Central Bank Monitoring

IV/2022

Czech National Bank —— Central Bank Monitoring —— IV/2022

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In this issue

Central banks are still facing high inflation, amid significant challenges and obstacles to economic growth. They are therefore considering how much they need to tighten monetary policy in order to restore price stability without incurring excessive economic costs. The central banks that were first to raise interest rates last year left rates unchanged at their most recent meetings (MNB, NBP, CNB). Other central banks are continuing to raise rates, although, for example, the key central banks, the Fed and the ECB, are reducing the pace of increase, their latest hikes having been 50 bp, as against 75 bp last time around. The ECB announced it would start quantitative tightening in March 2023.

Spotlight focuses on the dysfunction seen on the UK government bond market this autumn, which posed a threat to financial stability in the UK. The article describes the Bank of England's subsequent intervention in this market to calm the situation, and the need to coordinate the intervention with the ongoing process of monetary policy tightening in an environment of high inflation. In our selected speech, RBA Governor Philip Lowe talks about the negative effects of sustained high inflation, the RBA's current monetary policy, and in particular about the supply side of the economy, its impact on inflation and future challenges in this area.

This publication aims to provide economists and other specialists with information on the latest monetary policy developments, strategies and communications at selected central banks.

Current and past issues can be downloaded free from the *Monetary policy* section of the CNB website: https://www.cnb.cz/en/monetary-policy/monitoring/, where you can also download a file containing a list of all the thematic articles and speeches.

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Closing date for this issue: 15 December 2022.

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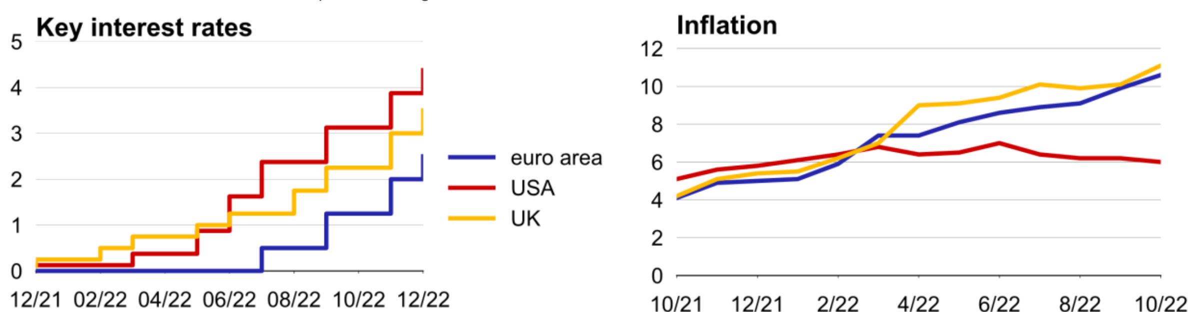
I. LATEST MONETARY POLICY DEVELOPMENTS AT SELECTED CENTRAL BANKS

I.1 KEY CENTRAL BANKS OF THE EURO-ATLANTIC AREA

	Euro area (ECB)	USA (Fed)	United Kingdom (BoE)
Inflation target	2%	2%[1]	2%
MP meetings (rate changes)	27 Oct (+0.75) 15 Dec (+0.50)	20–21 Sep (+0.75) 1–2 Nov (+0.75) 13–14 Dec (+0.50)	15 Sep (+0.50) 3 Nov (+0.75) 15 Dec (+0.50)
Current basic rate	2.50%	4.25–4.5%[2]	3.5%
Latest inflation	10.0% (Nov 2022)[3]	6.0% (Oct 2022)[4]	10.7% (Nov 2022)
Expected MP meetings	2 Feb 16 Mar	31 Jan–1 Feb	2 Feb
Other expected events	16 Mar: publication of forecast	8 Mar: publication of Beige Book	2 Feb: publication of Monetary Policy Report
Expected rate movements[5]	↑	↑	↑

Note: [1] long-term average (August 2020 definition) as measured by PCE (Personal Consumption Expenditures) index; [2] chart shows centre of band; [3] flash estimate; [4] PCE index; [5] direction of expected change in rates in next three months taken from Consensus Forecasts.



The **ECB** raised its rate by 75 bp at the meeting in October and by another 50 bp in December. According to the communication after the December decision, rates will be raised further. From March 2023 onwards, the asset purchase programme (APP) portfolio will decline at a pace of EUR 15 billion per month on average until the end of 2023 Q2, as the Eurosystem will not reinvest all of the principal payments from maturing securities. The subsequent pace of decline will be determined over time. At the February meeting, the ECB will announce the detailed parameters for reducing the APP holdings. By the end of 2023, it will also review its operational framework for steering short-term interest rates, which will provide information regarding the endpoint of the balance sheet normalisation process. Inflation is projected to decrease gradually to 6.3% in 2023, 3.4% in 2024 and 2.3% in 2025. The outlook for GDP growth is currently 0.5% in 2023, 1.9% in 2024 and 1.8% in 2025. The risks to the GDP and inflation forecasts are on the downside and upside respectively.

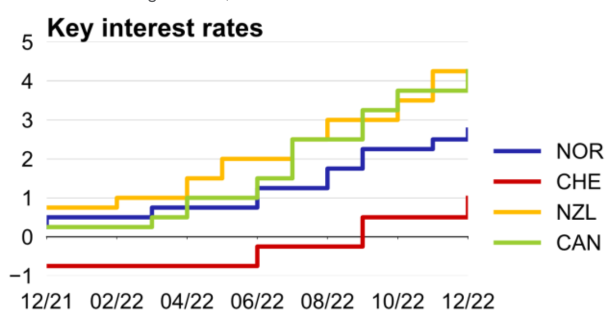
The **Fed** raised the federal funds rate (FFR) by a total of 200 bp to 4.25–4.5% at the last three meetings. At the December meeting, it slowed the pace from 75 bp to 50 bp. The Fed also continued its quantitative tightening. Compared with last year, growth in household consumption has slowed and activity on the housing market has decreased. Despite inflation being high above the target, inflation expectations remain anchored. Based on the FOMC participants' median projections, GDP can be expected to grow by 0.5% in 2023 (as against the September projection of 1.2%), 1.6% in 2024 (1.7%) and 1.8% in 2025 (1.8%). The unemployment rate is forecasted at around 4.5% in 2023–2025. PCE inflation is projected at 3.1% in 2023 (previously 2.8%), 2.5% in 2024 (2.3%) and 2.1% in 2025 (2.0%). The projection also includes the expected FFR path. The FFR midpoint is expected at 5.1% in 2023 (4.6%), 4.1% in 2024 (3.9%) and 3.1% in 2025 (2.9%).

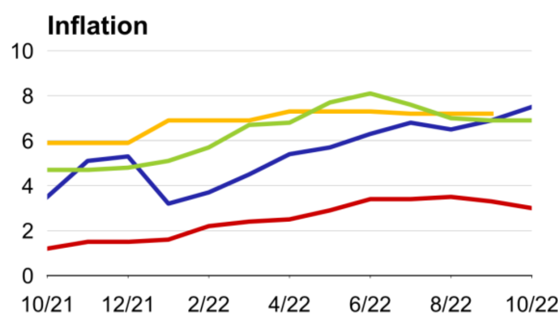
The **BoE** raised its rate in three steps by 175 bp overall. According to the November forecast, the UK economy will be in recession for a prolonged period. Inflation is expected to remain elevated in the near term and fall sharply from mid-2023. It will be below the 2% target in 2024 (forecast: 1.5%) and 2025 (expected 0%). An Energy Price Guarantee was introduced in October, fostering a fall in inflation. The forecast foresees a negative contribution from energy prices and also impacts from slowing economic growth and rising unemployment. The forecast expects GDP to decrease by 1.5% in 2023 and 1% in 2024 and increase by 0.5% in 2025. The BoE temporarily purchased bonds in late September and early October (see *Spotlight* for details). In November, it started to sell assets purchased under the Asset Purchase Facility.

I.2 SELECTED INFLATION-TARGETING NON-EU COUNTRIES

	Norway (NB)	Switzerland (SNB)	New Zealand (RBNZ)	Canada (BoC)
Inflation target	2%	0–2%	2%	2%
MP meetings (rate changes)	22 Sep (+0.5) 3 Nov (+0.25) 15 Dec (+0.25)	22 Sep (+0.75) 15 Dec (+0.50)	5 Oct (+0.50) 23 Nov (+0.75)	26 Oct (+0.50) 7 Dec (+0.50)
Current basic rate	2.75%	1.00%	4.25%	4.25%
Latest inflation	6.5% (Nov 2022)	3.0% (Oct 2022)	7.2% (2022 Q3)	6.9% (Oct 2022)
Expected MP meetings	19 Jan	23 Mar	22 Feb	25 Jan 8 Mar
Other expected events		21 Dec: publication of Quarterly Bulletin	22 Feb: publication of Monetary Policy Statement	25 Jan: publication of Monetary Policy Report
Expected rate movements[1]	↑	↑	↑	↑

Note: [1] direction of expected change in rates in next three months taken from Consensus Forecasts or, in the case of New Zealand, from RBNZ survey, and, in the case of Norges Bank, from forecast.





The **NB** has raised its rate three times in a row, by 100 bp overall, and will mostly likely raise it further in 2023 Q1. According to the NB, the forecast is more uncertain than normal due to households' unclear response to higher inflation and increased interest rates, and the potential effects of high inflation on wage and price formation. According to the December forecast, inflation will remain markedly above the target for longer than previously projected. The inflation rate is expected to be 4.8% in 2023, 2.8% in 2024 and 2.6% in 2025. The forecast indicates a drop in Norwegian mainland GDP of 0.2% in 2023 and a rise of 0.2% and 1.4% in 2024 and 2025 respectively. The expected recovery will be driven by investment in the petroleum industry and activities related to climate transition.

The **SNB** continued to raise its rate – by 75 bp at the meeting in September (bringing it to a positive level for the first time since 2015) and a further 50 bp at the December meeting. The SNB also announced its willingness to be active in the foreign exchange market as necessary. The SNB's conditional inflation forecast (which assumes that the policy rate is 1.0% over the entire forecast horizon) puts inflation at 2.4% for 2023 and 1.8% for 2024. The SNB expects GDP growth of 0.5% for 2023. The forecast is based on the assumption that the challenging situation will persist, as global economic growth will be weak and inflation abroad will remain elevated for longer, although it will moderate gradually.

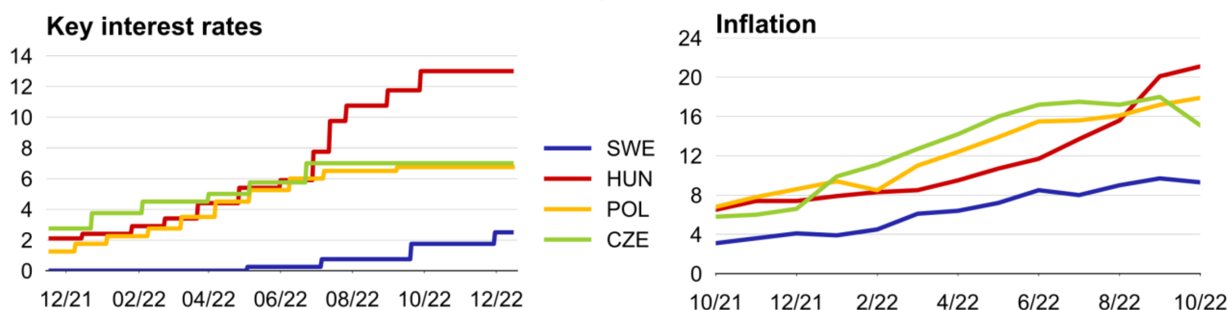
The **RBNZ** kept tightening monetary policy, raising its policy rate by a total of 125 bp in October and November. It expects core and headline inflation to remain elevated in the near term and start to decline in the second half of 2023. The unemployment rate is low (3.3% in September). A weaker currency is mitigating the anti-inflationary impact of the decline in international commodity prices. The house price index has declined to mid-2021 levels, but according to the RBNZ it is still above estimates of sustainable house prices and above pre-pandemic levels. The RBNZ has since July been selling off assets purchased earlier under the LSAP, and it was decided at the November meeting that it will continue to sell at the set pace.

The **BOC** raised its interest rate at its meetings in October and December by a total of 100 bp to 4.25%. The BoC is also continuing its quantitative tightening. GDP growth in 2022 Q3 was stronger than expected. The forecast expects GDP growth of 0.9% in 2023 and 2.0% in 2024. The labour market remains tight, with unemployment near historical lows. Consumption moderated in 2022 Q3, and housing market activity continues to decline. Inflation stayed at the September level (6.9%) in October, while core inflation remained around 5%. However, the three-month rates of change in core inflation indicate that price pressures may be losing momentum. The BoC expects inflation of 4.1% in 2023 and 2.2% in 2024. Looking ahead, it will be considering whether interest rates need to rise further.

I.3 SELECTED CENTRAL BANKS OF INFLATION-TARGETING EU COUNTRIES

	Sweden (Riksbank)	Hungary (MNB)	Poland (NBP)	Czech Republic (CNB)
Inflation target	2%[1]	3%	2.5%	2%
MP meetings (rate changes)	19 Sep (+1.00) 23 Nov (+0.75)	27 Sep (+1.25) 14 Oct (0.00)[2] 25 Oct (0.00) 22 Nov (0.00)	5 Oct (0.00) 9 Nov (0.00) 7 Dec (0.00)	29 Sep (0.00) 3 Nov (0.00)
Current basic rate	2.50%	13.00%	6.75%	7.00%
Latest inflation	9.3% (Oct 2022)	22.5% (Nov 2022)	17.4% (Nov 2022)[3]	16.2% (Nov 2022)
Expected MP meetings	8 Feb	20 Dec 24 Jan 28 Feb	3–4 Jan 7–8 Feb 7–8 Mar	21 Dec 2 Feb
Other expected events	9 Feb: publication of Monetary Policy Report	20 Dec: publication of Inflation Report	March: publication of Inflation Report	10 Feb: publication of Monetary Policy Report
Expected rate movements[4]	↑	→	→	→

Note: [1] CPIF – consumer price index including fixed interest rate; [2] extraordinary meeting at which key monetary policy rate was left unchanged but other instruments were adjusted; [3] flash estimate; [4] direction of expected change in rates in next three months taken from Consensus Forecasts.



The **Riksbank** continued to tighten monetary policy. It raised its rate by 100 bp for the first time in history in September and by a further 75 bp in November. The November forecast shows that the rate will probably be raised further at the beginning of 2023 and then be just below 3%. CPIF inflation was 9.3% in October. This was below the forecast, which was expecting higher energy prices. As for the other items, inflation was instead unexpectedly high. The forecast expects inflation to drop next year (5.7%) and approach the 2% inflation target in 2024. Riksbank expects Swedish GDP to decline in 2023 (by 1.2%) and grow in 2024 (by 1%). Unemployment has fallen to the pre-pandemic level, but the forecast expects it to rise in the years ahead.

The **MNB** announced in September that it had raised its policy rate for the last time, by 1.25%, and would subsequently tighten using other instruments. It thus left the rate unchanged at the October and November meetings. In mid-October, it responded to the increasing pressure on the forint by raising the O/N collateralised lending rate from 15.5% to 25% and suspending the one-week collateralised loan, among other measures. At the end of November, it held a two-month deposit tender to tie up banking sector liquidity. The bank is planning to hold euro liquidity-providing FX swap tenders in December. According to the forecast, inflation will start to decrease slowly in the first half of 2023 and return to the tolerance band in the first half of 2024. GDP growth is expected to slow to 0.5–1.5% in 2023 and pick up to 3.5–4.5% in 2024.

The **NBP** left its rate at the current level at the meetings in October, November and December. According to a preliminary estimate, year-on-year GDP growth slowed to 3.6% in 2022 Q3 (from 5.8% in Q2). The November forecast shows that GDP growth will slow to 0.7% in 2023. It will reach 2.0% in 2024 and 3.1% in 2025. The NBP expects inflation of 13.1% next year, 5.9% in 2024 and 3.5% in 2025. In contrast to its previous forecasts, the NBP has extended the forecast horizon to 2025, when inflation is expected to be approaching the target gradually.

The **CNB** left its 2W repo rate unchanged at the September and November meetings. The rate is at a level that is dampening domestic demand pressures. Due to the recent extraordinary but not escalating external cost pressures, the monetary policy horizon is currently 15–21 months. According to the autumn forecast, inflation will peak above 18% and then start to fall (to an average of 9.1% in 2023). It will return close to the 2% target in the first half of 2024. Whole-year economic growth will slow to 2.2% in 2022. Economic activity will fall by 0.7% in 2023 and return to growth of around 2.5% in 2024. The CNB is continuing to prevent excessive fluctuations in the exchange rate of the koruna.

II. NEWS OVER THE LAST THREE MONTHS

ECB modifies terms of TLTRO III programme

At its October meeting, the European Central Bank decided to recalibrate its programme for supporting bank lending (targeted longer-term refinancing operations, TLTRO III). Under this programme, banks were able to borrow long-term liquidity from the ECB at a favourable rate, subject to meeting specified conditions. The programme was introduced in 2019 (the previous two waves of TLTRO had been announced in 2014 and 2016) and included a total of ten operations with a maturity of three years – starting in September 2019 and thereafter at a quarterly frequency; its specific conditions were further adjusted during the coronavirus pandemic. While loans under TLTRO III were previously remunerated at favourable rates, following the October decision, since 23 November onwards, the interest rates have been equivalent to the average ECB rates from that date until repayment. The goal of this move is to reinforce the transmission of the ECB's monetary policy rate hikes to bank lending conditions. The ECB has also added new dates for banks to repay their TLTRO III borrowings before maturity.

BoE carries out quantitative tightening

The Bank of England has begun selling assets previously purchased under quantitative easing. The sales were originally scheduled to begin on 3 October, but, due to the turbulence in the UK government bond market, which forced the BoE to intervene (see the current *Spotlight* for more details), the start was postponed. The sales were eventually launched on 1 November, but in the first phase the BoE is not yet selling the bonds with the longest maturities due to market stability considerations.

RBNZ reviews its previous decisions and monetary policy strategy

The Reserve Bank of New Zealand published a paper assessing its monetary policy during 2017–2022. The paper shows, among other things, that the significant monetary easing after the pandemic was justified and that the worst economic scenarios were avoided. On the other hand, however, in hindsight, monetary policy should have been tightened earlier, for example by reducing the overall size of the asset purchase programme, stopping the programme earlier, or starting interest rate hikes sooner in 2021 (the first hike occurred in October 2021). Also, the Funding for Lending Programme (FLP) could have been designed with more flexibility – given its previous commitment and desire to maintain credibility, the RBNZ is maintaining the FLP until December 2022 even though this is no longer required by current economic developments. However, the RBNZ believes that even tightening monetary policy earlier would not have fully offset the strong inflationary pressures stemming from the series of supply shocks, including Russia's invasion of Ukraine.

In addition, the RBNZ is currently preparing a recommendation for the Minister of Finance on the review of its remit (which in New Zealand is set by the government, although the central bank is legally obliged to provide advice on the remit and potential changes to it at least every five years). According to its preliminary stance, the RBNZ recommends, among other things, that the minister consider introducing a clear hierarchy of objectives (the RBNZ currently has a dual mandate of price stability and maximum sustainable employment) and to revisit the question of whether monetary policy should explicitly take into account its impact on house price sustainability (which became part of the RBNZ's remit in 2021). The RBNZ continues to consider the current 2% inflation target (or a target range of 1–3%) to be appropriate. However, the RBNZ will not provide its final recommendation until April 2023.

RBA continues to review tools used during pandemic

Following a analysis of yield curve control policy (for details see the September *Central Bank Monitoring*), the Australian RBA assessed its experience with other tools used after the outbreak of the pandemic, namely the asset purchase programme and forward guidance. According to the RBA, the asset purchases helped the economy recover rapidly from the pandemic downturn, worked as intended and did not compromise market functioning. Compared with yield curve control, they provide more flexibility to respond to evolving economic circumstances, although they could entail larger financing costs. The RBA acknowledges the possible future use of asset purchases, but only in extreme circumstances.

The use of forward guidance also worked to lower funding costs and support the economy early in the pandemic. The forward guidance was mainly state-based, but it also included a time-based element for future monetary policy actions. This complicated the RBA's messaging, which failed to distinguish sufficiently between expectations about future developments and an explicit commitment. In fact, the time-based element of the forward guidance received more media and market attention. When the RBA then started to raise interest rates significantly earlier than previously expected (in May 2022 rather than 2024) due to inflationary developments, it attracted criticism. In the future, therefore, the central bank

will emphasise in its communication the conditionality of its actions on the evolution of economic variables (especially those falling within its mandate, namely inflation and unemployment). The RBA has not ruled out the use of a stronger form of forward guidance when interest rates are at, or near, the effective lower bound, but it would take into account the lessons learned in implementing this instrument.

Bank of Japan intervenes in foreign exchange market

On 22 September, Japan intervened in the market to support the yen for the first time since 1998. In Japan, interventions are carried out by the BoJ but decided on by the Ministry of Finance. The recent intervention was done in an attempt to slow the yen's long-term appreciation trend against the US dollar, which is a result, among other things, of a widening interest rate differential between the two currencies – the BoJ is now the last central bank which still maintains negative interest rates. The relevant authorities have not commented on the details, but interventions in the foreign exchange market appear to have continued in the following weeks. According to Reuters, Japan intervened during September and October, whereas no further interventions occurred during November owing to a calming of the situation. (The Bank of Japan's monetary policy and the yen exchange rate at the time were covered in more detail in *Spotlight* in the *June Central Bank Monitoring*.)

Yen-dollar exchange rate (JPY/USD)

Note: A higher value means a weaker yen against the dollar.
Source: Bank of Japan.

Former Fed chief wins Nobel Prize in Economics

Ben Bernanke, who was the head of the US central bank in 2006–2014, is one of this year's laureates of the Nobel Prize in Economics (or rather the Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel). In his academic career, Bernanke's primary research focus has been on the Great Depression of the 1930s. Bernanke shared the prize with Douglas Diamond and Philip Dybvig. All were awarded the prize for their research on banking and financial crises.

III. SPOTLIGHT: THE BANK OF ENGLAND AND ITS GILT MARKET INTERVENTION

The Bank of England has had to respond to unprecedented risks to financial stability in recent months. A disorderly deterioration in the UK long-term government bond (gilt) market following the announcement of expansionary fiscal measures by the government led the BoE to intervene with time-limited gilt purchases. The BoE had been about to start selling gilts, so it had to switch quickly and temporarily from sales to purchases. The temporary gilt purchases, carried out over 13 working days in late September and early October, were aimed at giving liability-driven investment (LDI) funds time to recapitalise and regain financial stability. Communicating the use of this instrument was challenging for the central bank, as it was crucial to distinguish the gilt purchases for the purposes of financial stability from the monetary policy quantitative easing that the bank had previously been applying.

This article describes the sequence of events surrounding the gilt market intervention and presents the design of the intervention and the challenges faced. Last but not least, it mentions the importance of communication by the central bank when making such unconventional market interventions.

Events surrounding the gilt market intervention

In September 2022, the Bank of England planned to start the active element of quantitative tightening – the sale of assets – as part of its fight against high inflation.[1] At its meeting on 22 September, the Monetary Policy Committee (MPC)[2] approved sales of government bonds, known as gilts,[3] as it had signalled at its August meeting. The asset sales were to end ten years of quantitative easing, which had been applied in several waves in response to the Global Financial Crisis, the outcome of the Brexit referendum and the onset of the pandemic. The quantitative tightening sales were supposed to start on 3 October. One week before the above-mentioned MPC meeting, the BoE also decided to raise its key interest rate. However, in response to gilt market volatility in late September and early October, which posed a significant risk to financial stability, the BoE had to switch from sales, to purchases and back to sales again within one month.

On Friday 23 September, the government announced a "Growth Plan". As part of the plan, a fiscal package called a "mini-budget" was presented to parliament. It contained economic policies and significant tax cuts, such as a reduction in the personal income tax rate and the abolition of the plan to increase corporate taxes in April 2023. The tax cuts and economic policies presented would reduce Treasury revenues by about GBP 45 billion in 2026 and 2027. The announcement of these plans triggered a sharp market reaction. Sterling lost 4% against the US dollar and 2% against the euro the same day, and long-term gilt yields rose by 30 bp between the Friday and Monday closing prices. Following the rapid rise in returns on gilts and hence drop in their prices, liability-driven investment (LDI)[4] fund managers began to express concerns about the implications for their funds' financial stability if the liquidity shortage were to continue. This shortage had emerged soon after the budget was presented, when demand for medium- and long-term gilts plummeted (due to uncertainty about the future financing of UK government expenditure because of the tax cuts). Between the start of September and the morning of 28 September, the 20-year gilt yield rose by more than 140 bp, twice the previous record-high increase seen in spring 2020. Figure 1 shows medium and long-term gilt yields between early September and mid-November.

On 26 and 27 September, there were times when there were almost no medium and long-term buyers on the gilt market. This put further downward pressure on prices and upward pressure on yields. LDI fund managers began selling their gilt holdings (representing a large share of the funds' assets) in large size to secure funds to satisfy higher margin calls and maintain positive net asset value. The gilt market thus started on a self-reinforcing downward price spiral that could have undermined financial stability. This posed a risk to the pension system, which is linked to LDI funds for leverage purposes (see below). The BoE thus found itself in a situation where a specific and largely unheard-of part of the market posed a risk

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[1] Since February 2022, the BoE has been conducting passive quantitative tightening, as it has not been reinvesting yields on maturing bonds. The entire process of phasing out quantitative easing and subsequent quantitative tightening by central banks was described in more detail in *Spotlight* in the March issue of *Central Bank Monitoring*.

[2] In the UK, maintaining price and financial stability falls under the Bank of England's mandate, but the two areas are managed by two different bodies. A seven-member Monetary Policy Committee is responsible for monetary policy, while financial stability policy is conducted by the Financial Policy Committee, which has twelve members, including one non-voting Treasury representative. The Governor and three Deputy Governors are members of both committees. This ensures some degree of coordination of the two policies.

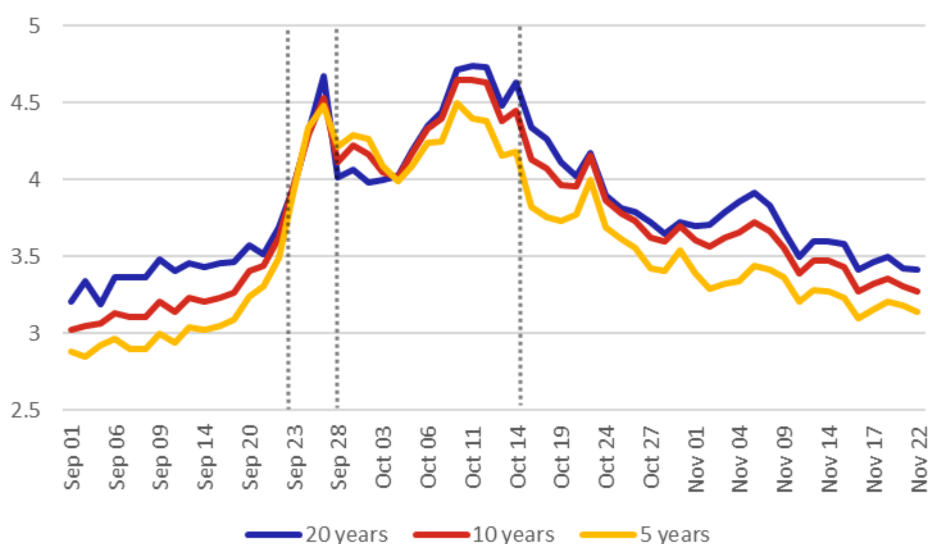
[3] A gilt is a bond issued by the UK government (specifically His Majesty's Treasury – the UK ministry of finance) in sterling and quoted on the London Stock Exchange. The gilt market offers two different types of bonds: conventional gilts, which account for about 75% of the portfolio, and index-linked gilts, which make up the remaining 25%.

[4] Liability-driven investment is a liability-based investment strategy. Funds following this strategy try to match the value of the assets they hold with that of their liabilities, as both sides change in value due to inflation and interest rates.

to financial stability. At the same time, however, the BoE was limited in its actions by a need to prevent excessive monetary easing amid high inflation.

The BoE responded by announcing temporary purchases of conventional gilts with a residual maturity of more than 20 years each day from 28 September to 14 October.[5] On the first day of the operation, 20-year gilt yields fell by more than 60 bp in response to the announcement of the purchases (as shown in Figure 1). The aim of the purchases was to gain time for pension funds to adjust their balance sheets and obtain enough liquidity. Together with the temporary purchases, it was announced that the planned gilt sales would be postponed until the end of October. On 10 October, the BoE launched a new Temporary Expanded Collateral Repo Facility (TECRF), which it planned to use (and did indeed use) until 10 November.[6] This instrument widened the range of eligible collateral for use in repo operations to include corporate bonds, increasing banks' flexibility with respect to eligible collateral from pension funds and supporting market liquidity. These steps were taken to safeguard financial stability and were decided by the Financial Policy Committee, which informed the Monetary Policy Committee about them.

Figure 1: Medium and long-term gilt yields (%)



Note: The vertical lines denote, respectively, the day the Growth Plan was published, the day the gilt purchases started and the day they ended.
Source: Bank of England, daily data.

On 14 October, Kwasi Kwarteng was dismissed as Chancellor of the Exchequer for the chaos that had followed the announcement of the "mini-budget". Despite the subsequent cancellation of the proposed changes, Prime Minister Liz Truss resigned on 20 October. Jeremy Hunt came in as Chancellor and Rishi Sunak took over as Prime Minister.

In a news release of 18 October, the BoE announced that it would start selling assets totalling GBP 838 billion held in the Asset Purchase Facility (i.e. assets purchased during the previous years of quantitative easing) in November, one month later than originally planned. So, it switched from buying gilts back to selling them. The aim of the sales is to reduce the asset holdings by GBP 80 billion over the following year. The BoE did indeed sell GBP 750 million of short-term gilts on 1 November, thus launching active quantitative tightening. At the monetary policy meeting on Thursday 3 November, the interest rate was raised by 0.75 pp and the BoE thus continued to tighten monetary policy in order to reduce inflation.

[5] The full specification of the entire operation, including the eligible instruments, can be found in a Market Notice of 28 September 2022.

[6] The total value of the assets used under the TECRF over the one-month period was GBP 7.5 million.

Seeking an appropriate response to the gilt market situation

Defined-benefit (DB)[7] pension schemes own long-term gilts and are thus exposed in terms of funding to changes in gilt yields. DB schemes therefore use LDI funds to secure higher returns and also to hedge their exposures to long-term gilt yields. In the era of low rates, this strategy provided DB schemes with coverage against risks associated with changes in the value of their liabilities. Amid changes in interest rates and inflation, it allowed DB funds to hold riskier, higher-yielding assets. However, the emergence of the gilt price spiral meant that LDI funds were exposed to illiquidity risk, as the large-scale gilt sales further reduced the prices of the assets they held. This required extra resources to meet margin calls and maintain positive net asset value. However, the funds did not have sufficient financial resources to meet these extra needs, so urgent recapitalisation was required. However, the recapitalisation mechanism was designed for calmer times. DB funds had both the means and the incentive to recapitalise LDI funds (since persistently higher yields reduce the cost of future liabilities and hence boost the funding position of DB funds),[8] but those resources took too long to mobilise. Insofar as DB funds were unable to meet the demand for more hedging or had investments in an LDI fund that did not meet its hedging needs, they could have lost part of their hedge against a fall in gilt yields in the future.

The BoE sought an instrument that would meet three criteria: it had to give LDI funds time to restore their lost stability; it had to avoid causing gilt prices to leap when it was discontinued, as this would again endanger financial stability and undermine the credibility of the exit strategy; and there had to be a clear separation between the use of the instrument and the monetary policy strategy – the instrument would have to have a clear inflationary effect, that is, the opposite effect to an increase in the monetary policy rate or quantitative tightening.

The BoE had previous experience with extraordinary purchases of gilts and other debt instruments enabling non-banks to obtain collateral in the event of liquidity shortages related to margin calls in March 2020 – the "dash for cash" period. Prices of risk-free assets (such as gilts) had also fallen sharply in 2020 as a result of large amounts of such risk-free assets being sold to obtain liquidity.

In the wake of the March 2020 events, the BoE joined other central banks in a working group to discuss how central banks might help supply the necessary liquidity to the markets. The report of the working group highlights that asset purchases can be effective at alleviating market dysfunction stemming from a broader range of causes than lending operations are able to address. In addition to providing the necessary liquidity, asset purchases act directly on market prices, affecting all holders of the relevant assets and helping to address breakdowns in price discovery due to asymmetric information. However, the report also warned against the consequences of such interventions in terms of incentivising underpricing of risk (such as moral hazard). According to the report, asset purchases may also pose risks to central bank capital. *In extremis*, central bank independence may also be at risk, especially for emerging economies, as central bank decisions may be unduly influenced by the government's financing needs.

In the end, the BoE opted to make temporary purchases of long-term gilts for just 13 working days, as this was considered enough time for the funds to recapitalise. The interventions were initially targeted solely at conventional gilts[9] and later extended to index-linked gilts[10] with effect from 11 October. The BoE set the daily ceiling for gilt purchases at GBP 5 billion. On 10 October, it raised the ceiling from GBP 5 billion to GBP 10 billion. As shown in Figure 2, which displays the value of the gilts purchased, the BoE did not come close to the ceiling on any of the 13 days. After the decision was made to include index-linked gilts, the purchases neared the initial daily ceiling of GBP 5 billion, but the increased ceiling had already been set for those days. Gilt purchases in excess GBP 1 billion took place only on the initial and closing days of the 13-day window. During this period, the BoE purchased gilts totalling GBP 19.26 billion, less than it had originally expected.[11]

On 29 November, the BoE started selling the extraordinarily purchased gilts, reducing their amount by almost 2% on the first day. The BoE did not set a final date for the sale, merely limiting it to three half-hour windows during the working week.

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[7] There are two types of private pension schemes in the UK. Defined-benefit schemes pay pensions based on the employee's salary and number of years worked for the employer, which also provides the scheme. The second type is defined-contribution schemes, where the amount paid depends on the amount of money invested, the return on the investment and whether the amount is paid out as a lump sum or in small amounts.

[8] According to the Pension Protection Fund 7800 index, DB pension fund liabilities decreased in value by around 34% (from GBP 1.69 trillion to GBP 1.12 trillion) between December 2021 and November 2022 (i.e. in the period when the monetary policy rate was being increased). Over the same period, the value of their assets fell by just 18% (from GBP 1.82 trillion to GBP 1.49 trillion). Their net asset value thus rose two and a half times, from GBP 146 billion to GBP 375 billion, over this period.

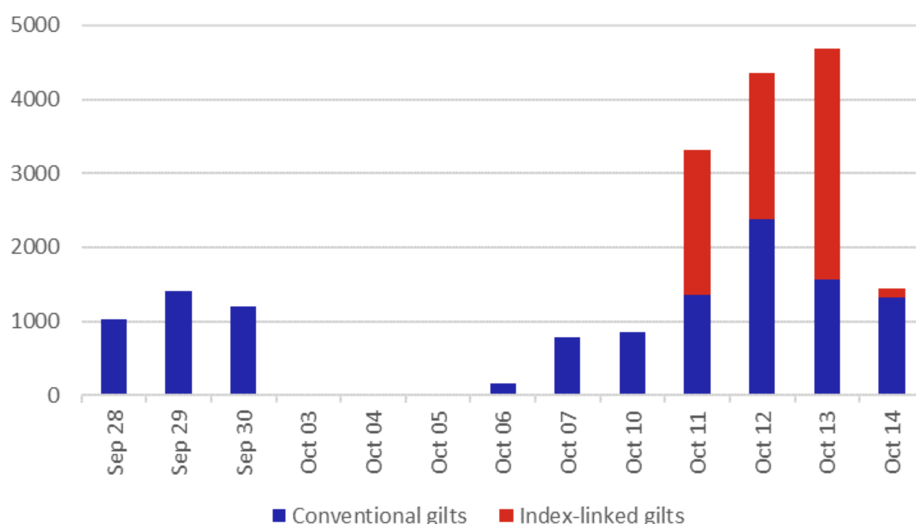
[9] A conventional gilt is a government commitment that guarantees the gilt holder a fixed coupon payment every six months until maturity, when the final coupon payment is received and the principal is returned. Conventional gilts are quoted at a nominal price of GBP 100, but can also be traded for a few pence.

[10] An index-linked gilt also guarantees the holder half-yearly coupon payments until maturity and the return of the principal. However, it differs from conventional gilts in that the half-yearly coupon and principal payments are adjusted in line with movements in the UK Retail Price Index, that is, they reflect the growth in inflation recorded since the date on which the commitment was issued.

[11] This was mentioned by Andrew Hauser, Executive Director for Markets at the Bank of England, in a conference speech.

It set a minimum sale price but specified no maximum or minimum daily sales volume. It opted for slow and voluntary sales in order to avoid destabilising the gilt markets again.

Figure 2: BoE extraordinary gilt purchases on individual days (GBP millions)



Source: Bank of England.

The central bank's communication on the use of the instrument

Communication was an important part of the purchases. When announcing them early on 28 September, the BoE declared that its objective was to safeguard financial stability and that the intervention involved no change in the longer-term process of monetary policy tightening. In this context, the BoE also stated that the intervention was temporary and would only run for the specified 13 days. In its messaging, it stressed that the purchases were not aimed at achieving any particular size or profit, but that the goal was to purchase the amount of assets needed to achieve financial stability and recapitalise the market. It also emphasised that it was not aiming to lower the cost of long-term government borrowing. HM Treasury declared that it would cover the financial risks of the operation and thus protect the BoE against any financial losses and would conversely benefit from any proceeds from the purchase, holding and subsequent sale of gilts.[12] Communication proved to be a powerful tool, as it was instrumental in the BoE being able to calm the situation with gilt purchases well below the set ceiling (as discussed above).

On the day the programme was announced and commenced, yields on medium and long-term conventional and index-linked gilts declined sharply (see Figure 1). Both the press and investors referred to the operation as another wave of quantitative easing. The lower yields calmed the situation regarding forced sales of LDI fund assets. Now the BoE faced another risk – if the yields were to remain at such low levels, the incentive for funds to improve their resilience would be overly reduced and gilt prices would jump at the end of the intervention period. However, the markets absorbed the information that the intervention was intended merely as a backstop, and so yields started to rise gradually. This increased the likelihood of gilts being bought by the private market and reduced the potential for a large jump in prices at the end of the intervention period. The government communicated a change to the originally proposed tax cuts and also underwent personnel changes. This, too, helped calm the situation on the gilt market. The BoE's communication was additionally complicated by an article published in the Financial Times two days before the exit about alleged covert discussions within the BoE about possibly prolonging its gilt market interventions. In response to the article, the BoE declared again that it would discontinue the asset purchases on 14 October as originally planned, which it then duly did.

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[12] A similar agreement (Deed of Indemnity) regarding quantitative easing has been in place since 2009 between the BoE, HM Treasury and the Bank of England Asset Purchase Facility Fund (a company belonging to the BoE, but separate from it, through which the BoE conducted QE asset purchases). HM Treasury covers any financial losses arising from QE and conversely receives any profits. For most of the period since the start of QE, profits were generated thanks to low interest rates, but in October this year, for example, the BoE received GBP 282 million from the Treasury to cover losses under the QE programme. Such agreements between central banks and ministries of finance are rare. In the euro area, for example, ministries cannot simply recapitalise central banks under EMU rules.

Conclusion

The BoE responded to risks to financial stability stemming from the medium and long-term gilt market by introducing short-term time-limited gilt purchases. Given the rapid evolution of the situation, it had to act quickly. It responded to the worsening situation on the fourth working day after the situation arose. The BoE is usually the lender of last resort in the UK financial system. However, both in 2020 and again now in 2022, the BoE acted as market-maker of last resort, as it was forced to supply liquidity to the markets. Moreover, this situation was unprecedented, making the BoE a pioneer in this area.

The BoE also faced a situation in which it had to cope with both a threat to financial stability and the issue of setting monetary policy in such a way as to bring down high inflation. In its communications, the BoE therefore needed to clearly separate the current extraordinary purchases from the previous quantitative easing programmes. The central bank's intervention (together with personnel changes in the government and the abandonment of the controversial mini-budget) helped calm the situation on the gilt market and averted major negative impacts on the UK pension system and, by extension, the financial system as a whole. The BoE itself intends in the future to assess whether a different instrument might have been used to calm the situation. Other central bankers and the economics community will certainly evaluate the BoE's communication and its response to the situation as a whole.

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IV. SELECTED SPEECH: Philip Lowe: Price stability, the supply side and prosperity

In his November speech at the Committee for Economic Development of Australia, the Governor of the Australian RBA Philip Lowe illustrated the detrimental effects of high inflation, outlined future changes in the global economy and their effects on monetary policy, and summarised the recent monetary policy of the RBA.

The scourge of inflation

In the 1960s, the inflation rate in Australia averaged 2%. Inflation rose significantly in the 1970s and was tamed only in the 1990s. Since then, under the inflation targeting regime, inflation has varied in a narrow range at low levels until this year. The high inflation of the 1970s and 1980s damaged the Australian economy, reduced living standards and discredited the idea that tolerating higher inflation may lead to faster growth and higher employment. The reverse was true. High inflation meant lower economic growth, fewer jobs and lower real wages.

As another lesson from these decades, Governor Lowe mentions the high cost of reducing inflation after it becomes ingrained in expectations. Bringing inflation back down required high interest rates and resulted in a recession and a rise in unemployment. This experience lies behind central banks' determination to ensure that the current period of high inflation is only temporary. Economies work better with low inflation. Once inflation takes root, it is very costly to stamp it out.

The supply side matters

Lowe warns that the global economy is facing long-term changes that are likely to affect inflation, monetary policy and the business environment in Australia. In the past three decades, most central banks have viewed managing inflation largely through the prism of managing aggregate demand. Supply has been largely treated as something that evolves slowly in the background. Growth in international trade and the subsequent flexibility of supply has played a significant role in this, as have economic growth in China, which has lowered relative prices, and demographic trends and related growth in the labour force. Looking ahead, it seems that the supply side will have a bigger influence. The very recent past has reminded us of just how influential it can be, with the COVID-19 pandemic and Russia's invasion of Ukraine contributing to the highest inflation in decades. Beyond these shocks, Lowe anticipates long-term developments that are likely to create more variability in inflation than we have become used to.

The first factor is the reversal of globalisation. International trade is no longer growing faster than the global economy. Barriers to trade are preventing closer integration and affecting both growth of living standards and the pricing of goods and services. The second factor is demographics. Until recently, the working-age population of the advanced economies was growing. Advances in technology made it easier to tap into the resulting growth in the labour force. This trend has also now turned. The working-age population in the advanced economies is declining, and the growing workforce in emerging economies has not yet been integrated into the global economy. The third factor is climate change. The frequency of extreme weather events has been increasing, disrupting production and affecting prices. As an example, Lowe gives the recent floods in Australia, which have contributed to rising inflation through prices of food and commodities. The last factor mentioned by Lowe is the global transition to green energy and the replacement of the depreciating capital stock that is used to produce energy. Higher and more volatile energy prices can be expected during this transition.

Inflation will be affected through two channels. The first is an increase in the prevalence of supply shocks, and the second is lower elasticity of supply. Both will result in more variability in inflation. This has several implications for monetary policy. First, it will be more problematic to keep inflation within predetermined boundaries. Second, the importance of having a strong nominal anchor will increase, as we will get better outcomes if people are confident that when inflation gets pushed away from the target, it will return to it. According to Lowe, more variable inflation is likely to make the monetary policy environment more challenging for central banks. However, none of this undermines central banks' ability to achieve their inflation targets.

RBA monetary policy

At the end of his speech, Lowe summarises the RBA's recent monetary policy. During the pandemic, the RBA used forward guidance, but it also had difficulties with communication. The message about the conditions under which it would increase rates was obscured by the message about the expected timing. After the first increase in the cash rate in May this year, the RBA returned to its pre-pandemic approach to forward guidance, which avoids calendar dates. However, it will continue to provide the information that allows people to make their own judgements about future interest rate movements.

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