GLOBAL ECONOMIC OUTLOOK – APRIL

Monetary and Statistics Department
External Economic Relations Division

2011

CNB CZECH NATIONAL BANK

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The economic recovery in the USA and the euro area is expected to continue over the next two years, whereas a slowdown is expected in Germany (and also China) in 2012. The role of the government sector in the recovery is gradually being replaced by rising private demand. According to current forecasts, **GDP** growth in the euro area will not exceed 1.8% by the end of next year. The German economy will grow by up to 2.7% this year. A decline to 1.5%–2.2% is then expected. The opposite trend can be seen in the USA, where the latest GDP growth outlooks (CF, IMF) rise from a maximum of 2.9% in 2011 to 3.3% in 2012. The monetary policy tightening in China due to an increased risk of economic overheating can be expected to adversely affect its GDP growth.

Inflation in the euro area, Germany and the USA could reach 2.2%–2.7% in 2011 (CF, IMF). A fall in inflation can then be expected. In 2012, inflation in these countries should be around 2%. Consumer prices in China are expected to increase to 5% in 2011 and decline slightly in 2012.

The **leading indicators** in April are signalling continuing robust economic growth in the USA and Germany. The euro area will continue to grow as well, albeit at a lower pace. Economic growth in China can be expected to pick up slightly.

3M and 1Y EURIBOR rates have been rising since mid-January 2011. The situation expected at the short end of the forecast was virtually unchanged, as the rise in the ECB's main refinancing rate from 1% to 1.25% on 13 April had already been taken fully into account in the rates. By contrast, the outlook for both rates at the end of 2012 shifted strongly upwards. The 10Y German government bond yield continued to go up rapidly in the first half of April (after levelling off temporarily in March). Nonetheless, the CF04 outlook was unchanged at the three-month horizon and reduced slightly to 3.7% at the 12-month horizon.

In the USA, **LIBOR dollar rates** remained flat, but the outlook for the end of 2012 was 0.4 p.p. higher for 3M and 1Y maturities (as in the euro area). The 10Y government bond yield has been fluctuating around 3.5% since February and the CF04 forecast does not expect significant growth at the three-month horizon. However, unlike for the German bond, the forecast for the 12-month horizon increased by 0.2 p.p. to 4.3%.

The outlook for the dollar-euro **exchange rate** still indicates appreciation of the U.S. currency in 2013. This year the exchange rate is expected to be around USD 1.38 to the euro, chiefly due to expected rate increases in the euro area. Concerns about the termination of bond purchases by the Fed in June are also increasing, as this will have a major effect on U.S. asset liquidity. The dollar should appreciate against the Japanese yen and the Swiss franc (by 8% and 14% respectively) at the two-year horizon according to the latest forecasts.

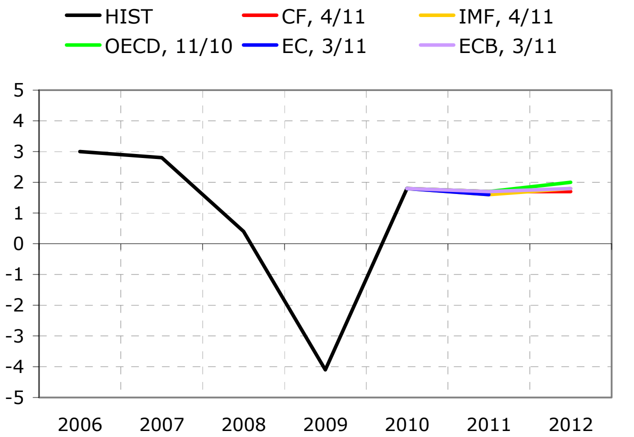
Geopolitical risks and a related decline in the oil supply on the one hand, and a sharp economic recovery in developing countries and expected higher oil demand in Japan on the other hand, speak in favour of persisting high **oil prices**, which on 8 April reached levels last seen in July 2008 (Brent USD 126.7 a barrel). The price of Brent crude oil is expected to fall gradually to USD 111 a barrel at the two-year horizon.

The non-energy commodity price index reached a long-term high in mid-February 2011. Prices of most important commodities then decreased until mid-March, but have been rising again since then. As a result, the outlook for both the total index and its components has been revised upwards by about 6.5%. Food commodity prices should stay at their current record levels until mid-2012 and then fall slightly. Prices of industrial metals should remain flat at their current levels.

II.1 GDP

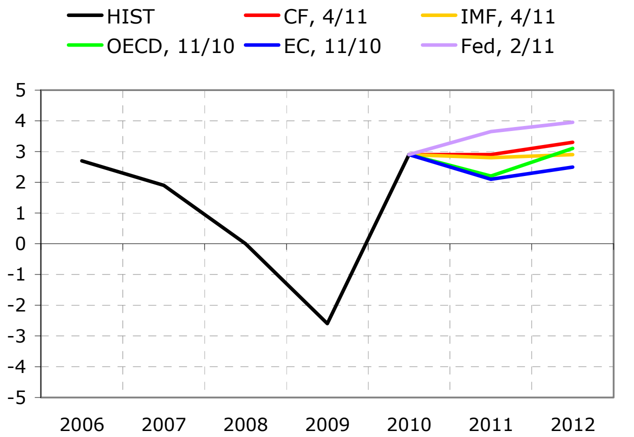
The economic recovery is gaining strength but remains mixed across the countries under review. According to new estimates, economic growth in the advanced economies will remain between 1.6% and 2.8% in 2011, whereas the Chinese economy will grow by around 9.5%. The withdrawal of fiscal stimuli and financial instability in the euro area periphery will probably slow economic growth in the region slightly. Despite some optimism about the future, there are numerous factors limiting GDP growth. High unemployment rates in all the advanced countries under review are another barrier to economic growth. Economic activity is also being hampered by high commodity prices.

EURO AREA



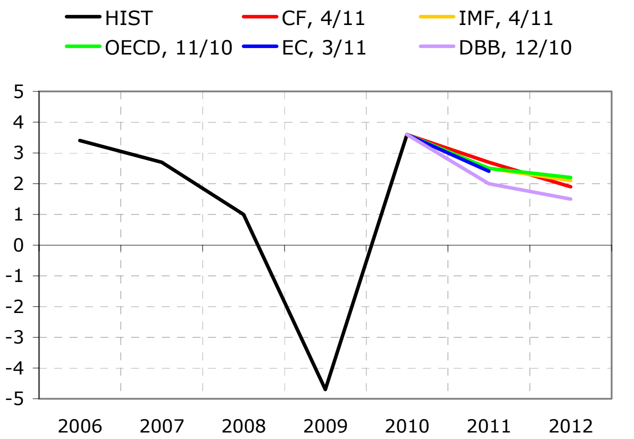
	HIST	CF	IMF	OECD	EC	ECB
2010	1.8					
2011		1.7	1.6	1.7	1.6	1.7
2012		1.7	1.8	2.0		1.8

USA



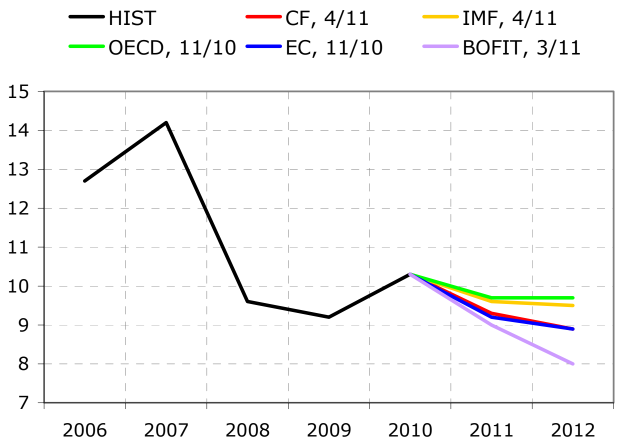
	HIST	CF	IMF	OECD	EC	Fed
2010	2.9					
2011		2.9	2.8	2.2	2.1	3.7
2012		3.3	2.9	3.1	2.5	4.0

GERMANY



	HIST	CF	IMF	OECD	EC	DBB
2010	3.6					
2011		2.7	2.5	2.5	2.4	2.0
2012		1.9	2.1	2.2		1.5

CHINA



	HIST	CF	IMF	OECD	EC	BOFIT
2010	10.3					
2011		9.3	9.6	9.7	9.2	9.0
2012		8.9	9.5	9.7	8.9	8.0

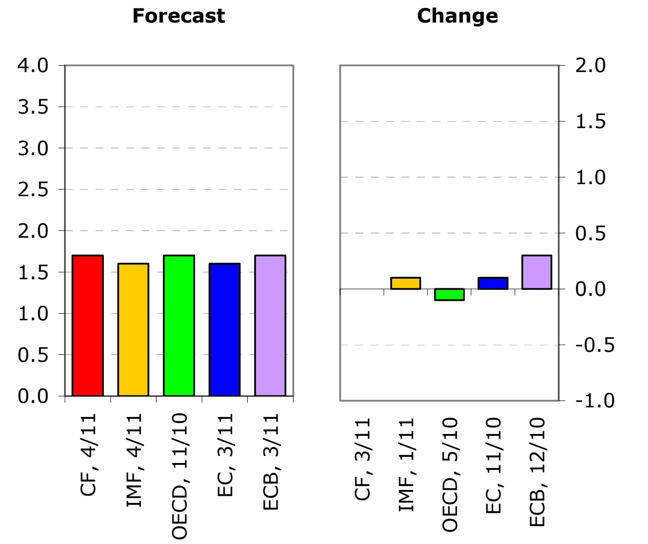
Note: Legend shows latest forecast data in format "Source, month/year of forecast publication". HIST: historical value. ECB and Fed: midpoint of range. [Cut-off date for data: 11 April 2011]

Source: CNB calculation using Eurostat, CF, IMF, OECD, EC, ECB, Fed, DBB and BOFIT databases.

II.2 GDP forecast comparison and change from the previous forecast

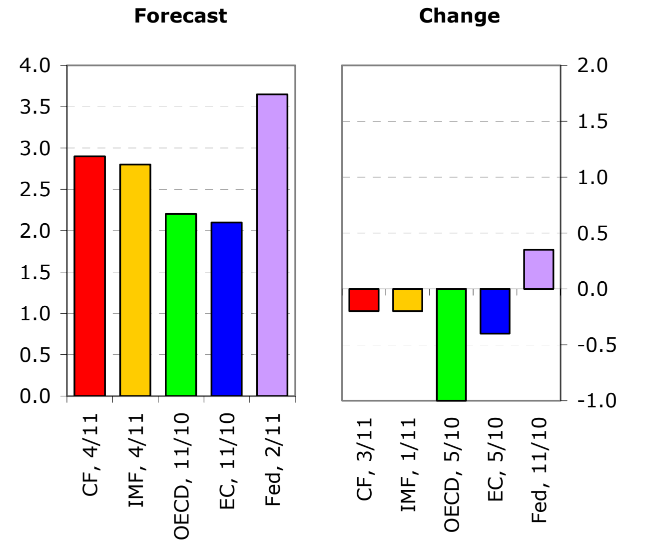
The outlook for GDP growth in the euro area and Germany has improved somewhat. By contrast, the outlook for growth in the USA has deteriorated according to new CF and IMF forecasts. The outlook for GDP growth in China has been revised downwards (CF) or left at the previous level.

EURO AREA



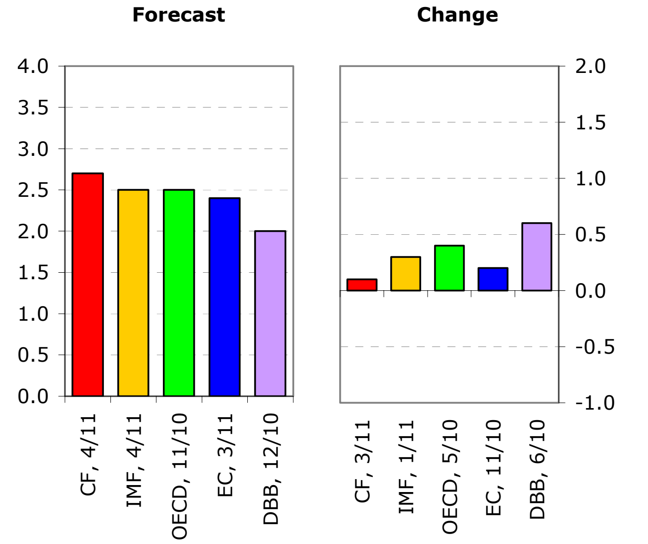
	2010	CF	IMF	OECD	EC	ECB
Forecast	1.8	1.7	1.6	1.7	1.6	1.7
Change		0.0	0.1	-0.1	0.1	0.3

USA



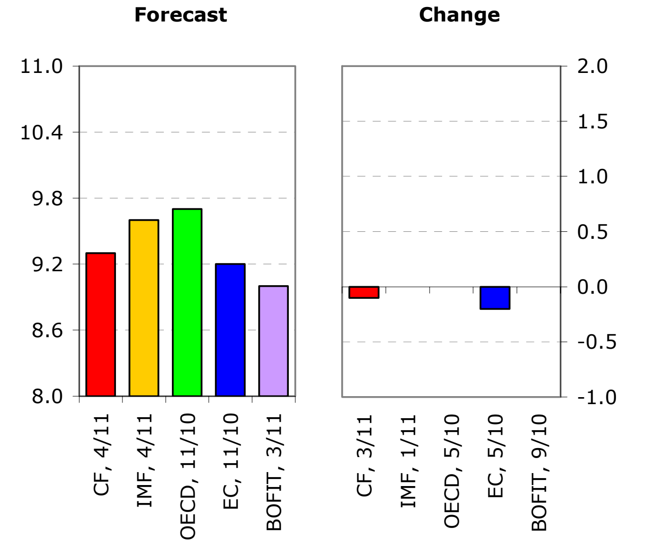
	2010	CF	IMF	OECD	EC	Fed
Forecast	2.9	2.9	2.8	2.2	2.1	3.7
Change		-0.2	-0.2	-1.0	-0.4	0.4

GERMANY



	2010	CF	IMF	OECD	EC	DBB
Forecast	3.6	2.7	2.5	2.5	2.4	2.0
Change		0.1	0.3	0.4	0.2	0.6

CHINA



	2010	CF	IMF	OECD	EC	BOFIT
Forecast	10.3	9.3	9.6	9.7	9.2	9.0
Change		-0.1	0.0	0.0	-0.2	0.0

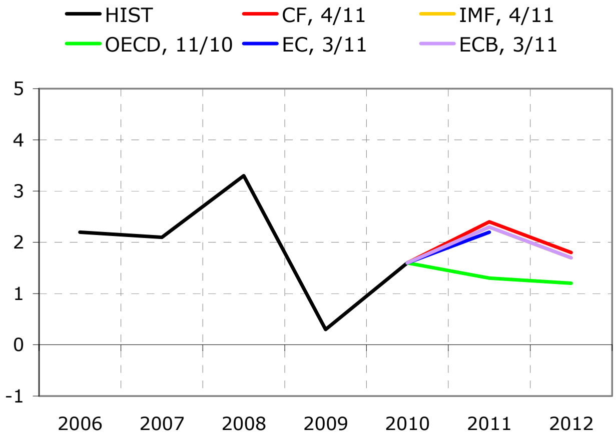
Note: Horizontal axis of left-hand (right-hand) chart shows latest (previous) forecast data in format "Source, month/year of forecast publication". HIST: historical value. ECB and Fed: midpoint of range. [Cut-off date for data: 11 April 2011]

Source: CNB calculation using Eurostat, CF, IMF, OECD, EC, ECB, Fed, DBB and BOFIT databases.

II.3 Inflation

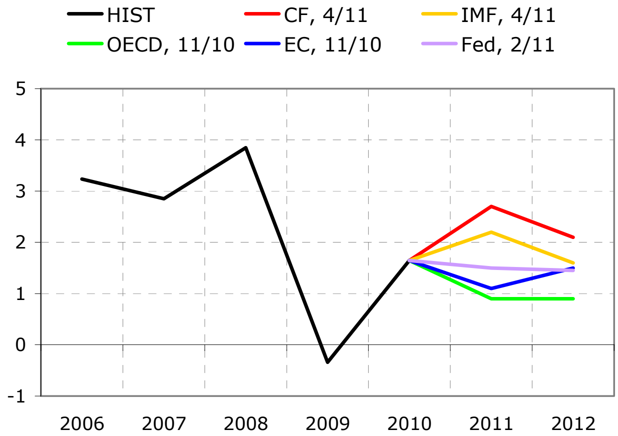
In the euro area, high commodity prices still pose a risk to the region's future development. Energy and food price growth should affect headline inflation most of all in China, where these items have a higher share in the consumer basket compared to the other countries under review. According to new CF and IMF forecasts, consumer price inflation in the advanced economies will increase this year to 2.2%–2.7%. Inflation in China will reach 4.6%–5%. Next year, prices will decline in all the monitored countries.

EURO AREA



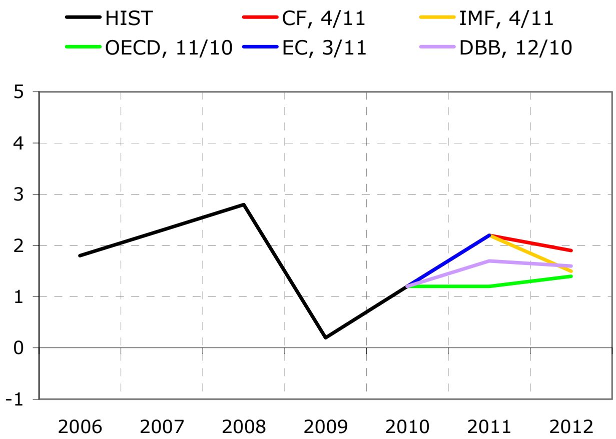
	HIST	CF	IMF	OECD	EC	ECB
2010	1.6					
2011		2.4	2.3	1.3	2.2	2.3
2012		1.8	1.7	1.2		1.7

USA



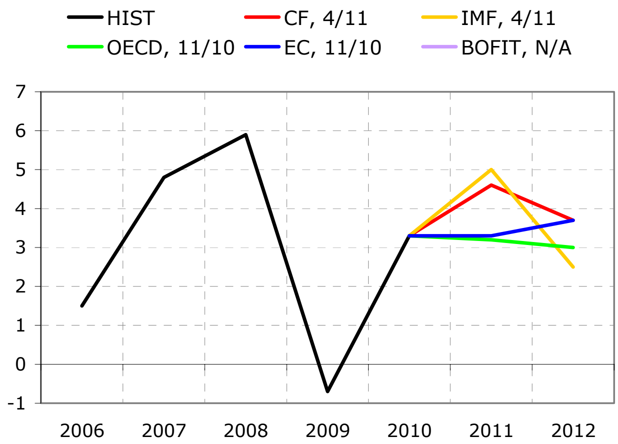
	HIST	CF	IMF	OECD	EC	Fed
2010	1.6					
2011		2.7	2.2	0.9	1.1	1.5
2012		2.1	1.6	0.9	1.5	1.5

GERMANY



	HIST	CF	IMF	OECD	EC	DBB
2010	1.2					
2011		2.2	2.2	1.2	2.2	1.7
2012		1.9	1.5	1.4		1.6

CHINA



	HIST	CF	IMF	OECD	EC	BOFIT
2010	3.3					
2011		4.6	5.0	3.2	3.3	
2012		3.7	2.5	3.0	3.7	

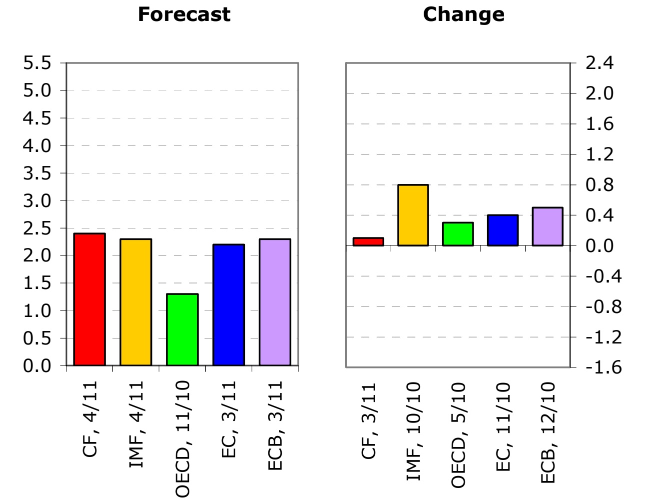
Note: Legend shows latest forecast data in format "Source, month/year of forecast publication". HIST: historical value. ECB and Fed: midpoint of range. [Cut-off date for data: 11 April 2011]

Source: CNB calculation using Eurostat, CF, IMF, OECD, EC, ECB, Fed, DBB and BOFIT databases.

II.4 Inflation forecast comparison and change from the previous forecast

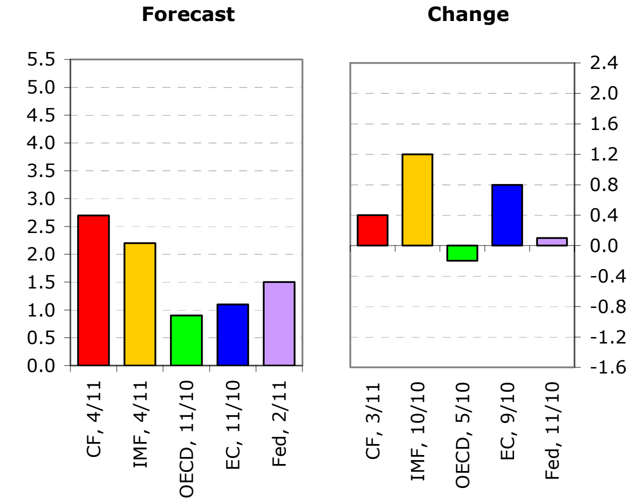
The spring outlooks for consumer price inflation in the USA, the euro area and Germany were revised upwards compared to the previous forecasts. The only exception is China, whose inflation outlooks were increased considerably in April. The *World Economic Outlook* (IMF) almost doubled its October forecast, from 2.7% to 5%.

EURO AREA



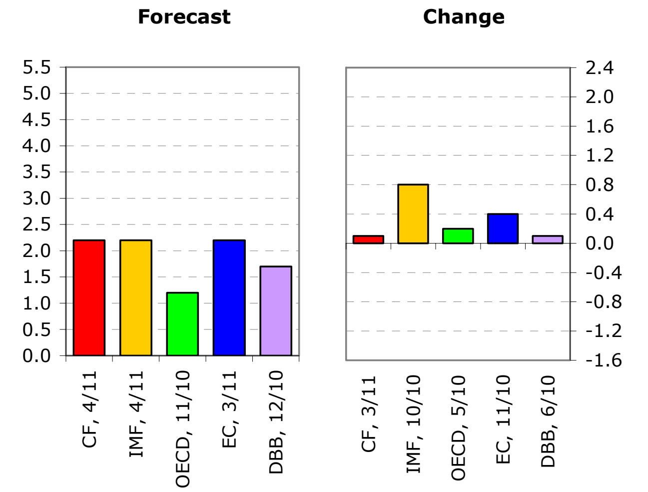
	2010	CF	IMF	OECD	EC	ECB
Forecast	1.6	2.4	2.3	1.3	2.2	2.3
Change		0.1	0.8	0.3	0.4	0.5

USA



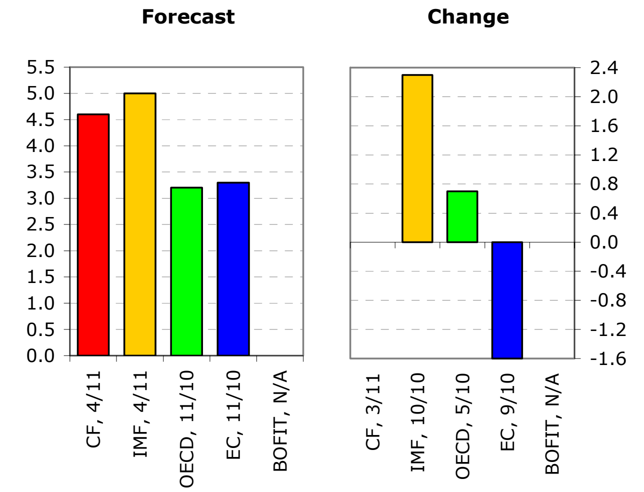
	2010	CF	IMF	OECD	EC	Fed
Forecast	1.6	2.7	2.2	0.9	1.1	1.5
Change		0.4	1.2	-0.2	0.8	0.1

GERMANY



	2010	CF	IMF	OECD	EC	DBB
Forecast	1.2	2.2	2.2	1.2	2.2	1.7
Change		0.1	0.8	0.2	0.4	0.1

CHINA



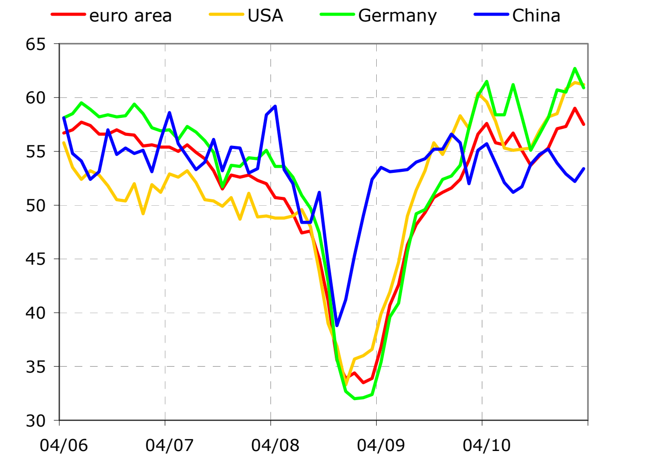
	2010	CF	IMF	OECD	EC	BOFIT
Forecast	3.3	4.6	5.0	3.2	3.3	
Change		0.0	2.3	0.7	-1.6	

Note: Horizontal axis of left-hand (right-hand) chart shows latest (previous) forecast data in format "Source, month/year of forecast publication". HIST: historical value. ECB and Fed: midpoint of range. [Cut-off date for data: 11 April 2011]

Source: CNB calculation using Eurostat, CF, IMF, OECD, EC, ECB, Fed, DBB and BOFIT databases.

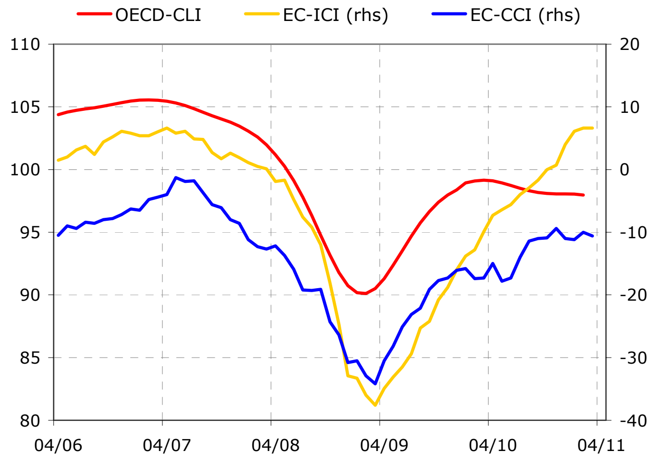
The PMI (Purchasing Managers' Index) leading indicators in April are signalling that industrial production growth will slow slightly in the USA, the euro area and Germany and rise in China in the second quarter of this year. A future deterioration of the outlook cannot be ruled out owing to the devastating earthquake in Japan in March. Consumer confidence decreased sharply in the USA, but the PMI weakened only slightly and the composite indices rose; further strong economic growth can be expected. In the euro area, all the leading indicators (except the PMI) were flat, indicating that relatively strong economic growth will be maintained, although at half the US level. In Germany, too, all the leading indicators (except the PMI) were flat, although at high levels signalling continuing robust economic growth at the levels observed at the end of last year.

PMI IN MANUFACTURING



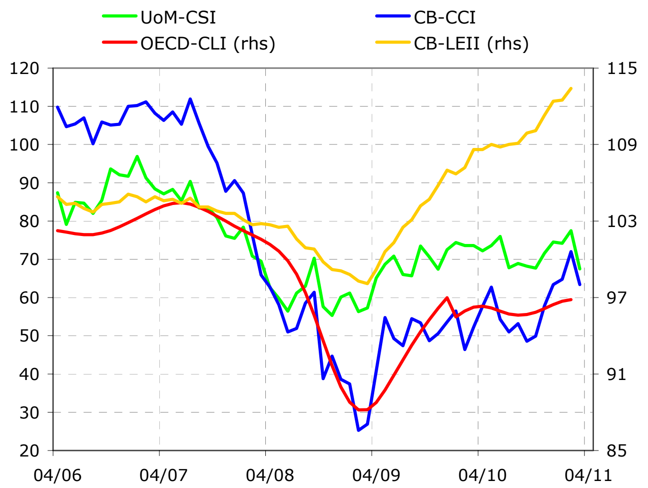
	EA	US	DE	CN
1/11	57.3	60.8	60.5	52.9
2/11	59.0	61.4	62.7	52.2
3/11	57.5	61.2	60.9	53.4

EURO AREA



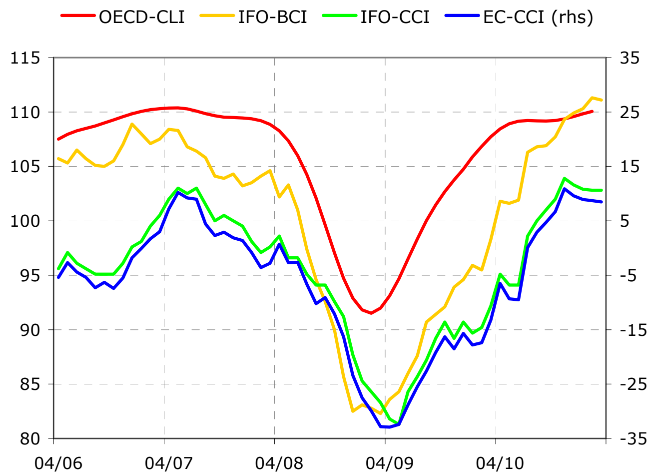
	OECD-CLI	EC-ICI	OECD-CCI
1/11	98.0	6.1	-11.2
2/11	98.0	6.6	-10.0
3/11		6.6	-10.6

USA



	OECD-CLI	CB-LEII	UoM-CSI	CB-CCI
1/11	96.7	112.5	74.2	64.8
2/11	96.8	113.4	77.5	72.0
3/11			67.5	63.4

GERMANY



	OECD-CLI	IFO-BCI	IFO-CCI	EC-CCI
1/11	109.8	110.3	102.9	8.9
2/11	110.1	111.3	102.8	8.7
3/11		111.1	102.8	8.5

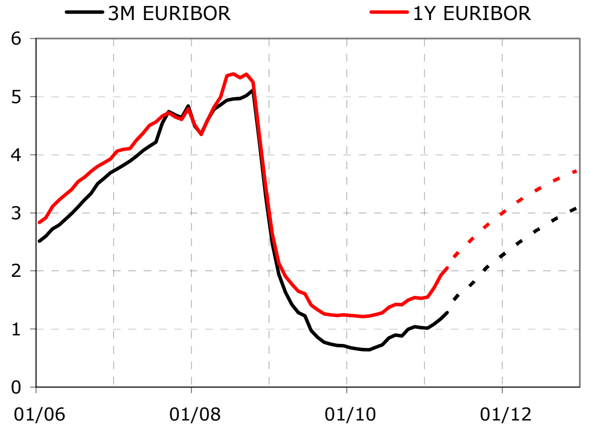
Note: OECD-CLI stands for OECD Composite Leading Indicator, EC-ICI (right-hand scale) for European Commission Industrial Confidence Indicator, EC-CCI (right-hand scale) for EC Consumer Confidence Indicator, CB-LEII for Conference Board Leading Economic Indicator Index, CB-CCI for CB Consumer Confidence Index, UoM-CSI for University of Michigan Consumer Sentiment Index, IFO-BCI for Institute for Economic Research – Business Climate Index, and IFO-CCI for IFO Consumer Confidence Index. [Cut-off date for data: 18 April 2011]

Source: CNB calculation using OECD, EC, IFO and UoM databases.

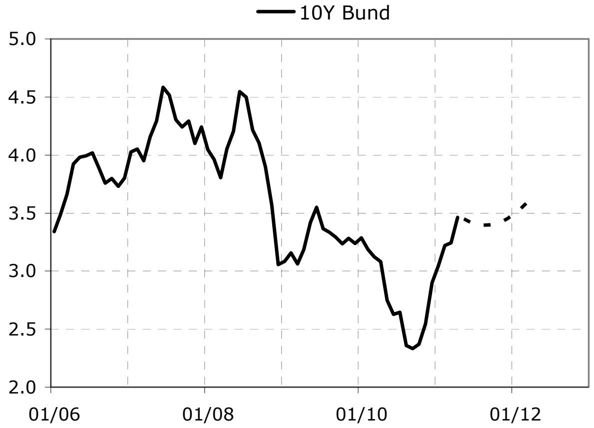
IV.1 Outlook for short-term and long-term interest rates: Euro area

3M and 1Y EURIBOR rates have been rising since mid-January. By mid-April the 3M rate was up by more than 0.3 p.p. to 1.3% and the 1Y rate by almost 0.6 p.p. to 2.1%. The situation expected at the short end of the forecast was virtually unchanged (the rise in the ECB's main refinancing rate from 1% to 1.25% on 13 April had been expected), but the outlook for the end of 2012 shifted strongly upwards (by almost 0.4 and 0.3 p.p. for 3M and 1Y respectively). The 10Y German government bond yield continued to go up rapidly in the first half of April (after levelling off temporarily in March). Nonetheless, the April CF outlook was unchanged at the three-month horizon and reduced slightly to 3.7% at the 12-month horizon.

EURIBOR



GOVERNMENT BOND YIELD



	03/11	04/11	06/11	12/11	06/12	12/12
3M EURIBOR	1.18	1.29	1.62	2.23	2.71	3.08
1Y EURIBOR	1.92	2.05	2.35	2.95	3.40	3.72

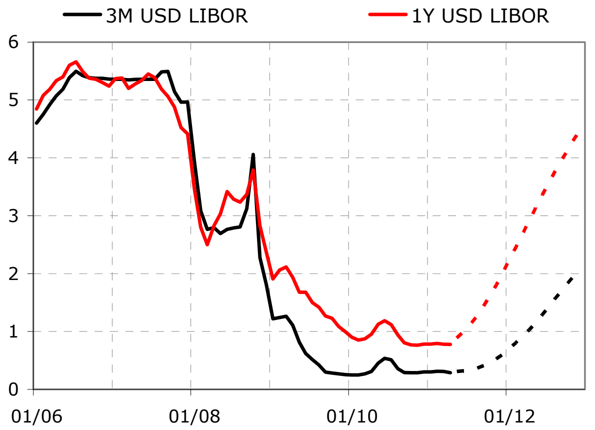
	03/11	04/11	06/11	12/11	06/12	12/12
10Y Bund	3.24	3.46	3.42	3.46		

Note: Forecast for EURIBOR rates is based on rates implied by interbank market yield curve (FRA rates are used from 4M to 15M and adjusted IRS rates for longer horizon). Forecast for German government bond yield (10Y Bund) is derived from CF forecast. Dashed line represents outlook. [Cut-off date for data: 11 April 2011]
Sources: Thomson Reuters (Datastream), Bloomberg, CNB calculations.

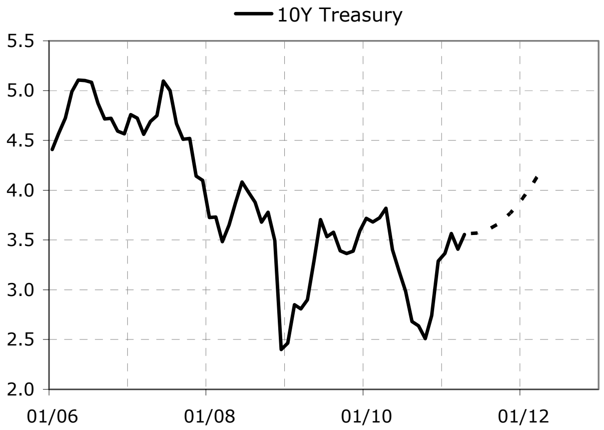
IV.2 Outlook for short-term and long-term interest rates: USA

LIBOR dollar rates remained flat (at 0.3% for 3M and 0.8% for 1Y), but the outlook for the end of 2012 was 0.4 p.p. higher for both maturities. The 10Y government bond yield has been fluctuating around 3.5% since February. CF04 does not expect significant growth at the three-month horizon, but expectations have risen by 0.2 p.p. to 4.3% at the 12-month horizon.

USD LIBOR



GOVERNMENT BOND YIELD



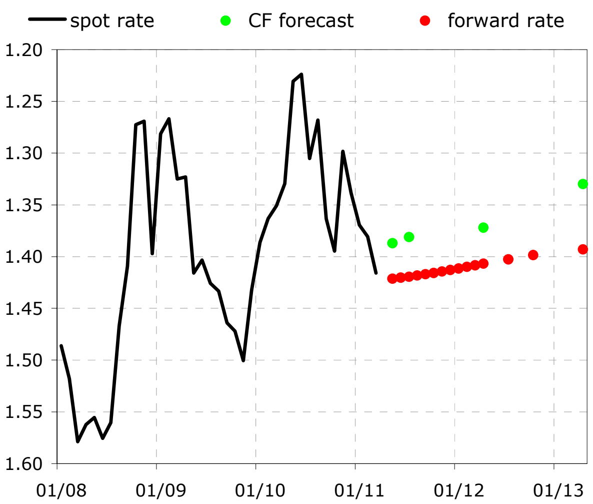
	03/11	04/11	06/11	12/11	06/12	12/12
3M USD LIBOR	0.31	0.29	0.32	0.60	1.29	2.10
1Y USD LIBOR	0.78	0.78	1.00	2.02	3.35	4.51

	03/11	04/11	06/11	12/11	06/12	12/12
10Y Treasury	3.41	3.55	3.57	3.84		

Note: Forecast for 3M and 1Y USD LIBOR rates is based on rates implied by London interbank market yield curve (USD LIBOR rates are used up to 3M, 3M FRA rates up to 15M, and adjusted IRS rates for longer horizon). Forecast for US government bond yield (10Y Treasury) is derived from CF forecast. Dashed line represents outlook. [Cut-off date for data: 11 April 2011]
Sources: Thomson Reuters (Datastream), Bloomberg, CNB calculations.

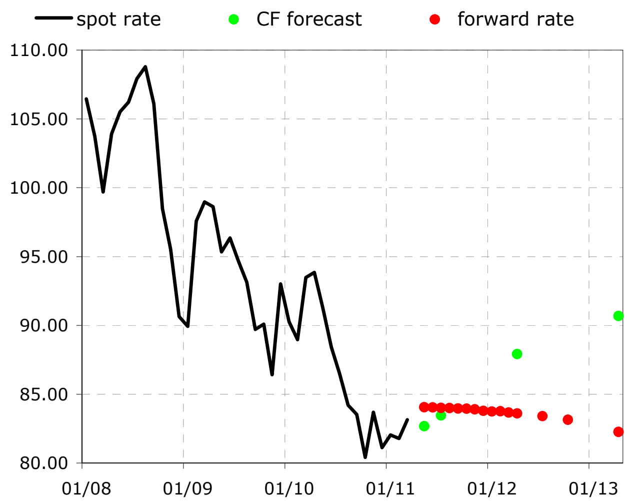
The dollar has been depreciating against the euro since the start of 2011 and the new publication of CF expects the dollar exchange rate to be weaker than in the previous month. The exchange rate is expected to be around USD 1.38 to the euro at the one-year horizon and strengthen to USD 1.33 to the euro at the two-year horizon. The dollar-sterling rate outlook saw no major changes – the dollar is expected to be just 1.2% weaker in April 2013. By contrast, the dollar is expected to appreciate against the Japanese yen and the Swiss franc (by 8% and 14% respectively) at the two-year horizon. In March, the yen appreciated temporarily against the dollar to JPY 79 to the dollar as investors speculated on appreciation of yen due to repatriation of foreign investments by Japanese insurance companies. The subsequent G7 intervention was successful and the yen weakened again. A sharp appreciation of the yen would generate further instability in global financial markets.

US$ per Euro



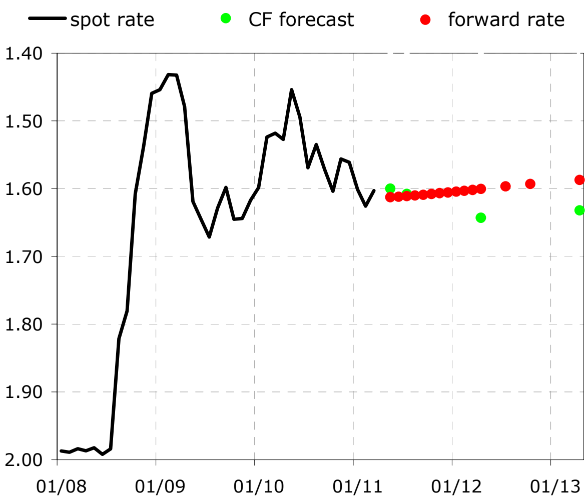
	4/4/11	05/11	07/11	04/12	04/13
spot rate	1.422				
CF forecast		1.387	1.381	1.372	1.330
forward rate		1.421	1.419	1.407	1.393

Yen per US$



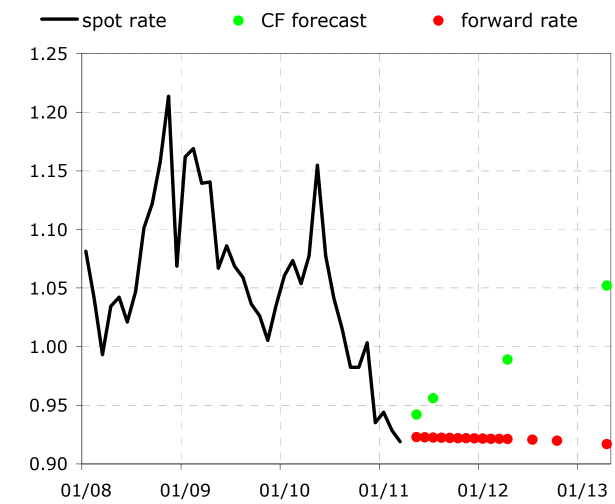
	4/4/11	05/11	07/11	04/12	04/13
spot rate	84.06				
CF forecast		82.67	83.45	87.92	90.68
forward rate		84.05	84.01	83.60	82.25

US$ per UK£



	4/4/11	05/11	07/11	04/12	04/13
spot rate	1.613				
CF forecast		1.600	1.608	1.643	1.632
forward rate		1.613	1.611	1.600	1.587

Swfr per US$



	4/4/11	05/11	07/11	04/12	04/13
spot rate	0.923				
CF forecast		0.942	0.956	0.989	1.052
forward rate		0.923	0.923	0.921	0.917

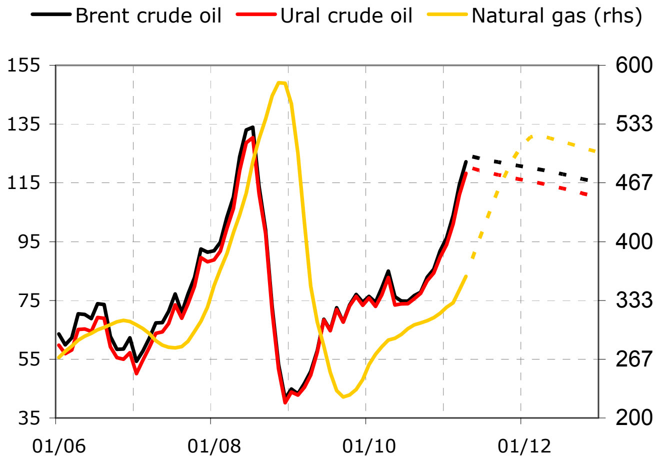
Note: Increase in currency pair represents appreciation of US dollar; data as of the last day of the month. Forward rate does not represent outlook; it is based on covered interest parity, i.e. currency of country with higher interest rate is depreciating. Forward rate represents current (as of cut-off date) possibilities for securing future exchange rate. [Cut-off date for data: 14 April 2011]

Source: CNB calculation using Bloomberg and Consensus Forecasts databases.

VI.1 Oil and natural gas

The long-running rise in the Brent crude oil price started accelerating in mid-February. The price reached almost USD 127 a barrel on 8 April, a level last seen in July 2008. Supply-side problems (conflicts in Libya and other countries of the region) and rising oil demand in developing countries are contributing to the high price level, which, if it persists, could affect demand for oil. In its April outlook the IMF links the risk of high prices with a growing (according to IMF estimates) shortage of oil. By contrast, Saudi Arabia describes the oil market as oversaturated. Futures-based market outlooks expect a gradual decline in oil prices at the two-year horizon. At the end of 2012 the price of Brent crude oil is thus expected to be USD 111 a barrel.

OUTLOOK FOR PRICES OF OIL AND NATURAL GAS



	04/11	06/11	12/11	06/12	12/12
Brent crude oil	122.2	123.4	120.8	118.5	115.4
Ural crude oil	118.3	119.3	116.3	113.7	110.4
Natural gas	360.8	400.9	501.6	515.3	502.2

Note: Oil prices in USD/barrel are taken from listings on London-based ICE Futures Europe international exchange. Prices of Russian natural gas at border with Germany in USD/1000 cubic m are calculated using IMF data. Future oil prices are derived from oil futures. Dashed line represents outlook. [Cut-off date for data: 14 April 2011].

Source: Bloomberg, IMF, CNB calculations.

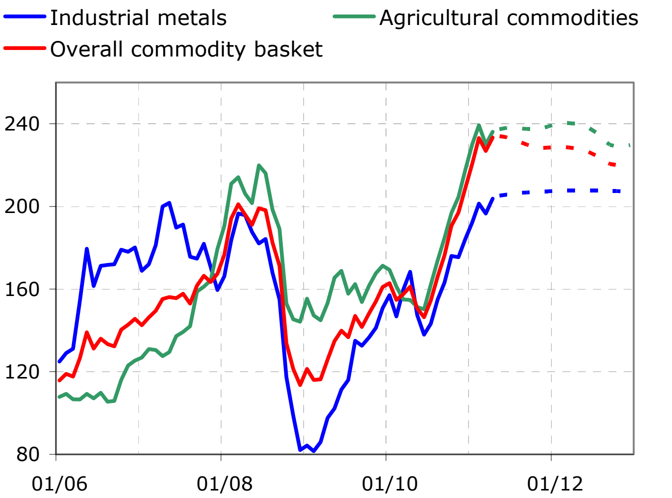
VI.2 Other commodities

The non-energy commodity price index reached a long-term high in mid-February 2011. Prices of most important commodities then decreased until mid-March, but have been rising again since then.

As a result, the outlook for both the total index and its components has been revised upwards by about 6.5%. Food commodity prices should stay at their current record levels until mid-2012 and then fall slightly. Prices of industrial metals are expected to be unchanged at the monitored horizon.

As regards food commodities, prices of maize and soy are close to several-year highs, as demand for alternative fuels is rising in line with oil prices. Prices of meat, coffee, cotton and rubber are high as well.

OUTLOOK FOR OTHER COMMODITY PRICES



	04/11	06/11	12/11	06/12	12/12
Industrial metals	203.8	205.7	207.3	207.7	207.2
Agricultural commodities	236.1	238.0	238.7	238.0	229.7
Overall commodity basket	233.4	233.5	228.5	226.3	220.2

Note: Chart shows indices, year 2005 = 100. Dashed line represents outlook. [Cut-off date for data: 11 April 2011].

Source: Bloomberg, outlooks based on futures.

MONETARY POLICY OF THE PEOPLE'S BANK OF CHINA

China's growing influence on the world economy has generated a wave of interest in its economic policies. The Chinese economy is very specific (fixed exchange rate, central planning combined with market economy, administrative measures, etc.), so questions related to the operation of its monetary policy in these conditions are relevant.

Introduction

Integration into the broader central planning framework is an integral part of China's monetary policy. The objectives and instruments of monetary policy cannot be defined in the standard way as in advanced market economies. The decisions of the Chinese central bank (People's Bank of China, PBoC) are subject to approval by the State Council (China's Cabinet), which on the other hand uses other instruments to achieve the same objectives as the central bank (e.g. containing inflation). The bank's main objective can be defined as "ensuring currency stability and promoting economic growth". Monetary policy tends to use quantitative instruments (e.g. loan ceilings) rather than price instruments (e.g. interest rates). The PBoC sets targets for monetary aggregates, which it steers by changing the money supply or defining loan quotas. Since 2007 it has also been using the reserve requirement rate in addition to open market operations to influence bank liquidity, mainly with regard to sterilization of foreign exchange operations. The main reason is to limit the appreciation of the domestic currency against the dollar, which is causing foreign exchange reserves to surge. However, this leads to a large liquidity surplus in the banking system. Finding a solution to this problem will be one of the most important tasks facing China's monetary policy in the years ahead.

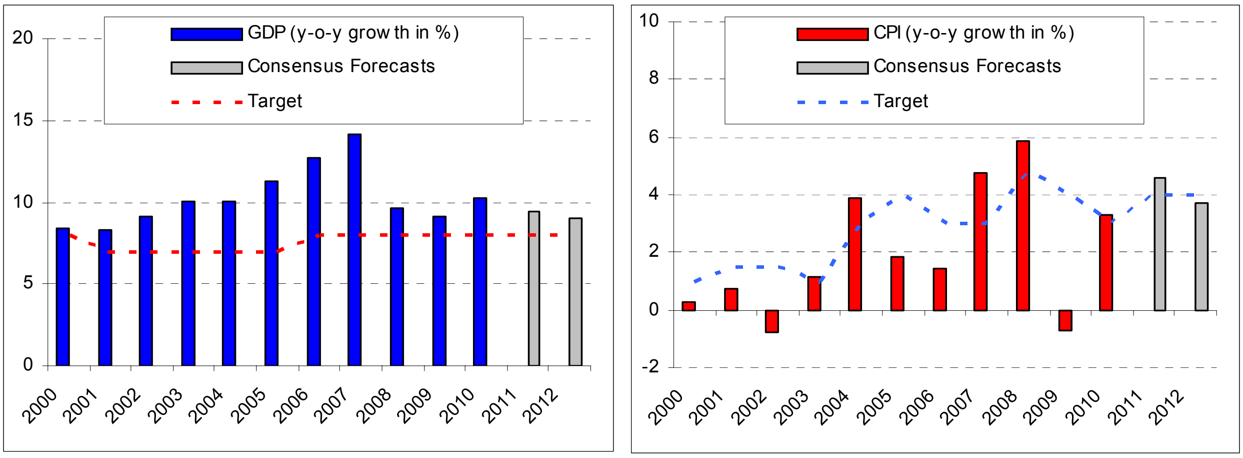
1 The Chinese central bank (PBoC)

The PBoC was established in 1948 on the foundations of several banks (Huabei Bank, Beihai Bank and Xibei Farmer Bank). In September 1983 the State Council decided to grant it central bank status, which was confirmed in 1995 by the National People's Congress. The PBoC's functions are laid down in the 2003 Law of the People's Republic of China on the People's Bank of China and include monetary policy, management of currency circulation, financial stability and currency stability. The bank's objective can be defined as "ensuring currency stability and promoting economic growth". The Monetary Policy Committee (MPC) was established in 2000 and is tasked with discussing and proposing: (i) changes in the monetary policy stance, (ii) monetary policy targets, (iii) application of monetary policy instruments and (iv) macroeconomic policy coordination measures. The MPC has ten members (representatives of ministries, government organisations and state banks) and meets every quarter. The minutes of MPC meetings are submitted to the State Council, which approves the MPC's decisions. In contrast to European central banks, the MPC is not an independent executive body. The Monetary Policy Report (published since 2002) is the basis for the MPC's meetings. It summarises the evolution of China's economy in the previous quarter and proposes further monetary policy actions. Once a year the PBoC publishes targets for monetary aggregates (M1 and M2) and the ceiling on domestic loans. It also monitors liquidity in the banking sector, interest rates and the exchange rate.

2 Economic developments and monetary policy since 2000

As China is a centrally planned economy with some features of a market economy, state ownership and planning has a major influence on the management of the economy. Direct state ownership and directive planning is on the retreat, but the state continues to play a dominant role in the economy. It owns about one-third of industry and manages the allocation of resources (energy, finance and land). The banking sector is largely owned either directly or indirectly by the state, giving rise to links with industry. The five-year plans are approved by the National People's Congress (the 12th five-year plan will be effective from 2011 to 2015). The plans, which contain quantitative economic development measures, preferred areas, energy consumption and so on, involve targeted coordination of monetary and fiscal policies. Shorter-term plans are created in response to current developments. For example, an Economic Support Plan, covering housing support, easier credit conditions for mortgages and loans to SMEs and lower taxes, was issued in response to the 2008–2009 global financial crisis. As Figure 1 shows, GDP growth has been above the target set in the plan (7–8%) over the last ten years, while the inflation plan (3–4% since 2004) was exceeded in 2004, 2007–2008 and 2010. The April Consensus Forecasts expect GDP growth and inflation to stand above the target in 2011. In 2012 both inflation and economic growth will slow down.

Figure 1 Economic growth and inflation in China: targets vs. reality



Source: Datastream, IMF, PBoC publications, Foreign Exchange Consensus Forecasts (inflation data are for the whole year)

The economic developments in China since 2000 can be divided into several periods:

2001–2002: Following the 1997 financial crisis in South-East Asia, the priority was to restore economic growth by using expansionary fiscal and monetary policies. As a result, investment increased and domestic demand also picked up, while deflation pressures were still present. Foreign trade was strongly affected by entry into the World Trade Organization (WTO). According to the PBoC, the monetary policy objective was to stop economic growth declining further and inflation rising. Key rates were decreased and the reserve requirement was also lowered slightly.

2003–2008: In 2003 China entered a period of robust economic growth. A recovery in global demand and the competitiveness of Chinese goods helped exports to rise by more than 30% a year. Credit growth exceeded 20% and investment rose by 50% compared to 2002. Rising commodity and food prices affected inflation, which exceeded the 3% target in 2004. The approach of the central bank also changed in mid-2003. Steering the volume of money and credit became the new objective. Loan quotas were introduced. They had a direct impact on investment, whose growth fell to 24% in mid-2004. The risk of overheating increased sharply in 2005 and 2006, so the central bank started gradually tightening monetary policy. In 2006 the reserve requirement ratios (RRR) was raised from 7.5% to 10% and interest rates also rose slightly. Much more radical steps were taken in 2007 and 2008. In 2007, economic growth exceeded 14% and exports continued to rise despite a downturn in global demand. Investment growth was around 30% and domestic demand remained strong. On the other hand, signs of overheating emerged on the property market, with prices rising significantly. The PBoC reacted by absorbing liquidity through open market operations and increasing interest rates and the reserve requirement. It also used several non-standard instruments, including special transactions with selected banks and administrative measures. Quarterly loan quotas were introduced and the bank also conducted foreign exchange swaps.

2008–2010: The monetary policy tightening took full effect in mid-2008 just as the global recession struck. In the first quarter, exports dropped sharply and domestic output and investment slowed significantly. The crisis also hit the property market. Nevertheless, the economy grew at more than 9%. At the end of 2008, the monetary policy approach was also changed dramatically: open market operations and PBoC note issuance were significantly limited, special deposits were abolished and interest rates were cut. The main lending rate fell from 7.5% in mid-2008 to 5.3% in early 2009. The main monetary policy channel was provision of liquidity in the form of loans. At the end of 2009, total loans in the Chinese banking sector were 30% higher than a year earlier.

Since the end of 2010: During 2010, signals emerged that the economy was overheating, and concerns of a property price bubble increased. Demand is still strong, but the price level has risen significantly. Annual inflation reached 5.1% in November, the highest figure in 28 months. Owing to a fourth-quarter acceleration, China's GDP growth for the whole of 2010 rose to 10.3% from 9.2% in 2009. This was the highest growth rate since 2007. The monetary policy stance was therefore changed from slightly easy to cautious. In addition to administrative measures, it was decided to use interest rates more actively. Since October 2010, the PBoC has increased the reserve requirement seven times but raised interest rates only four times.

China became the second largest economy in the world, generating higher GDP than Japan for the first time. It is the fastest-growing of the world's twenty largest economies. In purchasing power parity terms, China's GDP is the third largest after the USA and the EU.

Outlook for 2011 and 2012: Although the latest Consensus Forecast (published in April) suggests a slight economic slowdown, GDP growth will remain around 9% plan for 2011 and 2012. Inflation should reach 4.6% this year and fall to 3.7% in 2012. The PBoC can be expected to pursue a restrictive monetary policy, reflected in expected higher rates. An appreciating domestic currency will act in the same direction. According to Consensus Forecasts, the renminbi could appreciate by almost 9% in two years.

3 Monetary policy instruments and transmission mechanism

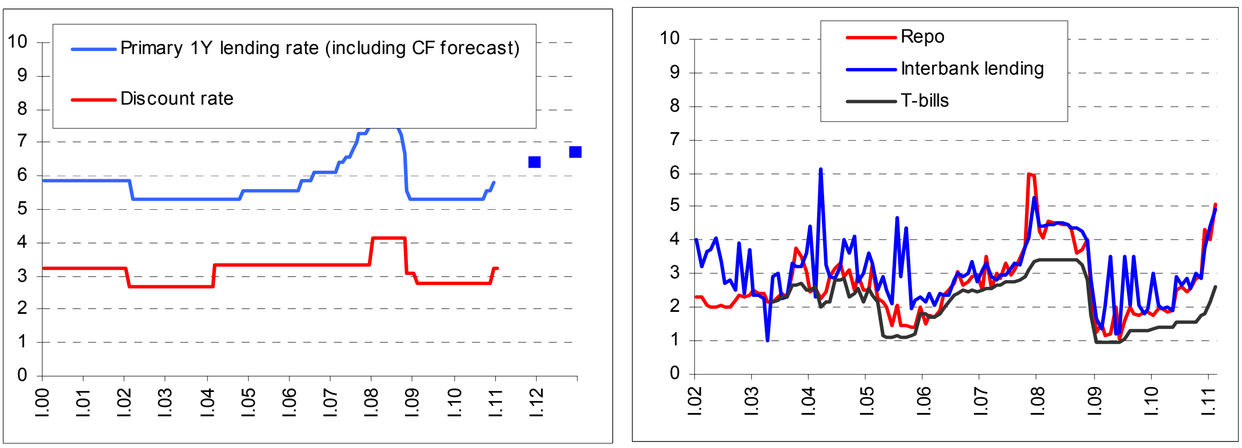
Monetary policy tends to use quantitative tools (e.g. loan ceilings) rather than price instruments (e.g. interest rates), as is appropriate in a situation of state ownership of banks and corporations.[1]

- Open market operations (since 1996) are conducted regularly to steer liquidity in the banking sector. They consist of PBoC note operations (repos and reverse repos) and their yield can be regarded as the monetary policy rate.
- One-off transactions are used in exceptional cases of liquidity surplus (issuance of notes to selected banks, special deposits, etc.).

[1] Information on open market operations, the minimum reserve requirement and interest rates is available to a limited extent; other information is not disclosed.

- The reserve requirement is another instrument for managing liquidity (and sterilising foreign exchange operations). The system is very complicated, with different reserve requirement rates being applied to different banks and bank products.[2] In 2010 the central bank increased the rate seven times. The latest 0.5% rise, effective on 21 April 2011, took the rate for commercial banks up to 20.5%. The rate applied to the reserves is 1.62% for standard deposits and 0.72% for deposits exceeding the limit.
- Interest rates are used to a much lesser extent as an instrument. Although money and bond market rates are liberalised, the PBoC continues to set minimum loan rates and has virtually fixed deposit rates. Even if deposit rates were liberalised, they would not increase given the high savings in the Chinese economy. On the other hand, the excess liquidity in the banking sector means that market rates do not follow key rates. The bank raised rates twice in 2010 and twice in 2011. Since 6 April, one-year rates on deposits and loans have been 3.25% and 6.31% respectively.
- Other measures include permitted deviations from key rates and credit restrictions. Up to 1998, a loan growth indicator was part of the state credit plan, which provided for the transfer of funds to preferred sectors. The directive plan was later changed into an indicative guideline. However, in the years when the Chinese economy was overheating the central bank took more radical action (loan quotas, limits on new loans, etc.) and often focused on certain sectors (e.g. the property market).

Figure 2 Key and market interest rates (in %)



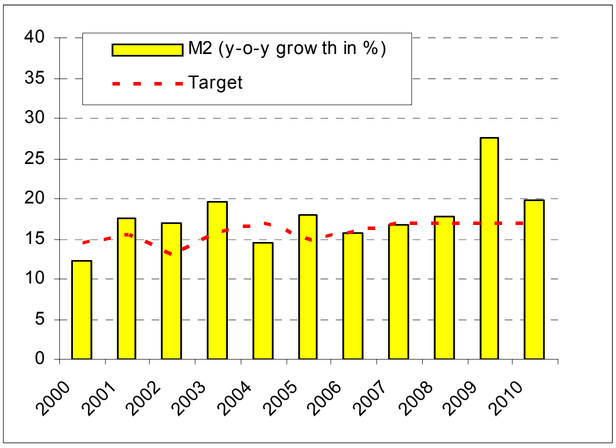
Note: monthly data

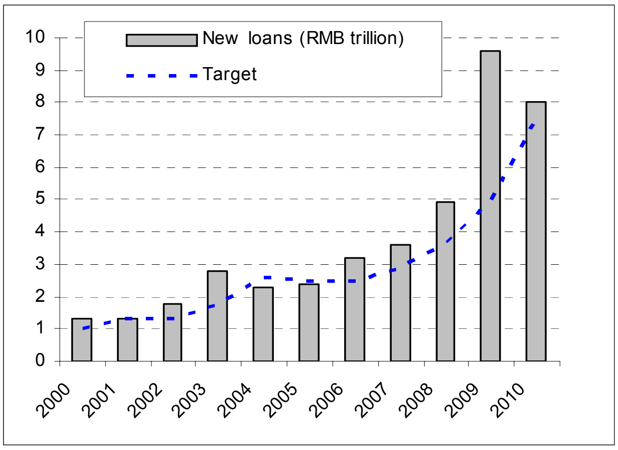
Source: Datastream, PBoC publications, Foreign Exchange Consensus Forecasts (CF)

Whereas in the 1990s directives played the dominant role, the establishment of the PBoC and the money market made it possible to develop the classical transmission mechanism (central bank – financial institutions – firms), where the key role is played by targets (for M1 and M2 growth and growth in loans).

[2] In 2011 the PBoC will probably introduce a rate calculation system based on banks' capital adequacy and systemic risk. To cut costs, it also intends to lower the interest paid on reserves and to eliminate it altogether in the future.

Figure 3 Monetary policy targets vs. reality

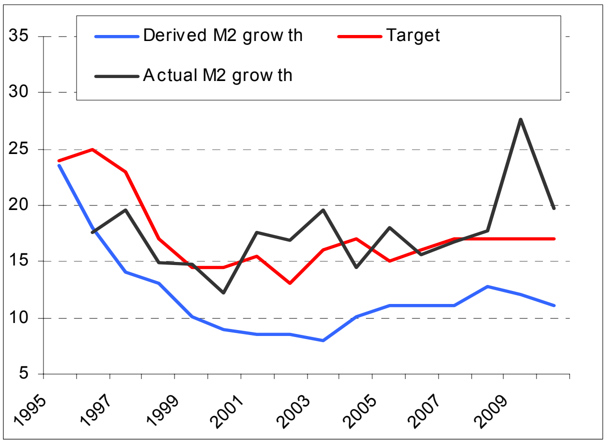


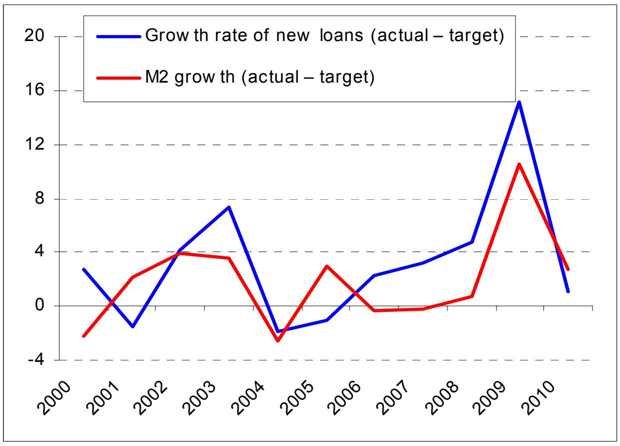


Source: Datastream, PBoC publications

The Chinese central bank has been setting *monetary aggregate* targets (in the form of expected values) since 1994. Monetary aggregate growth consistent with the planned fundamentals (GDP growth and inflation; see section 2) can be derived from the quantity equation.[3]

Figure 4 M2 growth and money multiplier (in %)





Source: authors' calculations, Datastream, IMF, PBoC Monetary Policy Reports, see footnotes 3 and 4

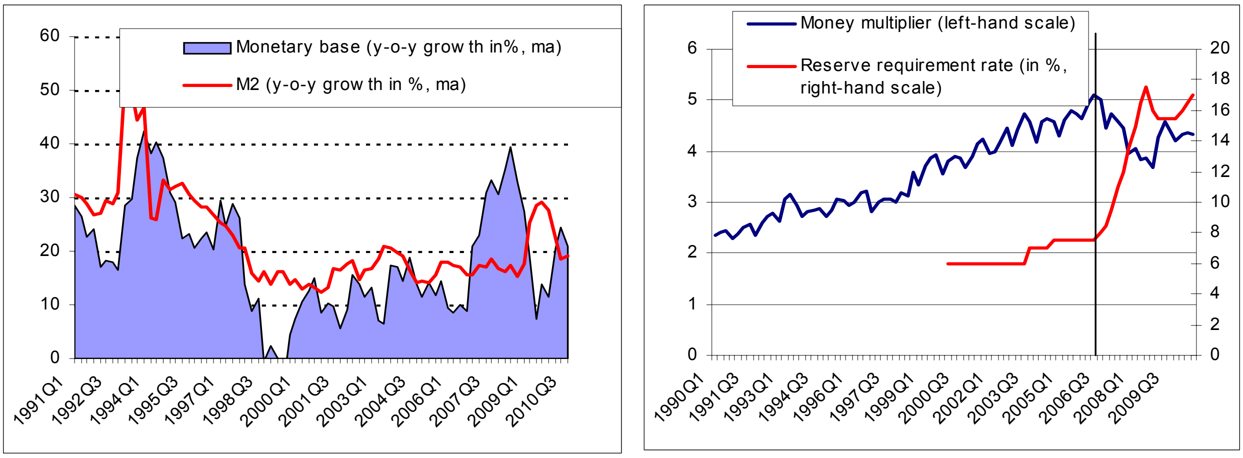
Since 1995, the derived growth has been about 5% lower than the PBoC's actual target. Actual monetary aggregate growth has differed from the PBoC target, although the difference is smaller than that from the derived indicator.[4] The deviation of M2 growth from the target probably does not indicate that the monetary policy instruments were ineffective; it is possible that, by government decision, monetary policy was more accommodative or restrictive than the PBoC had expected. In the same period the target for new loans was exceeded, which supports this view.

[3] The quantity equation of money is $M \bullet V \equiv P \bullet Y$ and the derived equation is $\Delta M^* = \pi target + \Delta Ypotential - \Delta Vtrend$. An economic growth target is included in the five-year plans. Trend velocity growth is estimated from the data. The inflation target can be found in the *Monetary Policy Report* (since 2002 following the annual economic meeting of the central government). The data up to 2002 were taken from *Instruments of Monetary Policy in China and Their Effectiveness: 1994–2006*.

[4] When calculating the monetary aggregate growth target, the PBoC uses documents from the annual conference on central planning (growth and inflation), which may differ from the five-year plans.

The main indicator for monetary aggregate targeting is the monetary base. The relationship between the monetary base and M2 was broadly stable throughout the 1990s. The money multiplier was increasing until 2006, when the central bank started to use the reserve requirement rate as a liquidity management instrument.

Figure 5 M2, monetary base and money multiplier

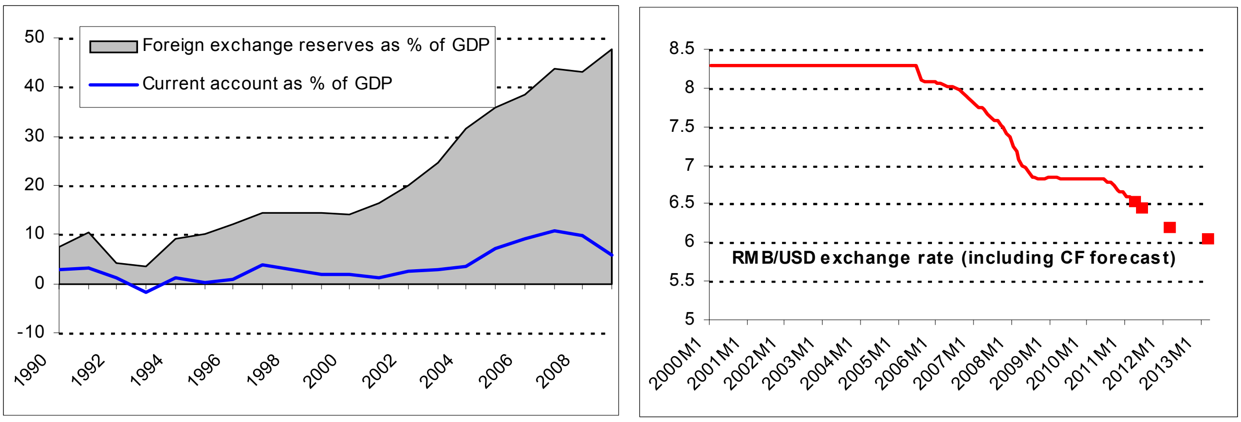


Note: quarterly data

Source: Datastream, PBoC Monetary Policy Reports

Raising the reserve requirement rate is usually regarded as a monetary policy measure within the cycle. It is clear, however, that in the Chinese economy an important role is also played by the fixed exchange rate and the sterilisation of foreign exchange flows.

Figure 6 Foreign exchange reserves, foreign trade and the exchange rate



Note: monthly data on the exchange rate

Source: IMF, Foreign Exchange Consensus Forecasts (CF)

The Chinese current account has been in surplus since the mid-1990s, but the exchange rate was fixed until 2005. In July 2005, a managed float was introduced, allowing the Chinese currency to appreciate gradually. The exchange rate has appreciated by 3% a year on average, although the appreciation halted during the economic crisis. Foreign exchange reserves have surged as a result, reaching 48% of GDP at the end of 2010.

Such large foreign currency purchases by the PBoC are causing concern as they are increasing liquidity on the domestic market, which may lead to inflation and asset market bubbles. For this reason, the PBoC is applying control of capital flows and sterilisation. China does not have a freely liberalised financial account. The bond market is small and foreign investment usually takes the form of direct investment.

Sterilisation of capital flows is another important element. T-bills were used before 2006, generating further renewals and costs for the central bank. Another solution was gradual adjustment of the reserve requirement rate, which was increased from 8% in June 2006 to 17.5% in October 2008 and now it is even 3% higher. Ouyang (2010) estimates that the PBoC sterilised about 70% of foreign exchange flows between 2007 and 2008. Given the fixed interest rates, the central bank does not make losses. Part of the cost is borne by the banking sector. The central bank will therefore continue raising the rate to maintain the existing system. However, this cannot be done forever and further exchange rate appreciation pressure can be expected.[5]

4 Conclusion

It is clear that Chinese monetary policy will move towards greater liberalisation of the financial system and greater exchange rate flexibility provided that structural reforms are implemented. On the other hand, there is a persisting danger of price bubbles in some sectors and of misallocation of resources. According to statements made by PBoC representatives in the press, the Chinese central bank is striving to switch from quantitative tools to price instruments so that the exchange rate and interest rates can play a greater role in the transmission mechanism.

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PBoC Monetary Policy Reports

[5] An appreciation of the RMB against the dollar of 10% would generate a reduction in the central bank's assets of RMB 2 trillion, which is the value of the bank's equity.

BOFIT	Bank of Finland Institute for Economies in Transition
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
EU	European Union
EUR	euro
EURIBOR	Euro Interbank Offered Rate
Fed	Federal Reserve System (the US central bank)
FRA	forward rate agreement
GBP	pound sterling
GDP	gross domestic product
CHF	Swiss franc
IFO	Institute for Economic Research
IFO-BCI	IFO – Business Climate Index
IFO-CCI	IFO – Consumer Confidence Index
IMF	International Monetary Fund
IRS	Interest rate swap
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
UoM	University of Michigan
UoM-CSI	University of Michigan Consumer Sentiment Index
US	United States
USD	US dollar