

## Monitoring centrálních bank - březen 2014

Česká národní banka 2014 Dostupný z http://www.nusl.cz/ntk/nusl-180144

Dílo je chráněno podle autorského zákona č. 121/2000 Sb.

Tento dokument byl stažen z Národního úložiště šedé literatury (NUŠL). Datum stažení: 03.05.2024

Další dokumenty můžete najít prostřednictvím vyhledávacího rozhraní nusl.cz .

# CENTRAL BANK MONITORING – MARCH

Monetary and Statistics Department Monetary Policy and Fiscal Analyses Division





#### In this issue

Economic developments in the countries we monitor are showing positive signs. In particular, growth in employment is visible in the UK and the USA. In many advanced economies inflation is very low or even negative. Inflation is being monitored particularly closely in the euro area. The US Federal Reserve is reducing the pace of its asset purchases. Many emerging markets are feeling the adverse effects of this step, with their currencies depreciating sharply and thus exerting inflationary pressures. After a sharp drop in unemployment, the Bank of England issued new forward guidance. The European Central Bank left its monetary policy unchanged. The Hungarian central bank continued lowering its rates as expected by the financial markets. The policy rates of the other central banks under review remained unchanged, although the New Zealand central bank now expects to start raising interest rates soon. Spotlight focuses on the monetary policy of Turkey from the introduction of implicit inflation targeting through to the current challenges associated with the sharply depreciating lira. Our Selected Speech is by Charles I. Plosser, the President and CEO of the Federal Reserve Bank of Philadelphia, who considers the character of economic shocks, the measurement of economic potential, and output gaps and their implications for the optimal monetary policy stance.

## 1. LATEST MONETARY POLICY DEVELOPMENTS AT SELECTED CENTRAL BANKS

	Euro area (ECB)	USA (Fed)	United Kingdom (BoE)	
Inflation target	< 2% <sup>1</sup>	2% <sup>2</sup>	2%	
MP meetings (rate changes)	9 Jan (0.00) 6 Feb (0.00) 6 Mar (0.00)	17–18 Dec (0.00) 28–29 Jan (0.00)	8–9 Jan (0.00) 5–6 Feb (0.00) 5–6 Mar (0.00)	
Current basic rate	0.25%	0–0.25%	0.50%	
Latest inflation	0.8% (Feb 2014) <sup>3</sup>	1.4% (Jan 2014)	1.9% (Jan 2014)	
Expected MP meetings	3 Apr 8 May 5 Jun	9–10 Apr 18–19 Mar 4–5 Jun		
Other expected events	5 Jun:	16 Apr and 4 Jun:	14 May: publication of	
	publication of forecast	publication of Beige Book	Inflation Report	
Expected rate movements <sup>4</sup>	publication of forecast →	publication of Beige Book →	Inflation Report →	
Expected rate movements <sup>4</sup>	→ bility; <sup>2</sup> January 2012 defir	$\rightarrow$ hition of inflation target; <sup>3</sup> fla	$\rightarrow$	
Expected rate movements <sup>4</sup> <sup>1</sup> ECB definition of price stal expected change in rates in co Key inter	→ bility; <sup>2</sup> January 2012 defir oming quarter taken from Co	→ nition of inflation target; <sup>3</sup> flaonsensus Forecast survey.	$\rightarrow$ ish estimate; <sup>4</sup> direction of	
Expected rate movements <sup>4</sup> <sup>1</sup> ECB definition of price stal expected change in rates in co	→ bility; <sup>2</sup> January 2012 defir oming quarter taken from Co	→ nition of inflation target; <sup>3</sup> fla	$\rightarrow$ ish estimate; <sup>4</sup> direction of	

#### Key central banks of the Euro-Atlantic area

The **ECB** left its key interest rate unchanged at 0.25%. The deposit rate remains at 0%. According to Mario Draghi, ECB interest rates will remain at present or lower levels for an extended period. A moderate recovery is proceeding in the euro area economy. Quarter-on-quarter GDP growth was 0.3% in 2013 Q4. The ECB projection (newly published for a three-year horizon) confirms expectations of a longer period of very low inflation, foreseeing inflation at 1.0% in 2014, 1.3% in 2015 and 1.5% in 2016. In the last quarter of 2016, annual HICP inflation is projected to be 1.7%. In March, the ECB discussed the possibility of cutting rates and introducing other measures.

The **Fed** left its key interest rate unchanged and confirmed its commitment to keep rates at the current level at least as long as the employment rate remains above 6.5%, the inflation outlook remains no more than 0.5 pp above the longer-run goal (of 2%), and longer-term inflation expectations are well anchored. The Fed is continuing to purchase securities, but at a lower pace of USD 65 billion per month as against the original USD 85 billion. Annualized q-o-q GDP growth slowed from 4.1% to 2.4% in 2013 Q4, but the employment rate dropped further to 6.6% in January. However, the FOMC anticipates maintaining low rates even if unemployment declines further, especially if projected inflation stays below its 2% goal.

The **BoE** left its key interest rate at 0.50% and also maintained the size of its Asset Purchase Programme. Inflation fell to 1.9% in January and is thus almost at the central bank's 2% target level. The economic recovery in the UK is the strongest one since 2008. GDP growth reached 1.9% in 2013. Unemployment has fallen sharply, and for this reason the BoE has issued new forward guidance (see *News* for more details). Moreover, at its March meeting the BoE decided to reinvest the GBP 8.1 billion of cash flows associated with securities held in the Asset Purchase Facility.

	Sweden (Riksbank)	Hungary (MNB)	Poland (NBP)		
Inflation target	2%	3%	2.5%		
MP meetings (rate changes)	16 Dec (-0.25) 12 Feb (0.00)	19 Dec (-0.20) 21 Jan (-0.15) 18 Feb (-0.15)	7–8 Jan (0.00) 4–5 Feb (0.00) 4–5 Mar (0.00)		
Current basic rate	0.75%	2.7%	2.50%		
Latest inflation	-0.2% (Jan 2014)	0.0% (Jan 2014)	0.7% (Jan 2014)		
Expected MP meetings	9 Apr	25 Mar 29 Apr 27 May	8–9 Apr 6–7 May 2–3 Jun		
Other expected events	9 Apr: publication of Monetary Policy Report	25 Mar: publication of Quarterly Report on Inflation	Mid-March: publication of Inflation Report		
Expected rate movements <sup>1</sup>	$\rightarrow$	$\downarrow \qquad \rightarrow$			
<sup>1</sup> Direction of expected change in rates in coming quarter taken from Consensus Forecast survey.					
Key interest rates         Inflation					

## Selected central banks of inflation-targeting EU countries

At its December meeting, the **Riksbank** reduced its key interest rates by 0.25 pp to 0.75%. The deposit rate was lowered to zero. The Riksbank says interest rates will stay at such low levels at least until the start of 2015. Inflation was negative in January and the Riksbank expects it to rise only very slowly, attaining the 2% target in 2015. Economic activity abroad is strengthening, confidence among Swedish households and companies has risen and employment has increased. The labour market is expected to improve further as GDP growth rises this year.

Once again, the **MNB** lowered its monetary policy rate three times in the last quarter, first by 0.20 pp and then twice by 0.15 pp, i.e. by a total of 0.50 pp to the present level of 2.7%. Inflation continued to decline in January, reaching zero. Unemployment is falling, but still exceeds its long-term level determined by structural factors. Private sector wage growth is moderate. The low domestic inflationary pressures are expected to fade as the domestic economic recovery gains momentum.

The **NBP** left its monetary policy rate unchanged at 2.50%. The inflation reached 0.7% in January and is thus still well below the inflation target of 2.5%. GDP growth in 2013 Q4 was supported primarily by net exports. Investment and consumption were also favourable. Retail sales and industrial output in January indicate a gradual economic recovery at the start of this year, while business climate indicators suggest gradually accelerating growth in the coming quarters. Employment rose in 2014 Q1, but the unemployment rate remains elevated, hampering wage growth in the economy. The NBP expects inflation at 0.8–1.4% in 2014 and 1.0–2.6% in 2015. Annual GDP growth is projected to be in the range of 2.9–4.2% in 2014 and 2.7–4.8% in 2015.

	<u>Norway (NB)</u>	Switzerland (SNB)	New Zealand (RBNZ)		
Inflation target	2.5%	0–2%	2%		
MP meetings (rate changes)	5 Dec (0.00)	12 Dec (0.00)	12 Dec (0.00) 30 Jan (0.00)		
Current basic rate	1.50%	0–0.25% <sup>1</sup>	2.50%		
Latest inflation	2.3% (Jan 2014)	0.1% (Jan 2014)	1.6% (2013 Q4)		
Expected MP meetings	27 Mar 8 May	20 Mar 19 Jun	13 Mar 24 Apr		
Other expected events	27 Mar: publication of Monetary Policy Report	26 Mar: publication of Monetary Policy Report	13 Mar: publication of Monetary Policy Statement		
Expected rate movements <sup>2</sup>	$\rightarrow$	$\rightarrow$	$\rightarrow$		
<sup>1</sup> Chart displays centre of band; <sup>2</sup> direction of expected change in rates in coming quarter taken from Consensus Forecast survey or, in the case of New Zealand, from RBNZ survey.					
Key interest rates       Inflation $3$ $4$ $4$ $1$ $4$ $4$ $2$ $4$ $4$ $2$ $4$ $4$ $2$ $4$ $4$ $1$ $4$ $4$ $2$ $4$ $4$ $1$ $4$ $4$ $2$ $4$ $4$ $1$ $113$ $3$ $3$ $4$ $4$ $4$ $4$ $4$ $1$ $113$ $3$ $113$ $3$ $5$ $113$ $3$ $4$ $113$ $3$ $113$ $1113$ $3$ $113$ $1113$ $113$ $1113$					
2/13 4/13 6/13 	8/13 10/13 12/13 2/14 CHE NZL	1/13 3/13 5/13 7/1 NORC	3 9/13 11/13 1/14 CHE NZL		

## Other selected inflation-targeting countries

**Norges Bank** has made no interest rate decisions since the December issue of Monitoring. NB usually holds monetary policy meetings six times a year. This year they are scheduled for 27 March, 8 May, 19 June, 18 September, 23 October and 11 December.

The **SNB** left rates in the lower part of the 0–0.25% target range and is sticking to its commitment to enforce a minimum exchange rate of CHF 1.20 to the euro. The inflation outlook was revised downwards; according to the SNB forecast the inflation rate will be 0.2% in 2014 and 0.6% in 2015. The SNB expects GDP growth of 1.5–2.0% for 2013 and around 2.0% for 2015. The SNB is monitoring the danger of imbalances on the mortgage and real estate markets and has proposed that the countercyclical capital buffer (part of the overall regulatory capital of banks) be increased from 1% to 2% (more details here).

The **RBNZ** left its key rate unchanged at 2.50% but expects it to rise soon. Inflation edged up to 1.6% in 2013 Q4 and was thus below the central bank's inflation target. Over the next two years, however, the RBNZ expects inflationary pressures from the real economy to increase, especially in construction-related price categories. New Zealand's economic expansion is gaining momentum. GDP grew by 3.5% in the year to September (as compared to the expected 3%) and the RBNZ expects growth to continue around this rate in 2014. Property price growth has moderated in recent months.

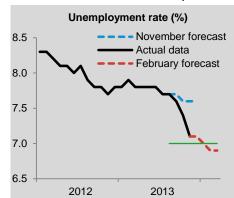
## 2. NEWS

#### BoE's new forward guidance

The Bank of England, taken by surprise by very favourable labour market developments,

revised its forward guidance. In August 2013, the BoE had pledged to maintain its highly stimulative monetary policy stance at least until the unemployment rate fell to 7%. Contrary to the BoE's expectations, unemployment has fallen sharply, with almost half a million more people having found work since August. The BoE furthermore forecasts this indicator to reach the 7% threshold soon.

In February, therefore, BoE Governor Mark Carney outlined the next phase of guidance. Carney said the BoE would monitor spare capacity in the economy and reflect it in its decision-making. He judges that there remains scope to absorb spare capacity further. When inflation is at target



but the economy is operating below its potential, the BoE will set policy to stimulate demand to eliminate that spare capacity. The MPC's view is that the economy currently has spare capacity equivalent to about 1-1.5% of GDP.

The governor also noted that the interest rate increase, once the BoE decides on it, is expected to be only gradual. At the same time, the MPC intends to maintain the stock of asset purchases until the first rise in the bank rate. According to Carney, any increases in the bank rate should be limited given the headwinds holding back the economy (the repair of public and private balance sheets, weak world demand, the appreciation of sterling, strains remaining in the financial system). These persistent headwinds imply that, in the medium term, the level of interest rates necessary to sustain low unemployment and price stability will be materially lower than before the crisis. Even when the economy returns to normal levels of capacity and inflation is close to the target, the appropriate level of the bank rate is likely to be materially below the 5% level set on average prior to the crisis. The MPC furthermore began publishing forecasts of 18 more economic indicators to better assess the economic situation.

BoE's indicators						
Global growth Credit condit	tions Supply capacity	External prices	Other indicators			
- World GDP - Credit spread - Euro-area GDP - Household stratio - USA GDP - Business investment to GDP ratio	aving - Participation rate - Average hours worked	prices	ribusing investment	<ul> <li>Real post-tax household income</li> <li>Employment</li> <li>Average weekly earnings</li> </ul>		

#### Fed's tapering affects emerging markets

The Fed's decision to reduce the pace of its asset purchases is prompting capital flow reversals and currency depreciation in many emerging countries. In Argentina, India and South Africa, depreciating currencies are thus creating considerable inflation risks in spite of low economic growth. Turkey, one of the countries facing changes in global investor sentiment, is examined from the monetary policy perspective in *Spotlight*.

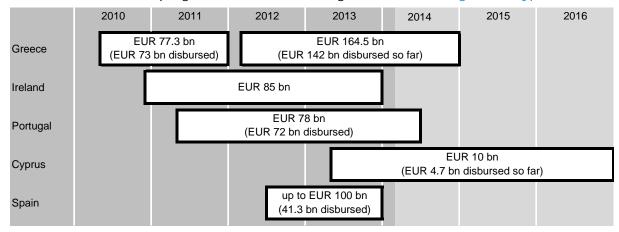
## Euro introduction in Latvia

Latvia introduced the euro as its legal tender on 1 January 2014. With the enlargement of the euro area to 18 member countries the number of Europeans sharing the currency has increased to some 333 million people. After experiencing a deep economic crisis and requiring financial assistance a few years ago, Latvia managed to recover briskly. It fully repaid the loan ahead of schedule and fulfilled all the necessary requirements for joining the euro area. The

governor of Latvijas Banka has thus become a member of the Eurosystem's Governing Council and participates in euro area monetary policy decision-making.

## Ireland and Spain successfully conclude economic assistance programmes

Ireland and Spain successfully concluded the economic stabilisation programmes on which financial support from the EU – and in the case of Ireland also from the IMF – had been made conditional. Stabilisation programmes are continuing in <u>Greece</u>, <u>Portugal</u> and <u>Cyprus</u>.



#### **Repercussions of events in Ukraine and Russia**

The current events in Ukraine are having a serious impact on its economy. Ukraine's monetary policy – its main goal being stability of the national currency, with other priorities of price stability (defined as an inflation rate of 4–6%), banking system stability and support for the government's economic policy – is now confronted with a difficult situation. The National Bank of Ukraine's new governor Stepan Kubiv will have to deal with tough issues, most notably restoration of public confidence in the country's banking system, the creation of a favourable environment to encourage investors to return to the Ukrainian market, and prevention of the outflow of financial funds. The most pressing matter at the moment is stabilisation of the hryvnia. The country has already requested financial assistance from the International Monetary Fund. In addition to IMF missions, EU experts are planning to visit Ukraine and aid from the EBRD is expected. Kubiv has indicated that the current level of gold and foreign exchange reserves is adequate and should stay so thanks to the IMF loan. The central bank has taken several temporary measures. It is providing liquidity to banks in the required amounts, but with tougher transparency conditions and tighter control of the funds provided. The requirement obliging banks to hold provisions for foreign currency loans has been suspended.

At the beginning of March, Russia also struggled with massive pressure on its currency. Its central bank responded to the situation by increasing its monetary policy rate by 1.5 pp to 7%. Moreover, the Bank of Russia decided to support the rouble – which has weakened by nearly 10% since the start of 2014 – with foreign currency interventions. Given the increased volatility in the domestic FX market, the central bank has started setting the parameters of its exchange rate policy daily based on an assessment of the latest situation.

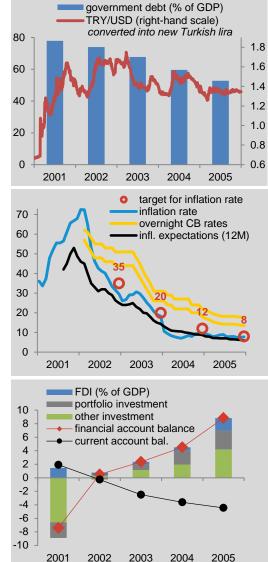
#### 3. SPOTLIGHT: THE MONETARY POLICY OF TURKEY

Under the spectre of rapid capital outflows the currencies of emerging economies are losing value in response to the tapering of unconventional monetary instruments by the Federal Reserve. One country that is being buffeted by the changes in global investor sentiment is Turkey. After suffering a crisis at the start of the millennium, Turkey embarked on a successful path to lower inflation under implicit inflation targeting. The Turkish central bank adopted the standard version of this regime in 2006 but initially overshot its inflation targets. The Turkish economy was affected by the global financial and economic crisis but recovered relatively quickly and returned to rapid growth, supported by capital inflows bolstered by the quantitative easing policies of the world's main central banks. In an effort to combat growing macroeconomic imbalances, the Turkish central bank started using unconventional instruments itself in 2010. As it added more targets, however, it deviated significantly from traditional inflation targeting and prices started to surge again. In January of this year, following a sharp depreciation of the lira, the Turkish central bank more than doubled its policy rate from 4.5% to 10% and decided to simplify its regime.

#### The Turkish economy at the start of the 2000s

Unsustainable public finances, inadequate bank regulation, chronic inflation averaging around 80%, high interest rates and high dollarisation of the economy were the main features of the Turkish economy at the turn of the new millennium. In response to the sustained high inflation, a stabilisation policy - consisting mainly in a crawling peg - was introduced in 2000. A crisis in February 2001, however, forced the Turkish central bank (CBRT) to let the lira float freely. The subsequent massive depreciation caused inflation to surge as high as 68%. The collapse of the lira along with extensive recapitalisation of banks caused government debt to rise from 52% to almost 80% of GDP. Gross domestic product fell by almost 10%. Turkey was granted financial assistance under an IMF programme that required it to achieve large primary budget surpluses.

Turkey's long history of inflation meant that inflation expectations were also high (around 50% at the end of 2001). One problem was the indexation of wages and prices to past data. Owing to its changing economic structure and a shortage of good quality data, the country lacked sufficient information for economic analyses and the results did not give a clear picture of the linkages within the economy. Monetary policy was severely limited by a high level of government debt with a large proportion of short-maturity bonds. The CBRT did not have control of long-term rates. Although the new central bank law of April 2001 guaranteed this institution's independence, it was not clear whether it would work in practice. As the conditions for inflation targeting had not been met at the time, the CBRT



introduced **implicit inflation targeting** (2002–2005) and, together with the government, set falling inflation targets of 35%, 20%, 12% and 8% for successive years.<sup>1</sup>

Although the CBRT's decisions during this period were discretionary and opaque, its communication, transparency, institutional conditions, forecasting system and data sources gradually improved. Despite high inflation expectations and inflation pressures, the central bank did not raise rates during the implicit inflation targeting period and instead focused mainly on communication policy and tried to support the government's fiscal reform drive. Fiscal discipline played a crucial role in the disinflation process. The results were surprisingly impressive – inflation went down from 68% in 2001 to 7.7% in 2005. Inflation expectations gradually decreased and the dollarisation of the economy was significantly reduced.

Under a monetary reform in 2005, six zeros were removed from the Turkish lira. The economy began a period of rapid economic growth. Exchange rate risk in the balance sheets of banks and firms was reduced. The favourable economic situation stimulated an inflow of capital, although much of this was short-term investment, which can flow out again very quickly if investor sentiment changes. In addition, the foreign capital brought with it a number of unhealthy tendencies – excessive growth in domestic demand, a sharp rise in loans, private consumption and consumer goods imports and, as a result, a widening current account deficit.

#### Inflation targeting and the impacts of the global crisis

In late 2004, the CBRT announced that it would introduce full-fledged inflation targeting at the start of 2006. Decision-making responsibility was put in the hands of a Monetary Policy Committee (MPC). A calendar of MPC meetings was published and the CBRT started issuing regular inflation reports. Inflation targets – with an "uncertainty band" of two percentage points on either side – are declared each year for three years ahead (and revised where necessary). Although the exchange rate is freely floating, the CBRT has been buying modest amounts of foreign currency in regular auctions to increase its foreign exchange reserves. It has also decided to intervene in the event of excessive foreign exchange market volatility.

In the first few years after the switch to inflation targeting the targets were exceeded, mainly due to a weakening lira, global supply shocks and rising administered prices. Right from the outset, therefore, the CBRT had to explain why it had overshot its targets.

The outbreak of the global financial and economic crisis in late 2008 hit Turkey hard. Besides a slump in external demand, country faced dwindling capital flows and a lack of dollar liquidity. The lira weakened by more than 30% in three months. The CBRT cut its lending rate from 16.75% to 6.50% and reduced the gap between its lending and deposit rates. Purchase auctions were suspended and the CBRT injected dollar liquidity as well as domestic liquidity into the financial system. Above all, it introduced longer-term (three-month) repo operations and lowered the reserve requirement for domestic and foreign currency deposits.

In 2010, while the advanced economies were still grappling with recession, growth in Turkey, as in other emerging economies, began to gather pace and the CBRT gradually phased out its extraordinary measures. The resulting inflow of capital – bolstered by the advanced economies' extremely easy monetary policies – was problematic in that it was very short-term in nature, causing the lira to appreciate and macrofinancial risks to emerge. The CBRT therefore started buying foreign currency again. The amounts purchased then rose sharply, albeit only temporarily, as the inflow of short-term capital grew, causing the sterilisation costs to surge.

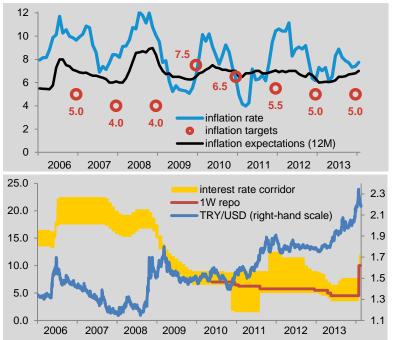
<sup>&</sup>lt;sup>1</sup> In the implicit inflation targeting regime, the central bank declared inflation targets and endeavoured to hit them. However, inflation targeting was not adopted formally, nor were any details of the regime announced. Moreover, many of the necessary conditions for full-fledged inflation targeting were not satisfied.

#### New monetary policy instruments

At the end of 2010, the CBRT adopted financial stability as an additional target, although its price stability target was not meant to be affected by this move. Along with macroprudential measures it introduced new monetary policy tools. One of these was the active use of an interest rate corridor to combat excessive capital flows: when capital flowed in, the CBRT

lowered the deposit rate, and later, when capital dried up, it supplied liquidity at an increased lending rate. However, the wider corridor caused interbank rates to go up, and the volatility of the rates also rose as the uncertainty grew. A Reserve Option Mechanism (ROM) was introduced to reduce the capital flow volatility and mitigate its effects on macroeconomic and financial stability. The ROM gave banks the option of holding part of their domestic reserves in foreign currency or gold. This was meant to ease the appreciation pressure on the lira when capital flowed in.

The central bank's unconventional monetary policy was thus aimed at reducing the extreme flows of capital and their impact on credit



growth and simultaneously at regulating the exchange rate if it showed excessive volatility. Sooner or later, a conflict of targets would inevitably arise. The CBRT deviated significantly from traditional inflation targeting and set looser monetary conditions than needed to achieve its inflation target. On top of that, Prime Minister Erdogan and other government representatives repeatedly expressed their opinion that an increase in rates would undermine the Turkish economy.

Despite the CBRT's best efforts, the Turkish currency was affected in 2013 by fears about the Fed's exit from its unconventional monetary policies and later also by the tapering of its quantitative easing programme. Starting in May 2013, the lira lost almost a quarter of its value against the dollar despite daily sales of dollars against the lira in CBRT auctions.

#### The CBRT's decision in January

In mid-January, the Turkish central bank intervened in the foreign exchange markets in an attempt to prop up the sharply depreciating lira. In the end, however, the CBRT decided in late January to more than double the repo rate from 4.5% to 10%. The lira subsequently recovered part of its losses. The CBRT simultaneously simplified its monetary policy framework by deciding to conduct its operations primarily through one-week repo tenders. These actions may signal a return of the CBRT to more conventional monetary policy focused on price stability.

#### 4. SELECTED SPEECH: SHOCKS, GAPS AND MONETARY POLICY

Charles I. Plosser, the President and CEO of the Federal Reserve Bank of Philadelphia, delivered a <u>speech</u> at a forum of the Korea-America Economic Association in early January in which he considered the character of economic shocks, the measurement of economic potential, and output gaps and their implications for the optimal monetary policy stance.

In his speech, Charles Plosser addresses the question of whether the observed negative economic shocks (such as the recent financial and economic crisis) have only transitory effects or whether they are a source of persistent changes in levels of economic activity. Mainstream economics employs the concept of transitory shocks, which fade out relatively quickly. These shocks create an output gap – a deviation from potential economic output. A negative output gap then creates deflationary pressures and calls for an accommodative monetary policy reaction, which should be able to smooth the gap. According to this concept, the period of a negative output gap should be followed by a period of higher economic growth, which should close the gap with respect to potential output.

Plosser offers a different interpretation. Using the example of United States GDP in the period around the recent crisis he shows that after reaching the bottom of the cycle in 2009 the economy continued to grow at rates close to those common before the crisis. The faster growth needed to close the gap has not occurred. Instead of a V-shaped recovery, there seems to have been a persistent level shift (fall) in economic activity. According to Plosser, this shock can be interpreted as permanent decline in the productivity of the financial intermediation sector, while the fall in housing prices has permanently reduced households' wealth. Plosser suggests that the majority of shocks have such a permanent character. Using the results of his academic research, he argues that the behaviour of economic variables can often be described as a random walk process with a long memory rather than as a mean-reverting process exhibiting convergence to a steady state, as assumed by contemporary mainstream economics. A return to the pre-crisis trend line is therefore highly unlikely.

The question of whether the impacts of economic shocks are transitory or permanent has important implications for monetary policy. According to the prevailing concept, which assumes that the output gap will eventually close and the economy will converge to a steady state (economic potential), the optimal reaction of a central bank to a significant negative shock is extremely accommodative monetary policy. In the presence of a binding zero bound on nominal interest rates, such monetary expansion can be delivered using non-standard tools such as quantitative easing. If the shock is permanent, the current level of economic output should be viewed as the new potential, and the optimal stance of monetary policy is neutral, not accommodative as observed today.

Moreover, there are other ways of measuring output gaps. New Keynesian theory employs the concept of the efficient level of economic activity, i.e. the level that would be attained in the absence of various rigidities and frictions. The monetary policy prescription in this theory is to minimise the gap with respect to this efficient level, which is equivalent to targeting inflation. This concept of an efficient level based on (the absence of) rigidities and frictions is different from the traditional concept of economic potential based on the production possibility frontier.

Plosser sums up that our understanding of the economy, and especially of the nature of shocks and their degree of persistence, is not perfect. Some economists believe that shocks are transitory and the economy tends to close the output gap and converge to its potential. Others claim that shocks are permanent, or at least highly persistent. Monetary policy therefore should be robust to these fundamental uncertainties.

This document is produced by the Monetary and Statistics Department of the Czech National Bank and is freely distributable. Closing date: 6 March 2014. Current and past issues can be downloaded free from the Monetary Policy section of the CNB website. Contact: <u>http://www.cnb.cz</u> or <u>info@cnb.cz</u>.