

CENTRAL BANK MONITORING – MARCH

Monetary Department
Monetary Policy and Fiscal Analyses Division

2016

In this issue

Most countries are feeling the risks and effects of the global economic slowdown, and their central banks are being forced to ease monetary policy further. Negative interest rates, which are being used as an unconventional monetary policy instrument in some countries, are a widely discussed topic in terms of both the potential spread of their use to other central banks and their possible reduction deeper into negative figures. Still low oil prices are affecting inflation, and some banks are facing low inflation expectations. The ECB introduced a package of measures aimed at easing monetary policy, the Riksbank lowered its key rate further into negative territory and the RBNZ cut its key monetary policy rate. Other central banks left their conventional and unconventional measures unchanged. Thanks to the improving condition of the US economy, the Fed embarked on a different path, increasing its key interest rate in December 2015.

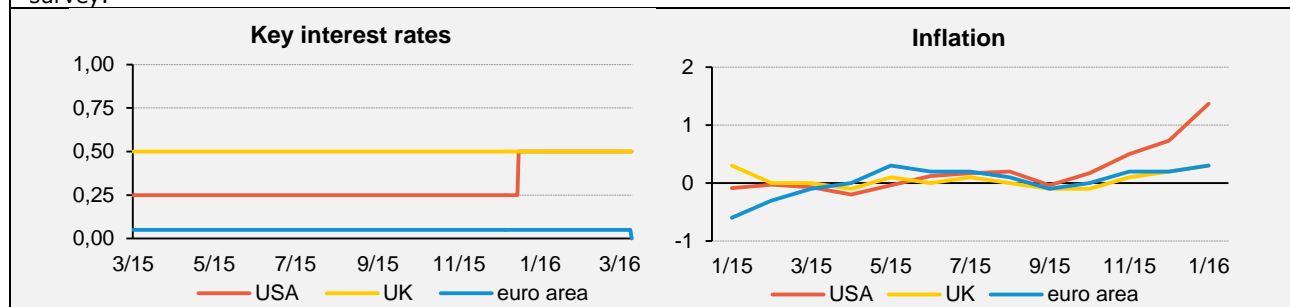
Starting with this issue of CBM, our introductory survey of monetary policy developments at selected central banks includes the Bank of Canada. As a consequence, Spotlight discusses the monetary policy of the Canadian central bank. Our Selected Speech summarises the views of Stanley Fischer, Vice Chair of the Board of Governors of the Federal Reserve System, on the issue of low interest rates.

1. LATEST MONETARY POLICY DEVELOPMENTS AT SELECTED CENTRAL BANKS

Key central banks of the Euro-Atlantic area

	<u>Euro area (ECB)</u>	<u>USA (Fed)</u>	<u>United Kingdom (BoE)</u>
Inflation target	< 2% ¹	2% ²	2%
MP meetings (rate changes)	21 Jan (0.00) 10 Mar (-0.05); (-0.10) ³	15–16 Dec ⁵ (0.25) 26–27 Jan (0.00)	9–10 Dec (0.00) 14 Jan (0.00) 4 Feb (0.00)
Current basic rate	0.00%; -0.40% ³	0.25-0.50%	0.50%
Latest inflation	-0.2% (Feb 2016) ⁴	1.4% (Jan 2016)	0.3% (Jan 2016)
Expected MP meetings	21 Apr 2 Jun	15–16 Mar ⁵ 26–27 Apr 14–15 Jun ⁵	17 Mar 14 Apr 12 May
Other expected events	2 Jun: publication of forecast	13 Apr: publication of Beige Book	12 May: publication of Inflation Report
Expected rate movements⁶	→	↑	→

¹ ECB definition of price stability “below, but close to 2%”; ² January 2012 definition of inflation target; ³ deposit rate; ⁴ flash estimate; ⁵ meeting associated with summary of FOMC economic forecasts and press conference given by FOMC Chairman; ⁶ direction of expected change in rates in next three quarters taken from Consensus Forecasts survey.



At its meeting in March, the **ECB** introduced a package of measures aimed at further easing monetary conditions. The key interest rate was lowered by 5 bp to zero, the deposit facility rate by 10 bp to -0.40% and the marginal lending facility rate by 5 bp to 0.25% with effect from 16 March. At the same time, the ECB decided to expand the monthly purchases under the asset purchase programme by EUR 20 billion to EUR 80 billion. Investment grade euro-denominated bonds issued by non-bank corporations will now be eligible for regular purchases. Also announced was the launch of targeted longer-term refinancing operations (TLTRO II), each with a maturity of four years, starting in June 2016.

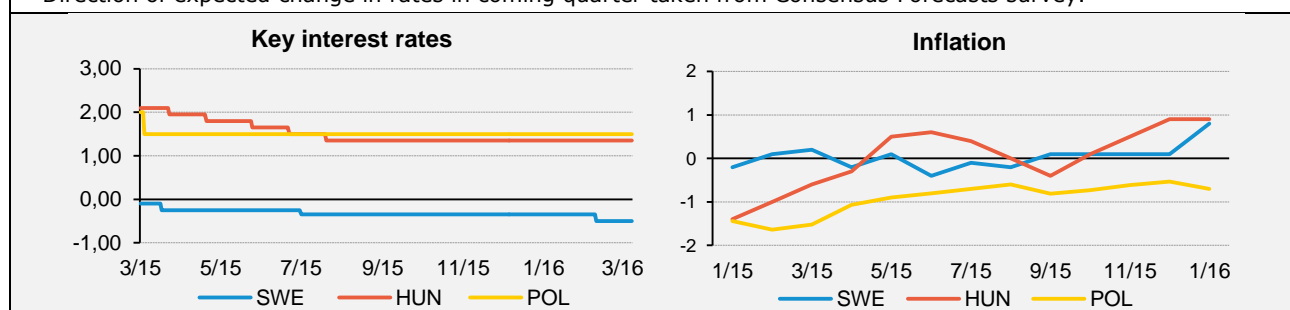
As expected, the **Fed** raised interest rates by 25 bp in December. The target range for its key interest rate is now 0.25%–0.50%. Further increases in rates are to be gradual rather than mechanical. Excess liquidity will be sterilised using an overnight reverse repo facility in virtually unlimited amounts. The Fed left interest rates unchanged in January. Economic growth has moved in the anti-inflationary direction since the December forecast. According to the Fed, inflation will be low in the near term and fulfilment of the 2% target is being postponed due to low commodity prices. Employment continues to grow at a fast pace, while economic growth slowed at the end of the year.

The **BoE** left its key interest rate at 0.50% and maintained the size of its securities holdings at GBP 375 billion. Inflation switched from negative to slightly positive at the end of 2015, reaching 0.2% in December. The BoE expects it to remain below 1% until the end of this year. Annual GDP growth slowed to less than 2% in 2014 Q4. This was due mainly to slower growth in credit-sensitive components of demand such as housing investment, reduced growth in government consumption and lower demand for exports due to appreciation of sterling.

Selected central banks of inflation-targeting EU countries

	<u>Sweden (Riksbank)</u>	<u>Hungary (MNB)</u>	<u>Poland (NBP)</u>
Inflation target	2%	3%	2.5%
MP meetings (rate changes)	14 Dec (0.00) 10 Feb (-0.15)	15 Dec (0.00) 26 Jan (0.00) 23 Feb (0.00)	13–14 Jan (0.00) 2–3 Feb (0.00)
Current basic rate	-0.50%	1.35%	1.50%
Latest inflation	0.8% (Jan 2016)	0.9 % (Jan 2016)	-0.7% (Jan 2016)
Expected MP meetings	20 Apr	22 Mar	10–11 Mar 5–6 Apr 12–13 May
Other expected events	21 Apr: publication of Monetary Policy Report	22 Mar: publication of Inflation Report	14 Mar: publication of Inflation Report
Expected rate movements¹	→	→	→

¹ Direction of expected change in rates in coming quarter taken from Consensus Forecasts survey.



At its February meeting, the **Riksbank** surprisingly lowered its key interest rate further into negative territory – by 15 bp to -0.50%. The markets had expected only a 10 bp cut. The Riksbank is continuing to purchase government bonds in accordance with the plan announced in October and is now reinvesting maturities and coupons from the government bond portfolio. According to the Riksbank's outlook, the period of low inflation this year will be even more prolonged, despite relatively good economic growth and falling unemployment. Specifically, CPI inflation and CPI inflation have been revised from 1.7% to 1.3% and from 1.3% to 0.7% respectively in 2016. The inflation target is expected to be fulfilled in 2017. The Riksbank is ready to ease monetary policy further and intervene in the foreign exchange market (for more details see *News*).

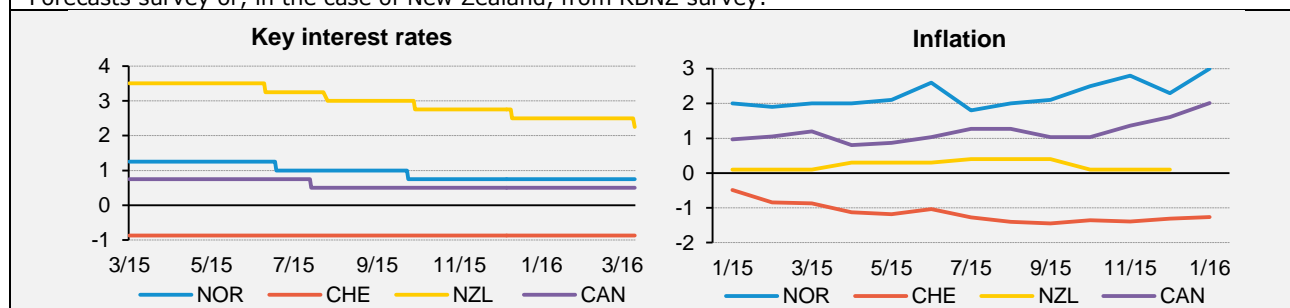
The **MNB** left its key rate at a historical low of 1.35%. According to the flash estimate, the Hungarian economy grew by 3.2% year on year in Q4, supported by growth in retail sales and rising industrial production. Despite having slowed in Q2 and Q3, the economy showed a growth rate of close to 3% in 2015 as a whole. The MNB expects slower growth in the first half of 2016, due mainly to a drop in government investment related to a decrease in the drawdown of EU funds. Growth will then recover due to higher exports and growth-supporting programmes. The MNB continues to expect inflation to remain well below the 3% target and approach it only at the end of 2017.

The **NBP** kept its interest rate unchanged at 1.50% in January and February. Economic growth continues (3.9% in Q4), driven mainly by consumption supported by a robust labour market. The Polish economy grew by 3.6% in 2015 as a whole. Inflation remains negative (-0.7% in January), mainly because of low commodity prices. Inflation expectations are still very low. The NBP expects inflation to remain negative in the coming quarters, with core inflation increasing gradually. It will be supported by stable economic growth and favourable labour market conditions.

Other selected inflation-targeting countries

	Norway (NB)	Switzerland (SNB)	New Zealand (RBNZ)	Canada (BoC)
Inflation target	2.5%	0-2%	2%	2%
MP meetings (rate changes)	17 Dec (0.00)	10 Dec (0.00)	10 Dec (-0.25) 28 Jan (0.00) 10 Mar (-0.25)	20 Jan (0.00) 9 Mar (0.00)
Current basic rate	0.75%	from -1.25 to -0.25% ¹	2.25%	0.5%
Latest inflation	3.0% (Jan 2016)	1.3%% (Jan 2016)	0.1% (2015 Q4)	2.0% (Jan 2016)
Expected MP meetings	17 Mar 23 Jun	17 Mar 16 Jun	28 Apr 9 Jun	13 Apr 25 May
Other expected events	17 Mar: publication of Monetary Policy Report	23 Mar: publication of Monetary Policy Report	9 Jun: publication of Monetary Policy Statement	13 Apr: publication of Monetary Policy Report
Expected rate movements²	→	→	↓	→

¹ Chart displays centre of band; ² direction of expected change in rates in coming quarter taken from Consensus Forecasts survey or, in the case of New Zealand, from RBNZ survey.



The **NB** kept its key interest rate unchanged at 0.75%. The effects of the fall in oil prices on the Norwegian economy are gradually becoming evident. Expectations regarding household consumption and private sector investment have decreased. Although expansionary fiscal policy is acting in the opposite direction, positively affecting demand for goods and services, the overall growth prospects are worse than expected by the NB and unemployment will rise slightly compared to the September forecast. The countercyclical capital buffer rate remains at the level of 1.5% set in June 2015 and will become effective on 30 June 2016.

At its December meeting, the **SNB** left the target range for the key monetary policy interest rate (3M LIBOR) at between -1.25% and -0.25%. The interest rate on sight deposits remained at -0.75%. The SNB remains ready to intervene in the foreign exchange market. The inflation forecast differed little from that of September, with an inflation rate of -0.5% and 0.3% expected in 2016 and 2017 respectively. The SNB expects economic growth of 1.5% this year, thanks mainly to robust domestic demand.

The **RBNZ** lowered its key monetary policy rate by 0.25 pp in both December and March to a current level of 2.25% because of low inflation (0.1% in Q4) and the risk of a decline in inflation expectations. It [did not rule out](#) easing monetary policy further. According to the RBNZ, inflation, which is being affected mainly by the drop in oil prices and the decline in other import prices, will not move inside the tolerance band (i.e. 1.0%–3.0%) until the end of 2016. Although house price inflation in Auckland has moderated, housing market pressures have been building in some other regions.

The **Bank of Canada** (BoC) is covered for the first time in this issue of CBM. Its monetary policy past and present is discussed in *Spotlight*. The BoC left its key rate unchanged at 0.5% in both January and March. Although low oil prices are dampening growth in Canada, the GDP growth of 0.2% recorded in Q4 exceeded the low expectations. The BoC expects GDP to grow by 1.4% this year and by 2.4% in 2017. CPI inflation in Canada stood at 2% year on year in January, but the BoC expects it to be below the targeted level during 2016.

2. NEWS

[Top Riksbank management gains instant intervention powers](#)

At an extraordinary monetary policy meeting in early January, the Executive Board of the Riksbank entrusted to Governor Stefan Ingves, together with First Deputy Governor Kerstin af Jochnick, the power to instantly intervene in the foreign exchange market to hold down the value of the krona, without having to previously convene the board (at this unscheduled board meeting Deputy Governor Martin Flodén [entered a reservation](#) against the intervention decision). The decision comes in response to the strengthening of the krona and to insufficient confidence of the markets in the Riksbank's readiness to intervene, despite repeated warnings from the bank about possible action. In the [Minutes](#) of the January meeting, the Executive Board also expressed a high level of preparedness to take other monetary policy measures in addition to the currency interventions if necessary for inflation to stabilise around 2%.

[Independent review of Riksbank monetary policy published](#)

The Swedish parliament's Committee on Finance commissions an external independent review of the Riksbank's monetary policy every four years as part of the evaluation of the central bank (two reviews have been carried out so far, covering 1995–2005 and 2005–2010). In June 2014, the Committee commissioned a third review from Mervyn King, former Governor of the Bank of England, and Professor Marvin Goodfriend. Their analysis covers the period of 2010–2015. At the beginning of this period the Riksbank raised interest rates in a tightening move that was later criticised. The final [report](#) analyses the processes leading to the Riksbank's decision and concludes that the rate increases in 2010–2011 appear not unreasonable in the light of the information available at the time and were well discussed by the Riksbank's Executive Board. The report is critical about the following period, when the Riksbank was slow to react to changing economic conditions, overly relied on forecasts produced by its own models and did not take into account the expectations of financial markets. Mounting tensions and disagreements among board members (on reconciling monetary policy with financial stability, among other things) started to spill over to the Riksbank's communication, presenting a danger to its reputation and credibility. The report also makes recommendations for remedying the situation, covering four areas: monetary policy, financial stability, accountability and organisation. As for monetary policy, the report recommends switching to the inflation target as measured by the CPIF (for an explanation of indexes, see the [December CBM](#)) and reviewing the target every ten years. Re-examining the methods for producing forecasts for both the world economy and overseas interest rates is also recommended. The report also suggests extending the Riksbank's mandate in the field of financial stability and more intense cooperation with the Swedish financial regulator, and advocates a review of the allocation of responsibility for macro-prudential policy between these two institutions, to be carried out in 2020. Improvements in the form of the minutes of board meetings and renaming and amending the structure of the Executive Board are also recommended.

[MNB terminates two-week deposit facility](#)

The MNB completed its programme of reform of its monetary policy instruments launched in 2014 and decided to terminate its two-week deposit facility by the end of April 2016. The former main instrument, replaced in September 2015 by a three-month facility (see the [June CBM](#)), will be definitively eliminated from the central bank's toolset. The MNB expects that by abolishing the two-week deposit, local banks will choose to purchase an additional HUF 400–800 billion of government bonds. The reform of monetary policy instruments is part of a Self-Financing Programme aimed at supporting banks' shift from depositing liquidity at the central bank to purchasing government securities, and therefore at reducing the nation's reliance on foreign financing of government debt.

Central bank of Japan adopts negative interest rates

In an effort to achieve its 2% inflation target, the Bank of Japan (BoJ) unexpectedly cut its key interest rate by 0.2 pp to -0.1% and did not rule out further cuts into negative territory. The decision will only affect some financial institutions' current accounts at the BoJ (the accounts were divided into three tiers, to which a positive, negative and zero interest rate are applied). The decision to introduce a negative rate was the result of a narrow 5–4 majority vote. At the same time the BoJ (again unexpectedly) chose not to expand its quantitative easing programme beyond its current level of buying ¥80tn in assets a year. The BoJ also extended the time frame for reaching the 2% target from the end of 2016 to at least mid-2017 with reference to falling oil prices. Several days later, BoJ Governor Haruhiko Kuroda stressed in a [speech](#) that there is no limit for the BoJ's monetary easing. He tried to dispel possible doubts that the central bank may be reaching a limit to its asset purchases due to an asset shortage (concern about creating such an impression was also one of the reasons for some of the BoJ board members voting against the adoption of negative rates so soon after the introduction of quantitative easing).

Central bankers hold symposium on ultra-low interest rates

In honour of Christian Noyer, after his long service as Governor of the Banque de France (BdF) and Chairman of the Bank for International Settlements (BIS), the BdF and the BIS co-organised a [farewell symposium](#) of central bank leaders and other officials in Paris in January. The participants discussed the ultra-low interest rates and related challenges for central banks. Apart from Noyer, the speakers and discussants included his successors François Villeroy de Galhau, BdF Governor, and Jens Weidmann, BIS Board Chair, and also Stanley Fischer, Vice Chair of the US Federal Reserve Board, Haruhiko Kuroda, BoJ Governor, Peter Praet, Executive Board Member of the ECB, Mark Carney, BoE Governor, and Christine Lagarde, Managing Director of the IMF. Among other things, the speakers expressed caution over sudden changes to inflation targets (de Galhau, Noyer, Fischer), raised concerns about the way low rates are forcing banks to adapt in unpredictable ways (Carney) and warned against risks stemming from financial markets being pushed into new forms (Noyer – Exchange Traded Funds, ETFs).

Bank of Korea sets inflation target at 2% for three forthcoming years

The central bank of South Korea (BoK) has set its inflation target for 2016–2018 as a fixed point of 2%, as measured by the year-on-year change in the consumer price index. The inflation target for 2013–2015 was defined as a target range from 2.5% to 3.5%. Before that, the BoK had used midpoints of target ranges (see the [overview by the BoK](#)).

Danish central bank raises deposit rate

At the start of January, Danmarks Nationalbank (DNB) raised its interest rate on certificates of deposit by 0.1 pp to -0.65% in a rare step taken independently of action by the ECB, with which it usually moves in lockstep (the ECB cut its deposit rate at its December 2015 meeting). The aim of Danish monetary policy is to maintain a fixed-exchange-rate policy vis-à-vis the euro by setting monetary policy interest rates relative to those of the ECB, and in the short term by intervening in the foreign exchange market. The DNB's decision follows nine consecutive months of interventions to bolster the krone, which resulted in fall in the bank's reserves. The January interest rate rise slightly reduced the need for further interventions.

Monetary Policy Council of Polish central bank works in new composition

The six-year mandates of eight of the ten members of the Monetary Policy Council of the Polish central bank ended this quarter. Seven of the members have been replaced so far. As they are appointed by both houses of parliament and the president, the choice is in the hands of the ruling PiS party as it exercises a dominant influence over both chambers. The mandate of the

current NBP governor Marek Belka expires in June. In March he was nominated by the Polish government as a candidate for president of the European Bank for Reconstruction and Development (EBRD). According to media [information](#), Adam Glapinski, a former MPC member who was recently [appointed](#) to the NBP's Management Board, could succeed Belka as governor.

3. SPOTLIGHT: CANADIAN MONETARY POLICY PAST AND PRESENT

Starting with this issue of CBM, our introductory review of the latest monetary policy developments at selected central banks includes the Bank of Canada (BoC). Like the Czech National Bank and some other central banks regularly monitored in this publication, the BoC targets inflation in a relatively small and open economy with strong ties to a large trading partner. In Spotlight we therefore present the Bank of Canada and its monetary policy and history and take a look at the challenges the BoC faces at present.

Canada is a federation consisting of ten provinces and three territories. With an area of almost 10 billion square kilometres it is the second-largest country in the world, but its population is only 35 million. Canada's GDP amounted to around USD 1,785 billion in 2014 (for comparison, the GDP of the USA, Canada's main trading partner, was USD 17,420 billion the same year).¹ Canada is a relatively open economy with developed foreign trade: both exports and imports account for about one-third of GDP. The USA is the recipient of 77% of its exports and the supplier of 54% of its imports (Canada's other major trading partners are the EU and China, each accounting for about 10% of both exports and imports).² Canada is thus strongly affected by external developments, in particular those in the USA. Unlike other advanced countries, it has a well developed primary sector, particularly the logging and oil industries. It is a net exporter of oil, which, together with oil-related products, accounts for about one-third of its total exports.

A brief history

The central bank law ([Bank of Canada Act](#)) was adopted in 1934 and the Bank of Canada (BoC) opened its doors in March 1935. Originally a privately owned institution, it was nationalised in 1938. All its shares are held by the Canadian Ministry of Finance (on behalf of the Queen of the United Kingdom, as Canada is part of the Commonwealth).

Since then, the BoC's mandate has been "to conduct monetary policy in a way that promotes the economic and financial well-being of Canadians". The BoC's specific monetary policy objective is to preserve the value of the national currency by maintaining price stability, i.e. by keeping inflation low, stable and predictable, and thus contribute to creating a stable economic environment and encourage long-term investment, job creation and greater productivity.

Canada decided to exit the Bretton Woods fixed exchange rate system in 1950, as the BoC and the government were unable to ward off post-war growth in inflationary pressures, which continued into the late 1940s. Canada became the only major world economy to introduce a floating exchange rate, whose appreciation was meant to prevent excessive capital inflows and reduce inflationary pressures. In the second half of the 1950s, the BoC additionally introduced restrictive monetary policy with the aim of curbing high inflation. Inflation then dropped below 1%, but the economy started to slow and the unemployment rate increased. This eventually resulted in the government dismissing the BoC governor in 1961. The public controversy over his dismissal and verbal interventions by the government led to a sharp depreciation of the Canadian dollar in 1962 and to Canada's return to the Bretton Woods system. Canadian monetary policy operated under a fixed-rate exchange rate regime until 1970. After the collapse of the Bretton Woods system the BoC's efforts to contain inflation tended to be reactive, depending on the government's fiscal activities.

In 1975 the BoC decided to introduce money targeting in response to high and volatile inflation. However, the relation between M1 and inflation, on which this regime was based, gradually weakened, partly due to the many financial innovations being introduced at that time, and monetary policy did not produce the desired results. The BoC abandoned this regime

¹ World Bank.

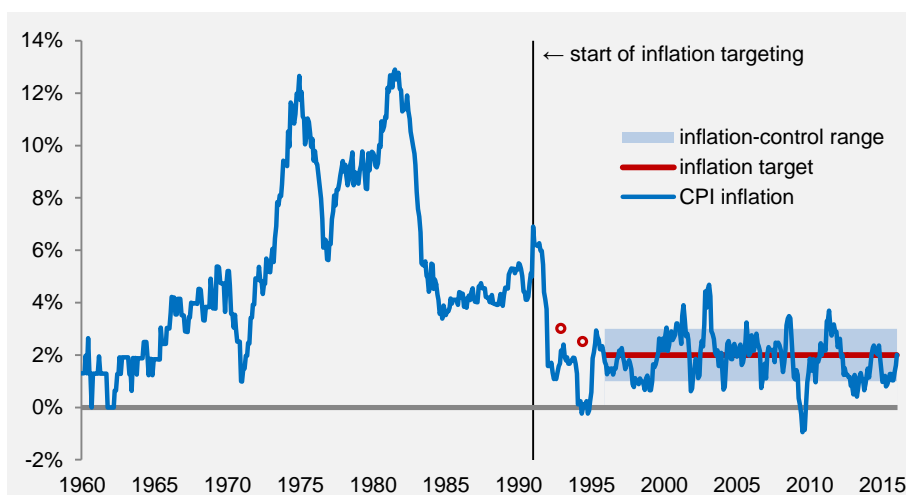
² WTO, September 2015.

in 1982 without replacing it with another formal one, and its monetary policy was hard for the market to read until the start of the 1990s.

The current inflation targeting regime

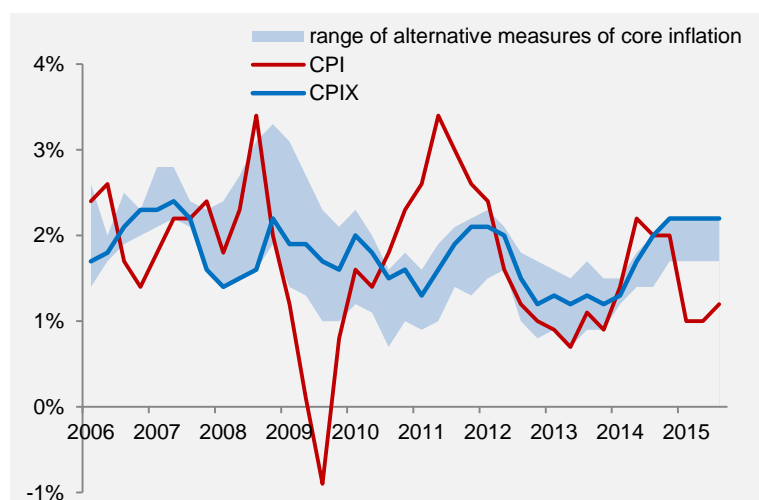
Things changed on 26 February 1991, when the BoC governor and the Canadian minister of finance jointly [announced](#)

an inflation targeting regime. This made Canada the second country in the world after New Zealand to introduce this modern regime. The aim was to gradually reduce inflation as measured by the consumer price index from a low initial level of around 5% to 2% by 1995. Since 1995, the target has been 2% with a control range of 1 pp on either side. Inflation went down and then stabilised



Source: Datastream

after the target was announced and has been fluctuating around 2% ever since. Its variability has decreased by about two-thirds compared with the 1970s and 1980s. Inflation expectations also started to converge towards 2% as the credibility of the inflation target grew.



Source: BoC

The targeted variable is inflation measured as year-on-year growth in the consumer price index (CPI), which was identified as the most relevant estimate of the cost of living. Besides the CPI, the bank also monitors a set of core inflation measures that better capture long-term inflation trends. The main measure, which currently serves as an operational guide for monetary policy-making, is the CPIX, i.e. the CPI stripped of its most volatile components (fruit, vegetables, fuels, intercity transport, tobacco products and mortgage interest) and the effect of changes in indirect taxes.³

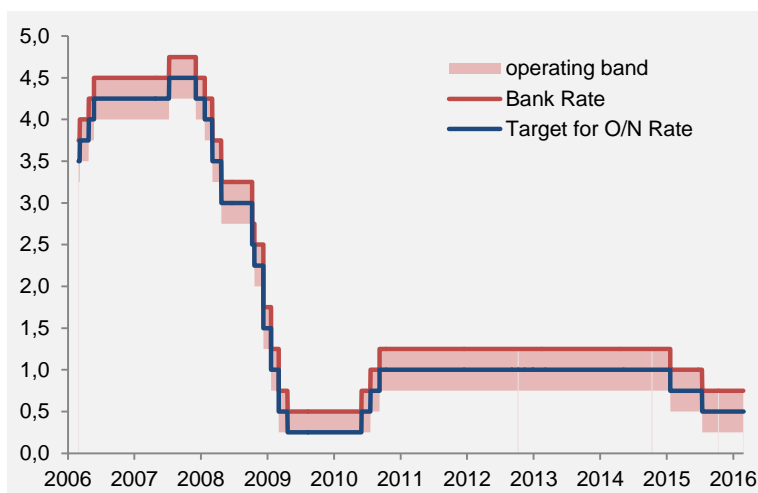
The main monetary policy tool used by the BoC is the policy interest rate, which, since 2001, has been the Target for the Overnight Rate (i.e. the market interest rate at which commercial banks borrow and lend overnight funds among themselves, referred to as the "O/N target" in the rest of this text). The O/N target lies at the centre of an operating band whose upper limit is the Bank Rate (the lending rate at which the BoC provides one-day loans to banks) and

³ The definitions of the core inflation measures can be found on the BoC website – see <http://www.bankofcanada.ca/rates/indicators/capacity-and-inflation-presures/inflation/>

whose lower bound is the BoC's deposit rate.⁴ The market interest rate moves within this band, which is 0.5 pp wide under standard conditions.⁵ The O/N target is internationally comparable with, for example, the Federal Reserve's target range for the federal funds rate and the Swiss National Bank's target range for the Libor.

Since December 2000, changes in the key interest rate have been announced at monetary policy meetings on eight fixed dates each year (before then there were no fixed dates for the meetings, nor were their dates announced in advance by the BoC). The BoC's Monetary Policy Report is published after every second meeting (i.e. four times a year).

The BoC's monetary policy is forward-looking, given that monetary policy transmission takes about six to eight quarters. However, in an environment of strong and persistent economic shocks the BoC can flexibly shorten or extend the monetary policy horizon, as it has done several times.



Source: BoC

An important role in Canada's monetary policy and economic developments is played by the flexible exchange rate, which helps its open economy to cope with external shocks. The Canadian dollar is weakening at present, mainly because of the fall in oil prices and the appreciation of the US dollar against other currencies, which is considered to have a stimulating – and in the given situation therefore stabilising – effect on the Canadian economy.

BoC monetary policy during the crisis and reaching the lower bound on interest rates

In the global financial and economic crisis the BoC provided a monetary stimulus to the economy by lowering its key monetary policy rate to the effective lower bound of 0.25% in April 2009. At the same time, in its [Monetary Policy Report](#) it identified other potential monetary policy instruments that it could use in a low interest rate environment. They included forward guidance (statements about the future path of interest rates containing elements of a commitment), quantitative easing (in the form of purchases of financial assets by the central bank) and credit easing. Unlike other central banks (the Fed and the Bank of England), however, the BoC ultimately did not adopt measures such as quantitative easing, instead only applying forward guidance by making a verbal commitment to preserve the monetary policy parameters until mid-2010 depending on the inflation outlooks. This measure turned out to be sufficient for easing monetary policy. The bank also extended the horizon at which inflation was expected to return to the 2% target to more than two years. Market confidence in the BoC

⁴ Before 2001, the BoC's key monetary policy rate was the Bank Rate. In the mid-1990s, however, the BoC began shifting emphasis to the O/N target, moving within a 50 bp operating band with the Bank Rate as its upper bound. With the advent of the Large Value Transfer System (LVTS) – an interbank payment settlement system regulated and supervised by the BoC – in February 1999, the O/N target was defined as the midpoint of the operating band. In May 2001 the BoC began using the O/N target as its key interest rate, with the Bank Rate and the deposit rate being set automatically after its announcement.

⁵ In exceptional circumstances when the O/N target was at very low levels – as happened, for example, in April 2009, when the target reached its effective lower bound (ELB) of 0.25% – the operating band was narrowed to 0.25 pp, with the O/N target forming its lower bound, equal to the deposit rate; the Bank Rate was then 0.5%. In December 2015 the ELB was set at around -0.5% following the experience of foreign banks with negative interest rates. At present the operating band is again 0.5 pp and the O/N target is 0.5%.

remained firm during the crisis thanks to its transparency and credibility. This was reflected in the stability of inflation expectations, which remained anchored at 2%.

In December 2015 the BoC [added](#) negative policy rates to its suite of applicable monetary policy instruments. On the basis of experience abroad and its own analyses, it lowered the theoretical value of the effective lower bound for the O/N target from 0.25% to approximately -0.5%. The BoC also mentioned the possibility of boosting bank lending to particular sectors of the economy using specialised facilities. The use of negative interest rates remains only a theoretical option for the time being; at present (March 2016), the O/N target is 0.5%, the deposit rate 0.25% and the Bank Rate 0.75%.

Regular renewal of the inflation target and related research

The specific features of Canadian inflation targeting include regular renewal of the inflation target in a joint statement issued by the BoC and the Canadian government. The target has been renewed every five years since the regime was introduced.

The first renewal took place in December 1993 in connection with the appointment of the new governor. The 2% inflation target with a control range of $\pm 1\%$ was extended until the end of 1998. In 1998, the 2% target was renewed for another five years (i.e. until the end of 2001) on the grounds that economic developments in a low inflation environment must be further monitored before the target can possibly be changed. In 2001, 2006 and 2011 the inflation target was kept unchanged for the next five years. At the end of this year, the BoC and the government are to decide on the target for the next five years.

Along with renewal of the inflation target, the BoC has since 2001 also been publishing answers to selected monetary policy questions of the given period on its website, accompanied by relevant research papers. In November 2014, BoC Deputy Governor Agathe Côté presented the latest research and policy topics, which include the appropriateness of increasing the inflation target, further questions on the relationship between monetary policy and financial stability and the possibility of changing the main guide for core inflation, as represented by CPIX at present. The relevant research is already available on the BoC's website. The questions are still being debated and the answers will be presented when the inflation target is renewed at the end of this year.

Current challenges

In addition to the functioning of monetary policy in a low interest rate environment and the relationship between monetary policy and financial stability, the current challenges facing Canadian monetary policy include the impact of falling commodity prices, a topic particularly relevant to Canada since it ranks among the major producers and net exporters of oil.

In the period of rising oil prices between 2001 and 2014, resources in the Canadian economy were redirected into industries focusing on oil and oil products. As oil prices started to decline, there were major shifts in labour and capital in the opposite direction between provinces and sectors. In the first phase of the oil price shock, oil sectors recorded a slowdown in growth, a drop in investment and growth in unemployment. The slowdown then spilled into other sectors. In this phase the BoC surprised the markets by cutting rates by 0.25 pp in January 2015, citing concerns about the sharp drop in oil prices in the previous six months, slower economic growth in Canada than in other countries and a decreasing inflation outlook. In July 2015, the BoC lowered the rate by a further 0.25 pp, referring, among other things, to faltering growth in China accompanied by a drop in prices of commodities that are important to Canada's exports.

The unexpected rate cut in January dealt a blow to the markets' confidence in Governor Stephen Poloz, who took over the helm of the BoC in June 2013 (succeeding the highly regarded Mark Carney, who was named BoE governor as of June 2013), since Poloz had not signalled any such change in interest rates before the policy meeting. Given that no minutes

from the BoC's monetary policy meetings are released and the final rate decision is not taken by vote but reached by consensus, the markets were unable to work out whether the rate cut was a sudden individual decision by Poloz responding to fresh economic data that he considered important, and thus whether they were at the mercy of abrupt swings in his opinions (their concerns were summed up in the phrase "the Poloz reaction function"). However, market confidence in the BoC was restored thanks to the relative recovery of the Canadian economy.

The drop in commodity prices and consequent decline in the terms of trade resulted in the aforementioned depreciation of the Canadian dollar, which is ultimately leading to smaller losses from the decrease in dollar prices of oil (and other products), an improvement in the competitiveness of Canadian exporters and an increase in prices of imported goods. However, despite the relative improvement in the Canadian economy, its re-orientation towards sectors not related to oil extraction can be expected to continue in the coming years. The BoC has said it will closely monitor this process and continue to foster economic stability and development by applying appropriate monetary policy instruments, thereby promoting the economic and financial well-being of Canadians.

4. SELECTED SPEECH: MONETARY POLICY, FINANCIAL STABILITY, AND THE ZERO LOWER BOUND

Stanley Fischer, Vice Chair of the Board of Governors of the Federal Reserve System, presented his views on the issue of low interest rates in a [speech](#) given at the Annual Meeting of the American Economic Association in San Francisco in January 2016.

Fischer focuses on three related questions associated with the zero lower bound (ZLB) on nominal interest rates. The first one is whether we are moving towards a permanently lower long-run equilibrium real interest rate. A variety of evidence indicates that the current level of the equilibrium real interest rate (i.e. the rate consistent with full utilisation of resources) may be close to zero. Moreover, the level of the real rate seems likely to rise only gradually to a longer-run level that is still quite low by historical standards. This suggests that the frequency and duration of future episodes in which monetary policy is constrained by the ZLB will be higher than in the past. Fischer finds conducting monetary policy effectively at the ZLB to be challenging, to say the least. Although unconventional policy tools have been helpful, there are many uncertainties associated with their use. At the same time we cannot say whether the equilibrium real interest rate will remain at today's low levels permanently, as many of the factors that determine it, particularly productivity growth, are extremely difficult to forecast.

The second issue Fischer deals with is what steps can be taken to mitigate the constraints imposed by the ZLB. He discusses raising the inflation target, as proposed by many economists. However, this may cause higher inflation variability, associated with welfare costs and difficulties in achieving inflation goals. He also mentions the option to reduce interest rates below zero. The recent use of negative interest rates in several European countries has been accompanied by a decline in short-term money market rates. The easing has been transmitted to assets of longer maturity and greater risk and has also acted as expected through the exchange rate channel. Although it is unclear how low policy rates can go before cash holdings rise, the European experience has shown that zero is not the lower bound in those countries. Another option to ease the constraints associated with the ZLB, according to Fischer, is to take steps aimed at raising the equilibrium real rate, for example expansionary fiscal policy or lowering term premiums, which would enable the central bank to maintain a level of long-term rates consistent with full employment and stable prices while raising the level of short-term rates. The last possibility to mitigate the constraints imposed by the ZLB could be a transition to a cashless economy, as the existence of physical currency limits how deeply interest rates can be pushed into negative territory. Fischer notes, however, that, at least in the US, effective cashless functioning of the financial system is more a theoretical possibility.

The potential risks resulting from an environment of low rates for a prolonged period of time bring Fischer to the third question: how should central banks incorporate financial stability considerations in the conduct of monetary policy? Can they reduce the likelihood of financial instability? Fischer prefers macroprudential tools as the first line of defence and mentions a number of measures introduced in the US in recent years. However, he notes that the Fed has fewer macroprudential tools at its command than some other central banks, particularly with respect to real estate. The lack of such tools requires placing greater weight on the ability of the financial system to withstand financial shocks without macroprudential instruments being used and leads to consideration of using the policy rate to support financial stability. The macroeconomic and financial stability objectives, however, are not always consistent and there is no clear answer whether interest rates should be used to deal with problems of financial instability. Fischer believes that, given that financial variables are a critical part of the transmission mechanism of monetary policy, if asset prices are too high, raising the interest rate may be the appropriate step to prevent potential financial instability.

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