CENTRAL BANK MONITORING – MARCH

Monetary Department
Monetary Policy and Fiscal Analyses Division

2018

CZECH NATIONAL BANK

IN THIS ISSUE

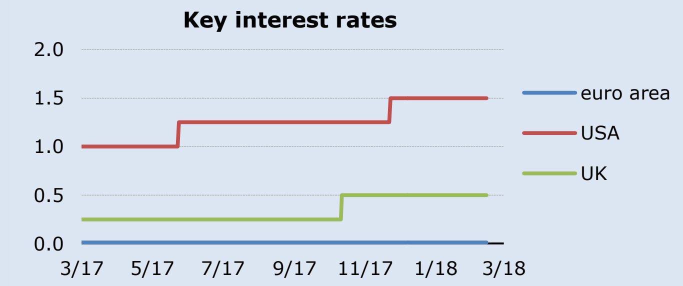
Inflation rates are nearing target levels in most of the economies we monitor, and economic growth rates are mostly solid. Central banks' policy rates are generally still low, giving their economies a monetary policy stimulus. The unconventional measures at the ECB and the Riksbank are past their peak and further gradual progress towards normalising monetary policy can be expected. The Bank of Canada was the only central bank to raise its policy rate over the past three months. Spotlight *focuses on Bulgaria, the state of its economy and its preparedness for joining ERM II. In our* Selected speech*, Riksbank Governor Stefan Ingves sets out the Swedish central bank's thinking on the possible future introduction of a digital currency.*

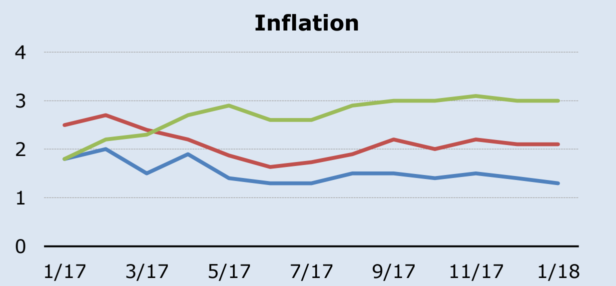
1. LATEST MONETARY POLICY DEVELOPMENTS AT SELECTED CENTRAL BANKS

Key central banks of the Euro-Atlantic area

	Euro area (ECB)	USA (Fed)	United Kingdom (BoE)
Inflation target	<2%[1]	2%[2]	2%
MP meetings (rate changes)	25 Jan (0.00) 8 Mar (0.00)	30–31 Jan (0.00)	8 Feb (0.00)
Current basic rate	0.00%; -0.40%[3]	1.25–1.50%	0.50%
Latest inflation	1.2% (Feb 2018)[4]	2.2% (Jan 2018)	3.0% (Jan 2018)
Expected MP meetings	26 Apr 14 Jun	20–21 Mar 1–2 May	22 Mar 10 May
Other expected events	14 Jun: publication of ECB staff projections	18 Apr: publication of Beige Book, Jun 2018: publication of Monetary Policy Report	10 May: publication of Inflation Report
Expected rate movements[1]	→	↑	→

[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 Chair; [6] direction of expected change in rates in next three months taken from Consensus Forecasts.





The **ECB** kept its policy rates unchanged and expects them to remain at their present levels for an extended period of time, and well past the horizon of its net asset purchases. It confirmed that the net asset purchases, at the current monthly pace of €30 billion, are intended to run until the end of September 2018, or beyond, if necessary. At its March meeting, however, it did not mention the possibility of increasing them. Compared to its previous forecast, the ECB expects higher GDP growth in 2018 (2.4%, as against 2.3% in December). The outlooks for 2019 and 2020 remain unchanged at 1.9% and 1.7% respectively. The inflation outlook remains at 1.4% for 2018 and has been revised downwards from 1.5% to 1.4% for 2019. The outlook for inflation in 2020 is still 1.7%.

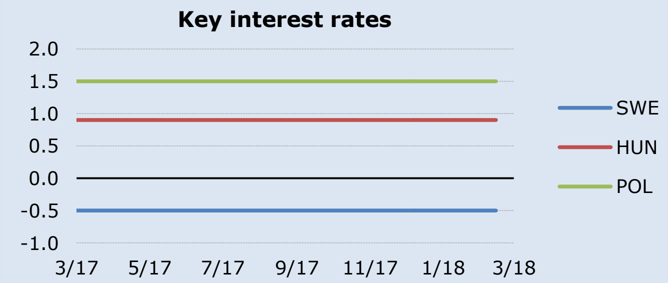
The **Fed** left its key interest rate unchanged at 1.25%–1.50% in January. According to the median of the FOMC members' projections (Dec 2017), three policy rate hikes of 0.25 pp to 2.1% can be expected in 2018. Markets currently expect the first hike to take place in late March. In the longer run, the FOMC expects rates to stand at 3.1% in 2020. The labour market remains strong and the outlook for the unemployment rate for the next three years is 4% (the rate currently stands at 4.1%). According to the FOMC, economic activity can be expected to expand at a moderate pace (2.5% in 2018 and 2.0% in 2019). Inflation rose slightly above 2% and thus accelerated slightly compared with the FOMC's December projection.

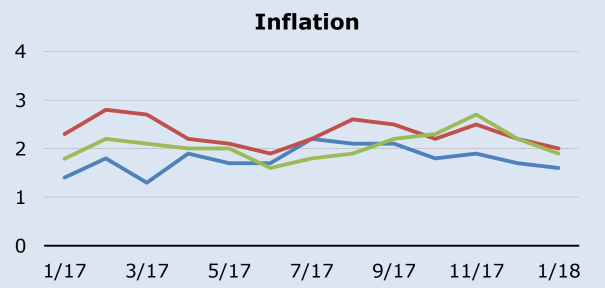
The **BoE** kept its key interest rate unchanged at 0.50% in February. It also maintained the stock of government and corporate bond purchases at GBP 435 billion and GBP 10 billion respectively. According to the forecast, GDP growth will average 1.75% in the years ahead. Inflation is expected to average around 1.5%. Currently, however, it remains above the inflation target at 3%, mainly reflecting higher oil prices. From a longer-term perspective, inflation is also being pushed up by the pass-through of sterling's past depreciation to consumer prices, although this effect will slowly dissipate.

Selected central banks of inflation-targeting EU countries

	Sweden (Riksbank)	Hungary (MNB)	Poland (NBP)
Inflation target	2%	3%	2.5%
MP meetings (rate changes)	19 Dec (0.00) 13 Feb (0.00)	19 Dec (0.00) 30 Jan (0.00) 27 Feb (0.00)	9–10 Jan (0.00) 6–7 Feb (0.00) 6–7 Mar (0.00)
Current basic rate	-0.50%; -1.25%[2]	0.9%; -0.15%[2]	1.50%
Latest inflation	1.7% (Jan 2018)	2.1% (Jan 2018)	1.9% (Jan 2018)
Expected MP meetings	25 Apr	27 Mar 24 Apr 22 May	10–11 Apr 15–16 May 5–6 Jun
Other expected events	26 Apr: publication of Monetary Policy Report	27 Mar: publication of Inflation Report	Jul: publication of Inflation Report
Expected rate movements[1]	→	↑	↑

[1] Direction of expected change in rates in next three months taken from Consensus Forecast survey; [2] deposit rate, [3] CPIF – consumer price index including fixed interest rate





The **Riksbank** left its policy rate at -0.5% at its two previous meetings and expects slow rate rises to be initiated during the second half of 2018. According to the forecast, the rate will return slightly above zero at the start of 2020. The Riksbank will reinvest redemptions and coupon payments in bonds. Government bond holdings amounted to SEK 310 billion in February. CPIF inflation stood at 1.7% in January. In its December forecast, the Riksbank slightly lowered its CPI outlook to 1.7% and its CPIF outlook to 1.9% for 2018 (from 2% in both cases). For 2019, it expects CPI inflation of 2.6% and CPIF inflation of 1.9%. It slightly lowered its GDP growth forecast for this year to 2.8% and expects 1.8% for next year.

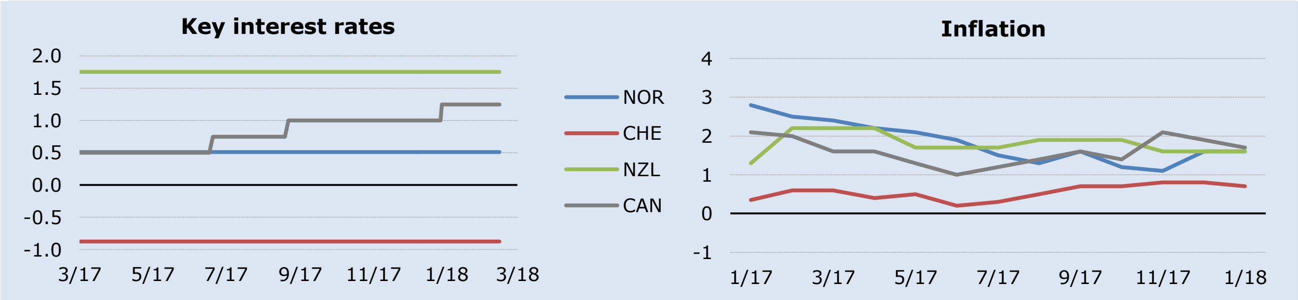
The **MNB** maintained its base rate at 0.9%. The deposit rate remains at -0.15%. In January, inflation stood at 2.1% and core inflation at 2.5%. The MNB expects inflation to increase over the medium term due to growth in domestic demand and wages. The Hungarian economy picked up to 4.4% in Q4, mainly on the back of services and industry. The MNB expects economic growth of 4% this year. Employment is at historical highs and unemployment is still falling. Corporate lending, especially to SMEs, continues to grow at a solid pace, partly due to previous support programmes. The MNB has been purchasing mortgage bonds since January and is also attempting to affect the long end of the yield curve through the IRS facility.

The **NBP** left its interest rate unchanged at 1.5%. Annual economic growth accelerated further to 5.1% in Q4, still driven primarily by consumer demand supported by rapid wage growth and consumer optimism. Investment growth also increased in Q4, especially in the public sector. Headline inflation is slowing slightly and stood at 1.9% in January. Core inflation remains low. According to the NBP's new forecast, the economy will grow somewhat faster over the next two years compared with the previous forecast, by 3.5%–5.0% in 2018 and by 2.4%–4.8% in 2019. The NBP expects inflation of 1.6%–2.5% in 2018 and 1.7%–3.6% in 2019. These levels are almost the same as those in the previous forecast for both years.

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)	25 Jan (0.00)	14 Dec (0.00)	8 Feb (0.00)	17 Jan (+0.25) 7 Mar (0.00)
Current basic rate	0.50% -0.50 reserve rate[1]	from -1.25 to -0.25%;[2] -0.75%[3]	1.75%	1.25%
Latest inflation	1.6% (Jan 2018)	0.7% (Jan 2018)	1.6% (2017 Q4)	1.7% (Jan 2018)
Expected MP meetings	15 Mar 3 May	15 Mar 21 Jun	22 Mar 10 May	18 Apr 30 May
Other expected events	15 Mar: publication of Monetary Policy Report	21 Mar: publication of Quarterly Bulletin	10 May: publication of Monetary Policy Statement	18 Apr: publication of Monetary Policy Report
Expected rate movements[1]	→	→	→	↑

[1] Only on reserves exceeding quota; [2] chart displays centre of band; [3] negative deposit rate on banks' account balances held at SNB, graded according to balance amounts; [4] direction of expected change in rates in next three months taken from Consensus Forecasts or, in the case of New Zealand, from RBNZ survey; [5] inflation target lowered from 2.5%.



The **NB** left its interest rate at 0.50% and expects it to be stable until autumn 2018 and then rise gradually. Capacity utilisation in the Norwegian economy will continue to increase, but there is still spare capacity. House prices showed a slight correction. Fiscal policy will probably be less expansionary than it has been recently. Inflation is currently low and will remain below 2.5% in the coming years. The NB's inflation target was lowered to 2% (see *News* for details).

The **SNB** is maintaining the target range for its monetary policy rate (3M LIBOR) in negative territory (at between -1.25% and -0.25%). The rate on banks' account balances with the SNB also remains unchanged at -0.75%. The franc weakened against the US dollar and the euro, but the SNB still considers it overvalued and remains willing to intervene in the foreign exchange market as necessary. The SNB expects GDP growth of around 2% for 2018. It raised its inflation forecast for 2018 from 0.4% to 0.7% and continues to expect 1.1% for 2019.

The **RBNZ** left its official rate at 1.75%. According to the RBNZ, monetary policy will remain accommodative for a considerable period. GDP growth eased over the second half of 2017 but its outlook remains promising. Economic growth is being driven by accommodative monetary policy, fiscal stimulus, population growth and favourable terms of trade. Inflation was 1.6% in 2017 Q4. The RBNZ expects it to rise to 2% this year. House price inflation has increased somewhat over the past few months, but housing credit growth continues to moderate.

The **BoC** raised its key rate by 0.25 pp to 1.25% at its January meeting and left it unchanged at its March meeting. Inflation is running close to the target and the economy is operating near capacity. According to the new BoC outlook, the economy will grow at a slower rate of 2.2% this year, whereas the previous outlook had predicted growth of 3%. In 2019, the growth will slow to 1.6%. Inflation has increased over the last three months and stood at 1.7% in January. Inflation will fluctuate in the near term, due mainly to temporary factors (electricity and petrol prices), but will stand at around 2% over the projection horizon. Conversely, core inflation measures will stabilise in a narrow range of 1.8%–1.9%.

2. NEWS OVER THE LAST THREE MONTHS

Norway lowers inflation target to 2% and changes monetary policy mandate

Norway's government decided to cut Norges Bank's (NB) annual inflation target from 2.5% to 2.0%. Most inflation-targeting central banks have a 2% objective. The inflation target had been set at 2.5% in 2001, when Norway was experiencing a period where substantial oil revenues were to be phased into the economy. According to the Ministry of Finance, the cut corresponds to the ending of this period. The government also updated its monetary policy regulation to emphasise that inflation targeting should be forward-looking and flexible and to include a reference to financial stability. The reference to the krone exchange rate has been removed. Norges Bank supported the change. (See the December and September CBM for more on the proposal for a new Norges Bank law currently under debate.)

Jerome H. Powell becomes new Federal Reserve chair

Jerome H. Powell in February became Chairman of the Board of Governors of the Federal Reserve System (and Chairman of the Federal Open Market Committee). Powell was nominated by the US President and confirmed by the US Senate. He replaced Janet Yellen, who resigned from the Fed as of the day he became Fed chair. He is expected to continue her cautious monetary policy (see the December CBM for more).

Spain's finance minister de Guindos to become new ECB vice-president

In June, the Spanish minister of finance Luis de Guindos will replace the current ECB vice-president, Vítor Constâncio from Portugal, whose mandate expires at the end of May. Ireland withdrew the other candidate for the vice-presidency, the governor of the Bank of Ireland, Philip Lane. The nomination of Luis de Guindos was recommended by the Economic and Financial Affairs Council (Ecofin) in February. After consultations with the ECB's Governing Council and the European Parliament, it will have to be confirmed by the European Council in March. Philip Lane is now widely seen as the top candidate to become ECB chief economist when Peter Praet leaves his position in June 2019. Mario Draghi's term as the ECB president expires in November 2019.

Deputy Governor Floden continues at Riksbank

The Riksbank General Council decided in February to extend Deputy Governor Martin Flodén's mandate for a further six years until May 2024. His term was supposed to expire this May.

Central Banking awards 2018 announced

Central Banking Publications awarded the title Central Bank of the Year to the Bank of Canada for its ever-improving transparency and its regular in-depth review of its policy mandate. The Transparency Award went to the Bank of Ireland for its great progress in communicating in an open manner. It had to earn back its good reputation with the public after failures during the financial crisis. Lesetja Kganyago, the governor of the South Africa Reserve Bank, was named Governor of the Year for defending the independence and enhancing the reputation of the central bank during turbulent political and economic times (see the September CBM for more about the South African economy and central bank). The 2018 Website of the Year title was awarded to the Lithuanian central bank for the maximum accessibility and information clarity of its website. The Bank of England picked up the Initiative of the Year award for its responsiveness to financial technology and for its FinTech Accelerator platform for research in the field of fintech in central banking in partnership with technology firms.

SNB opposes sovereign money initiative ahead of referendum

The Swiss National Bank opposes the concept of "sovereign money" proposed by the Vollgeld Initiative. Under the initiative, only the SNB would be able to issue money and Swiss commercial banks would no longer be permitted to create deposits through lending (money creation). The SNB opposes the sovereign money system because it would lead to a less efficient and more costly financial system and also complicate and politicise the implementation of monetary policy, which would be to the detriment of the real economy. Both the Federal Council and the Swiss parliament also oppose the initiative. The concept will be put to a vote in a national referendum in Switzerland in June.

Sveriges Riksbank modernises its website and celebrates 350 years

The Riksbank unveiled a new website giving easier access to its most popular content. The new website has a new design and is based on a more efficient technical platform. Older publications and statistics (prior to 2017) can be found in the Riksbank's web archive. Moreover, in 2018 the Riksbank celebrates 350 years since its foundation and a separate section of the website is dedicated to this anniversary. The bank will be organising a range of activities all over Sweden during the anniversary year.

3. SPOTLIGHT: BULGARIA ON THE PATH TO THE EURO

Bulgaria has been a member of the European Union for more than ten years now. Its representatives have expressed an interest in adopting the euro on several occasions but have not yet officially applied to enter ERM II and join the euro area. However, Bulgaria holds the Presidency of the Council of the European Union in the first half of this year and Bulgarian government representatives have stated several times that the country may apply for ERM II entry during its presidency. Spotlight *therefore focuses on Bulgaria, the state of its economy and its preparedness for joining ERM II.*

Bulgaria joined the EU on 1 January 2007 and is one of its newest members. It lies on the periphery of the EU – and not just geographically. Bulgaria is the weakest EU member in terms of economic level as measured by GDP per capita at purchasing power parity. In 2016, this indicator was running at just 49% of the EU average, despite having risen over the last ten years. Bulgaria also has the lowest price level of GDP in the EU at less than 48% of the EU average in 2016. That said, the Bulgarian economy differs little from the advanced European countries in terms of structure.[1] It is a small open economy, with exports accounting for about two-thirds of GDP. Bulgaria's largest trading partner is the EU, which is the destination for almost two-thirds of its exports and the source of about two-thirds of its imports.[2]

Since 1997, the monetary policy of the Bulgarian National Bank (BNB) has been limited to keeping the lev fixed against the euro under a currency board arrangement.

Introduction of the currency board

The transformation of the Bulgarian economy in the 1990s proceeded very slowly and was undermined by an inconsistent approach to reforms. Large state-owned enterprises did not start to be privatised until 1998, by which time their output was plummeting. This affected the performance of the entire Bulgarian economy, which was weaker than in most transition economies in the region.[3] Government finances and bank loan quality simultaneously worsened. In 1996, the problems escalated into a bank and monetary crisis, fuelled by direct financing of the government by the central bank approved under the state budget law. The crisis peaked in early 1997 with a sharp depreciation of the lev, hyperinflation (annual CPI inflation reached 2,040% in March 1997) and a slump in GDP.

The situation required radical measures to restore confidence in the Bulgarian currency. A macroeconomic stabilisation programme, adopted on 1 July 1997, sought to stabilise fiscal policy, accelerate structural reforms and introduce a currency board system.[4] The programme led to a rapid improvement: inflation was brought under control (reaching single figures in mid-1998), interest rates fell sharply, helping reduce the fiscal deficit to a sustainable level, and GDP started to grow again. However, a still low GDP level was accompanied by a high unemployment rate, which reached double figures over the following few years.

After a redenomination of the lev and the introduction of the euro in the EU[5] the exchange rate was recalculated at a rate of 1.95583 levs to the euro, where it has been ever since. This value is set forth in the law on the Bulgarian National Bank, which also obliges the BNB to buy or sell euros on demand at the spot rate, which may not deviate from the official rate by more than 0.5%, including all fees. The Bulgarian currency board is defined as a narrow one, ensuring full

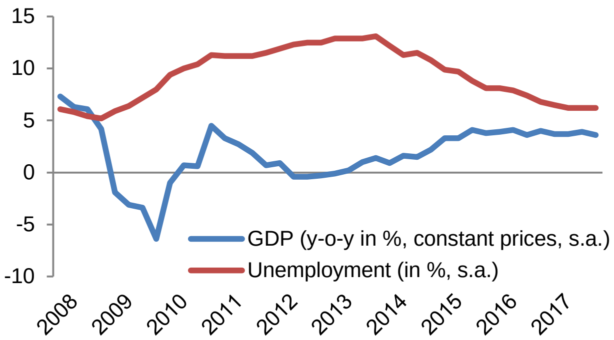
---

[1] The tertiary sector accounts for roughly two-thirds of gross value added. Compared with the EU, Bulgaria has a higher share of agriculture and, within industry, a higher share of heavy industry and a lower share manufacturing.
[2] Bulgaria's other exports major markets are the Balkans and Asia, which account for about 13% and 8% of its exports respectively.
[3] The cumulative contraction in Bulgarian GDP in 1990–1997 was 37%.
[4] The currency board was enacted in a new BNB law, which simultaneously prohibited the central bank from financing the government. Given the country's planned EU entry, the exchange rate was pegged to the German mark at a rate of BGN 1,000/DM (even though Bulgaria's foreign trade transactions were mostly conducted in US dollars at the time).
[5] In 1998, the lev was redenominated at a ratio of 1,000:1 and its exchange rate was accordingly changed to BGN 1 to the mark. When the euro was introduced in January 1999, the Bulgarian currency's exchange rate against the euro was calculated in the same way as it had been against the mark.

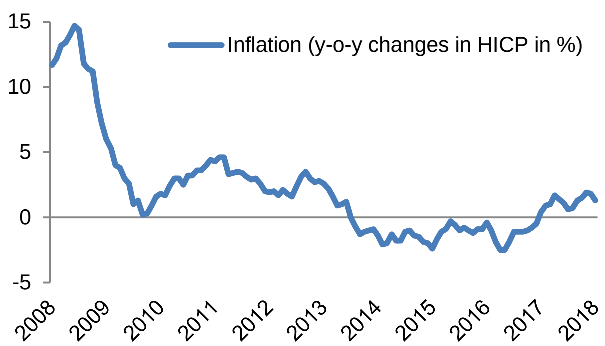
reserve coverage of the monetary base. The BNB law stipulates that "the aggregate amount of the BNB's monetary liabilities shall not exceed the lev equivalent of its gross international reserves". It forbids the central bank to lend to domestic banks, so the reserve requirement remains the BNB's only monetary policy instrument.

Economic developments over the last ten years

Before the global financial and economic crisis, the Bulgarian economy was characterised by strong capital inflows, which caused domestic demand to expand. This, on the one hand, was reflected in sharp GDP growth, but on the other caused the current account deficit to rise and the economy to overheat (wages grew rapidly and inflation soared into double figures). The subsequent global financial and economic crisis brought about a drop in capital inflows and domestic demand. At the same time, the recession experienced by Bulgaria's trading partners caused exports to fall. Overall, this led to a decline in GDP. The cautious fiscal policy accompanying the currency board arrangement helped maintain macroeconomic and financial stability, but fostered a sharp rise in unemployment and only a slow recovery, which also reflected long-running structural problems on the labour market and low productivity.



Source: Eurostat, NSI



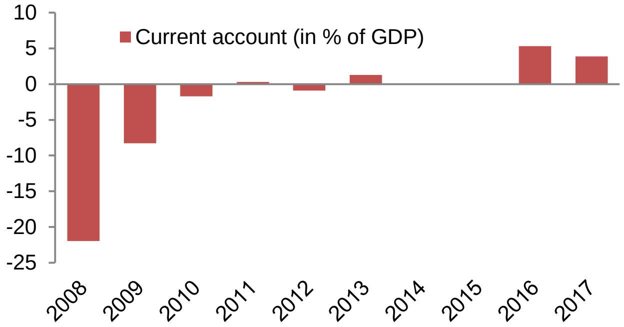
Source: Eurostat

Bulgarian inflation gradually went down after the outbreak of the crisis and turned negative in the second half of 2013 due to a drop in import prices and cuts in administered prices. Although it mirrored inflation in the euro area, it fell more sharply than elsewhere due to the higher weight of commodities in the Bulgarian HICP. Bulgaria thus had one of the highest rates of deflation in the EU. Inflation did not turn positive again until the start of 2017.[6]

Bulgaria's fourth largest bank, KTB,[7] collapsed in 2014. This revealed shortcomings in local banking supervision and pointed to a correlation between financial and fiscal risks under the currency board. The Bulgarian currency board arrangement essentially makes the government the lender of last resort. The government thus had to bear all the costs of maintaining the banking sector's liquidity and capital reserves, including the deposit insurance system. This caused the fiscal situation to deteriorate.[8] Nevertheless, the government support – which was also extended to the largest domestic bank FIB – quickly helped restore confidence in the banking system. The very next year the system faced another test when a banking crisis in neighbouring Greece threatened to spill over.[9] However, crisis management by the Bulgarian authorities successfully averted this threat. The Bulgarian financial sector nonetheless remains vulnerable.

[6] According to the latest published data, inflation stood at 1.3% in January this year.
[7] KTB was Bulgaria's fourth largest bank in terms of assets, its third largest in terms of net profit and its biggest in terms of deposit growth.
[8] The crisis was prevented from spreading further by an injection of public money into the deposit insurance fund. Government debt rose by 10 pp to 27% of GDP as a result. This was still one of the lowest figures in Europe
[9] Bulgarian branches of Greek banks held about 24% of Bulgarian bank assets and 22% of deposits in mid-2014.

Economic growth picked up noticeably in late 2014 and early 2015, buoyed by external demand, improved functioning of the labour market and faster absorption of EU funds. Annual GDP growth neared 4% at the end of 2015 and has stayed there since then.[10] On the labour market, unemployment is falling steadily, while wage growth is rising and outpacing labour productivity, although it is not jeopardising the competitiveness of the Bulgarian economy as yet.



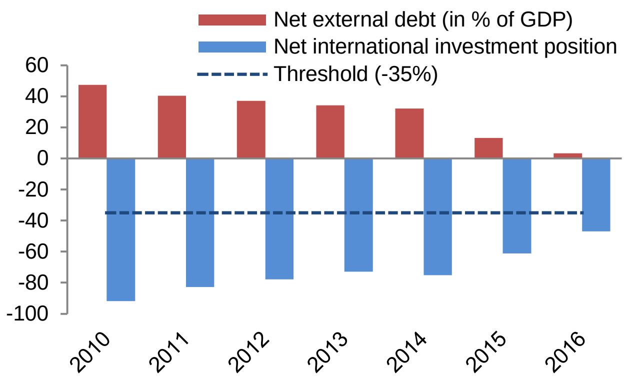
Source: Eurostat, BNB

Bulgaria's external position is also improving. The current account balance has been distinctly positive since spring 2016. The ongoing gradual deleveraging of the public sector has been reflected in a significant drop in foreign debt.

Current challenges

Despite the current positive economic developments, Bulgaria faces a number of challenges to sustained growth and convergence towards the EU. According to the IMF, further strengthening financial stability,[11] supporting economic growth[12] and ensuring fiscal sustainability are of crucial importance. The last of these is jeopardised by the weak performance of state-owned enterprises, the poor condition of local budgets, uncertainty about the viability of public pension funds and, from the long-term perspective, population ageing.

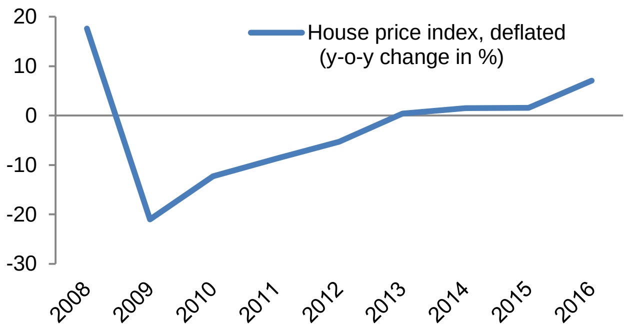
The European Commission has also identified a number of risks to the Bulgarian economy. Since 2011, when the macroeconomic imbalance procedure (MIP) was introduced, Bulgaria has been evaluated every year as a country requiring an in-depth review (IDR). Last year's review concluded that Bulgaria was experiencing excessive imbalances, in particular financial sector vulnerabilities coupled with high corporate indebtedness. Two of the indicators used to identify risks in this year's MIP – the net international investment position and house price growth – were beyond the threshold.[13] The investment position has gradually been improving. Moreover, most of it relates to foreign direct investment liabilities, which mitigates external risks. However, private indebtedness remains a concern, in particular for non-financial corporations, where the NPL ratio remains high despite the ongoing deleveraging process.



Source: BNB

[10] According to a preliminary estimate, real GDP increased by 3.6% year on year in 2017 Q4.
[11] After KTB collapsed, Bulgaria made considerable progress in strengthening supervision and enhancing confidence in its banking system, in particular by changing the organisation of banking supervision and amending legislation. In 2016, the BNB reviewed the quality of the banking system's assets and conducted stress tests, which revealed that most banks were sufficiently capitalised. Non-performing loans, which are twice as high as the EU average, remain a problem. Moreover, some measures to strengthen supervision have yet to be implemented.
[12] The IMF recommends that Bulgaria improve its investment conditions, infrastructure, health care and education, deal with the negative impacts of the emigration of skilled labour, streamline public administration, enhance the rule of law and tackle corruption.
[13] The updated table of indicators contains data for 2016. It was published by the Commission in the Alert Mechanism Report 2018. Bulgaria's net investment position was -47% of GDP in 2016 (threshold: -35%). The house price index adjusted for headline inflation rose by 7.1% year on year in 2016 (threshold: 6%). Both these indicators remained at similar levels during 2017.

By contrast, the second alert indicator – house price growth – deteriorated compared to previous years. Fast property price growth could foster vulnerabilities in the financial sector, whose functioning is still hampered by poor asset quality and weak supervision. The Commission sees further risks in the functioning of the Bulgarian labour market, especially persisting structural issues.[14] Owing to the risks and excessive imbalances identified by last year's in-depth review, the Commission ranks Bulgaria among the 12 countries in which an in-depth review should be conducted again this year.



Source: Eurostat

On the path to the euro

According to the Convergence Reports published by the European Central Bank (ECB) and the EC, Bulgaria has been compliant with the Maastricht convergence criteria for several years now (the exception being the exchange rate criterion, which it does not fulfil because it does not participate in ERM II). The general government deficit increased to 5.4% of GDP in 2014 due to measures implemented to support the financial sector, and thus exceeded the 3% reference value. However, the European Commission assessed the deficit to be exceptional and temporary and so did not open an excessive deficit procedure.

Assessment of the fulfilment of the Maastricht convergence criteria in convergence reports

	2008		2010		2012		2014		2016	
	Ref. value	BG	Ref. value	BG	Ref. value	BG	Ref. value	BG	Ref. value	BG
Price stability criterion	3.2	9.4	1.0	1.7	3.1	2.7	1.7	-0.8	0.7	-1.0
Criterion on the government financial position										
General government balance	-3	3.4	-3	-3.9	-3	-2.1	-3	-1.5	-3	-2.1
General government debt (in % of GDP)	60	18.0	60	15.0	60	16.3	60	18.9	60	26.7
Interest rate criterion	6.5	4.7	6.0	6.9	5.8	5.3	6.2	3.5	4.0	2.5
Exchange rate criterion	-	-	-	-	-	-	-	-	-	-

Note: A failure to meet a criterion is indicated in red. Inflation and interest rates are assessed as of April (or March) of the year when the Convergence Report is published. The government financial position is assessed for the previous calendar year.

The latest Convergence Report, issued in 2016, showed that Bulgaria was comfortably compliant with the price stability, interest rate and government finance criteria. Inflation was negative and well below the reference value.[15] However, the ECB expressed concerns about inflation over the longer term, as the expected positive inflation differential vis-à-vis the euro area may lead to excessive price pressures and imbalances. This differential reflects convergence-driven appreciation of the real exchange rate of the Bulgarian currency and related growth in the relative price level, which is manifesting itself in increased inflation given that the nominal exchange rate is fixed. Bulgaria was also compliant with the interest rate

[14] None of the labour market indicators in the updated table is beyond the threshold. However, wage costs are set to accelerate looking forward. Structural issues include long-term unemployment, a skills mismatch and continuing emigration caused by a large difference between wages in Bulgaria and other EU countries.
[15] Bulgaria's inflation rate was among the lowest in the EU and was thus used to calculate the reference value of the price stability criterion. Accordingly, the Bulgarian interest rate was used to calculate the reference value of the interest rate criterion.

criterion. Its long-term interest rates have gradually decreased since 2009. It also comfortably met the criterion on the government financial position.[16] According to the ECB, however, the country faces medium risks to fiscal sustainability over the long run due to population ageing. Bulgaria does not formally meet the exchange rate criterion because it does not participate in ERM II. Nevertheless, the exchange rate of the lev was stable thanks to the currency board, whose resilience is backed by large foreign exchange reserves.[17]

Bulgarian representatives declared an interest in early adoption of the euro soon after the country joined the EU. However, they have put off the plan several times.[18] Their efforts were given a new impetus when Boyko Borissov returned to the post of prime minister. In 2015, his government established a council to prepare Bulgaria for Eurozone accession, headed by Finance Minister Vladislav Goranov. In recent months, both politicians have said that Bulgaria intends to apply to join ERM II.[19] According to Goranov, Bulgaria is making great efforts to negotiate support for this step with the ECB and the EC. However, the government is ready to apply to join even if it has no guarantee of a positive outcome. The application for ERM II entry should, he believes, force European institutions to set clear objectives for Bulgaria (such as the achievement of a certain degree of economic convergence), which Bulgaria is ready to accept. However, Bulgaria is reluctant to repeat the experience of its request to join the Schengen area, which has yet to be accepted despite it meeting all the formal criteria.

[16] Bulgaria has also been compliant with the medium-term objective (MTO), defined under the preventive arm of the Stability and Growth Pact as a maximum of 1% of GDP, since 2016.

[17] Bulgaria's foreign exchange reserves cover almost nine months of imports and are three times bigger than the country's short-term debt.

[18] The government of Boyko Borissov announced in early 2010 that it had had to abandon its plan to apply for ERM II entry due to an unexpectedly high budget deficit for the preceding year caused by the recognition of large contracts signed by the previous government. The following year, Bulgaria started to successfully fulfil all the Maastricht convergence criteria (except for ERM II participation). However, its plans to adopt the euro were put off as the European debt crisis unfolded. Public support for euro adoption, which was very high after the country joined the EU, has meanwhile gradually ebbed. According to the November 2017 Eurobarometer, 39% of respondents in Bulgaria are in favour of introducing the euro and 50% are against.

[19] During a visit by EU Commissioners to Sofia in January, Goranov said he was prepared to do so during the Bulgarian presidency, probably after the publication of this year's Convergence Report planned for May. He also said Bulgaria was ready to remain in ERM II for as long as needed, i.e. longer than the minimum requirement of two years.

4. SELECTED SPEECH: DO WE NEED AN E-KRONA?

Riksbank Governor Stefan Ingves in his December speech explained why the Swedish central bank is considering introducing digital central bank money – called an e-krona – as an alternative to cash.

Sweden is currently experiencing a unique situation in an international perspective – a rapid decline in demand for banknotes and coins (by around 40% in the last ten years). The share of cash payments in the retail trade has decreased from 40% in 2010 to a current 15%. It is a well-known fact that a critical mass of users is needed for a payment instrument to be generally accepted, otherwise it will disappear from the market. Cash use in Sweden may be reaching this critical point. According to research, half of Swedish traders believe they will stop accepting cash by 2025. So for Sweden, the cashless society is no longer just a hypothetical situation in the distant future. This is due to the fact that the Swedish population is willing to adopt innovations in the IT field. It is probably only a question of time before more countries find themselves in the same situation as Sweden is in today, since the younger generations around the world are quick to adopt digital technology.

There are some groups in society who find it difficult to accept digital technology, but for the majority of the population, the market appears able to supply payment solutions on its own. Governor Ingves, however, points out that money, in addition to its basic functions (an arithmetical unit, a store of value and a means of payment), must have the general public's confidence. This determines the importance of central banks in the monetary system. If cash were to disappear completely, the general public would only have access to account-based private bank money. During normal times this is not a problem. But in times of financial stress the general public wants access to the central bank's risk-free money. The deposit guarantee alleviates the problem of a lack of confidence but does not entirely resolve it. The Riksbank thus needs to at least investigate whether the arguments that the central bank shall provide the general public with assets and means of payment free of credit risk no longer have such great significance. Is it the case that the general public no longer wants central bank money? Or is it rather that it is only money made of pieces of paper that they no longer wish to hold in a digitalised world? If it is the latter, then it is the Riksbank's duty to investigate the scope for issuing a digital alternative – an e-krona that the general public can hold.

However, according to Governor Ingves, there are also other reasons for investigating a digital alternative. The payment infrastructure for electronic payments must be very concentrated and standardised, which entails a number of problems. One them is vulnerability of such a centralised system, especially if there is no alternative such as cash payments. Another problem may be a lack of competition and entry barriers for new agents. A potential e-krona could alleviate both of these problems. An e-krona could be based on a separate infrastructure that could be used if alternative systems fail. This infrastructure could also be open to private agents willing to offer payment services linked to the e-krona. In this way, an e-krona system could provide a platform that promotes competition and innovation.

At the end of his speech, Governor Ingves outlined how an e-krona might look. It should be available to all. It should be possible to use it in real time and off-line. It could contain some element of anonymity, and it could be designed so that even groups who find digitalisation difficult to handle can easily use it. However, the Riksbank has not yet thought it all through, and since it is a complex issue, it is calling for a dialogue between all interested parties. The Riksbank has already identified a number of questions that require further analysis. There are questions regarding technology, legal issues and the effects of the e-krona on the economy and financial agents. In the next phase the Riksbank will continue to be as open as possible. According to Ingves, however, the Riksbank has only been examining the possibility of introducing an e-krona and no decisions have yet been taken.

This document is produced by the Monetary Department of the Czech National Bank and is freely distributable. Closing date: 9 March 2018. Current and past issues can be downloaded free from the Monetary Policy section of the CNB website. Contact: http://www.cnb.cz or podatelna@cnb.cz.