risk of secured and unsecured rates turning negative, because safe assets can be obtained on the market (although with no possibility of selling them on).

The ON RRP rate is thus the floor for overnight liquidity provision/deposit market rates (see Chart 2). By contrast, the IOER is above the market FFR. When the exit occurs, the IOER should thus drive the effective FFR upwards, while the ON RRP will only play a role in maintaining the band. Reverse repos will only be a supplementary facility and will be abandoned when it becomes no longer necessary to control the FFR, as there are concerns that if financial tensions arise market participants may switch en masse to reverse repos and exacerbate the market financing problems. Normal money market functioning will also be fostered by term deposits for banks and term reverse repos for a wider range of participants (as from September 2014).

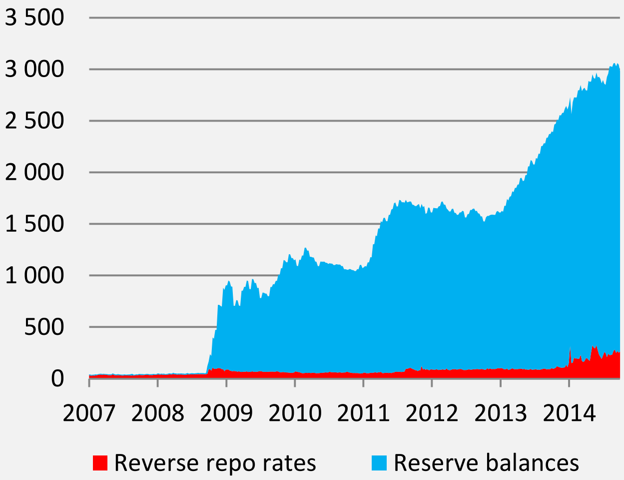


Chart 1: Fed liquidity (USD billions)

Source: Datastream

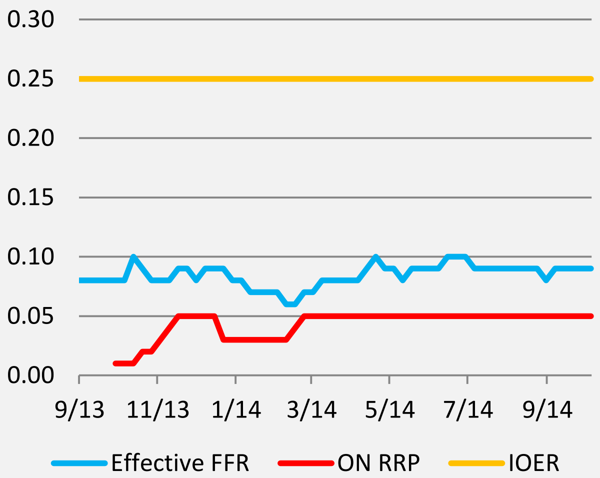


Chart 2: O/N market rates

Source: Datastream, Fed

Part 2: Fed communication

Before 2007 the Fed's communication had been relatively limited, but the financial crisis and the introduction of new measures could not be left without comment and explanation. So, in December 2008, after the zero bound had been reached, the Fed's statement for the first time mentioned a prolonged period of low rates ("forward guidance"). The first press conference with questions and answers took place in April 2011, and in August 2011 the Fed started to release more explicit information about the future path of rates. The Fed's rhetoric changed from very general ("leaving rates at low levels for an extended period") to time-conditional ("at least until mid-2013"). In 2012, the indication of the future rate path was made conditional on the levels of inflation and unemployment. However, the markets started reacting sensitively to current data from the economy, and falling unemployment during 2013 put the Fed's communication in a difficult situation.

The arrival of the new Federal Reserve Chair Janet L. Yellen in March 2014 marked a return to general rhetoric ("maintain the current target range for the federal funds rate for a considerable time after the asset purchase program ends"). This time the change in communication generated no market reaction. However, the ambiguity of the statement immediately gave rise to a debate about how long "a considerable time" is, as the purchases were ended in October. The markets are speculating about 6–12 months, but the central bank has repeated that it prefers not to set a specific date.

However, how to set the specific form of "forward guidance" is not the only communication problem the Fed must now face. The Fed does not have a single voice, even though the chair's views and statements have the most weight. The other members of the FOMC, which decides on rates, have different opinions on the future path of rates. Since January 2012, their expectations have been published as dot diagrams. For example, the September 2014 dot diagram indicates that rates will be between 0.5% and 4% at the end of 2016, which is a wide range. However, this includes members who are not currently voting members of the FOMC.

This lack of unity in the FOMC may increase the uncertainty in the financial markets, which have a tendency to overreact. The Fed is also afraid that the markets will misinterpret its statements. Any change in its forward guidance may be interpreted as a signal of a fundamental change in the monetary policy stance and lead to sharp corrections in the markets.

In the past, the Fed's efforts to achieve maximum predictability and transparency have proved to be an effective tool for managing market expectations. Practical implementation, however, is complicated by the limited flexibility of this tool. The Fed may thus make its statement on when it will raise rates even more general ("the timing and pace of interest rate increases will depend on how economic conditions evolve and on expected progress toward the objectives") while at the same time repeating that the policy stance remains unchanged. The communication strategy is key to the smooth transition to positive market rates. Further sharp swings on the markets cannot be ruled out, but the central bank has little way of predicting those.

And in the future…

The Fed's asset portfolio will be reduced over the long term to the lowest possible level necessary for conducting monetary policy effectively and will consist solely of government bonds. The reduction of asset holdings has been designed in such a way that repayments of principal will not be reinvested. The process will start some time after the exit from zero rates, depending on current economic conditions. Mortgage-backed securities (MBS) will not be sold off.

Given the expected exit from zero rates in the first step, the assets held by the Fed may fall in price. The central bank would thus incur an accounting loss. This loss, however, would be unrealised and would be covered by future earnings. Simulations in Carpenter et al. (2013) show how large a loss the Fed might face depending on the expected rate path. An increase in the FFR to 4% in 2015–2018 (with subsequent stability) represents no threat to remittances to the Treasury. The cumulative unrealised loss will decrease gradually from a peak of USD 300 billion in 2017 to USD 100 billion in 2025. According to the authors, however, higher rates would result in a halt in remittances to the Treasury and thus in lower fiscal income.

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A1. Change in GDP predictions for 2014

	CF		IMF		OECD		CB / EIU	
EA	0.0	2014/11 2014/10	-0.3	2014/10 2014/7	-0.4	2014/9 2014/5	-0.1	2014/9 2014/6
US	0.0	2014/11 2014/10	0.5	2014/10 2014/7	-0.5	2014/9 2014/5	-0.1	2014/9 2014/6
DE	0.0	2014/11 2014/10	-0.5	2014/10 2014/7	-0.4	2014/9 2014/5	0.2	2014/6 2013/12
JP	-0.1	2014/11 2014/10	-0.7	2014/10 2014/7	-0.3	2014/9 2014/5	-0.5	2014/10 2014/7
BR	-0.1	2014/11 2014/10	-1.0	2014/10 2014/7	-1.5	2014/9 2014/5	0.0	2014/11 2014/10
RU	0.1	2014/11 2014/10	0.0	2014/10 2014/7	-1.8	2014/5 2013/11	0.0	2014/11 2014/10
IN	0.0	2014/11 2014/10	0.2	2014/10 2014/7	0.8	2014/9 2014/5	0.0	2014/11 2014/10
CN	0.1	2014/11 2014/10	0.0	2014/10 2014/7	0.0	2014/9 2014/5	0.0	2014/11 2014/10

A2. Change in inflation predictions for 2014

	CF		IMF		OECD		CB/ EIU	
EA	0.0	2014/11 2014/10	-0.4	2014/10 2014/4	-0.5	2014/5 2013/11	-0.1	2014/9 2014/6
US	-0.1	2014/11 2014/10	0.6	2014/10 2014/4	-0.3	2014/5 2013/11	0.0	2014/9 2014/6
DE	0.0	2014/11 2014/10	-0.5	2014/10 2014/4	-0.7	2014/5 2013/11	-0.2	2014/6 2013/12
JP	0.0	2014/11 2014/10	-0.1	2014/10 2014/4	0.3	2014/5 2013/11	-0.1	2014/10 2014/7
BR	0.1	2014/11 2014/10	0.4	2014/10 2014/4	0.9	2014/5 2013/11	0.0	2014/11 2014/10
RU	0.5	2014/11 2014/10	1.6	2014/10 2014/4	0.3	2014/5 2013/11	0.0	2014/11 2014/10
IN	-0.4	2014/11 2014/10	-0.2	2014/10 2014/4	-1.4	2014/5 2013/11	0.0	2014/11 2014/10
CN	-0.2	2014/11 2014/10	-0.7	2014/10 2014/4	0.0	2014/5 2013/11	0.0	2014/11 2014/10

A3. List of abbreviations

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

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

A4. List of thematic articles published in the GEO

2014

	Issue
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 Novoný)	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

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