Central Bank Monitoring

III/2022

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

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In this issue

The global economy is going through a turbulent period and faces inflation running at levels unseen for several decades, an energy crisis, the impacts of Russia's aggression in Ukraine and still present Covid-related bottlenecks in global supply chains. There are discussions about whether or when recessions will break out in individual economies, even though labour markets are still very tight in many countries. In this environment, most central banks are continuing to tighten monetary policy rapidly to tame the high inflation and keep inflation expectations anchored. The ECB (together with introducing an "anti-fragmentation" bond purchase instrument) and the SNB have now raised their interest rates as well. Over the last three months, all the central banks we monitor have thus lifted rates by at least 0.5 pp – and in the case of Hungary's MNB, for example, by almost 6 pp.

The latest *Spotlight* focuses on housing markets, which have recorded sharp price growth in many countries in recent years, and their links with monetary policy in the countries we monitor. The article describes the developments in recent years, discusses how housing costs feed through to inflation and presents the latest findings on how monetary policy affects the housing market. In our *Selected Speech*, member of the Fed's Board of Governors Christopher Waller discusses the outlook for US monetary policy and reflects on the implications of the conflicting new data suggesting a contraction in economic activity on the one hand and a very tight labour market on the other.

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.

The publication is produced by the Monetary Policy and Fiscal Analyses Division of the Czech National Bank's Monetary Department and is freely distributable. Authors: Vojtěch Molnár (editor), Petr Kaštánek, Ivana Kubicová and Barbara Livorová.

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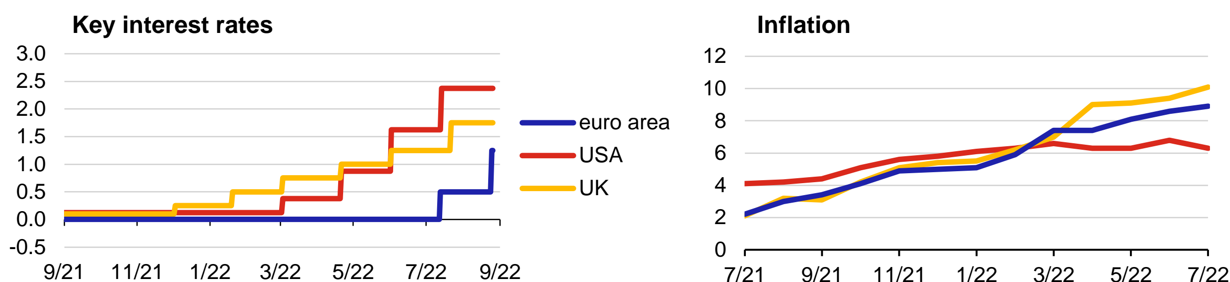
I. LATEST MONETARY POLICY DEVELOPMENTS AT SELECTED CENTRAL BANKS

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)	21 Jul (+0.50) 8 Sep (+0.75)	14–15 Jun (+0.75) 26–27 Jul (+0.75)	16 Jun (+0.25) 4 Aug (+0.50)
Current basic rate	1.25%	2.25–2.5%[2]	1.75%
Latest inflation	9.1% (Aug 2022)[3]	6.3% (Jul 2022)[4]	10.1% (Jul 2022)
Expected MP meetings	27 Oct 15 Dec	20–21 Sep[5] 1–2 Nov 13–14 Dec[5]	15 Sep 3 Nov 15 Dec
Other expected events	15 Dec: publication of forecast	19 Oct and 30 Nov: publication of Beige Book	3 Nov: publication of Monetary Policy Report
Expected rate movements[6]	↑	↑	↑

Note: [1] long-term average (the August 2020 definition) as measured by PCE (Personal Consumption Expenditures) index; [2] chart shows centre of band; [3] flash estimate; [4] PCE index; [5] meeting associated with summary of FOMC economic forecasts; [6] direction of expected change in rates in next three months taken from Consensus Forecasts.



The **ECB** raised interest rates twice in a row, by a total of 125 bp. It justified the hikes as major steps frontloading the transition from the prevailing highly accommodative level of policy rates towards levels that will ensure the timely return of inflation to the 2% target. Over the next several meetings, the ECB plans to raise rates further to dampen demand and guard against the risk of a persistent upward shift in inflation expectations. Price pressures have continued to strengthen and broaden across the economy and inflation may rise further in the near term. The ECB has significantly revised up its inflation projections to 8.1% (previously 6.8%) in 2022, 5.5% (3.5%) in 2023 and 2.3% (2.1%) in 2024. The GDP projection has been revised down markedly throughout 2023, to 3.1% (previously 2.8%) in 2022, 0.9% (2.1%) in 2023 and 1.9% (2.1%) in 2024. Following the raising of the deposit facility rate to above zero, the two-tier system for the remuneration of excess reserves is no longer necessary. It was therefore suspended with effect from 8 September by setting the multiplier to zero. The reinvestment volumes stayed unchanged, i.e. the principal payments from maturing securities purchased under the APP will still be reinvested in full and PEPP reinvestments will continue until at least the end of 2024.

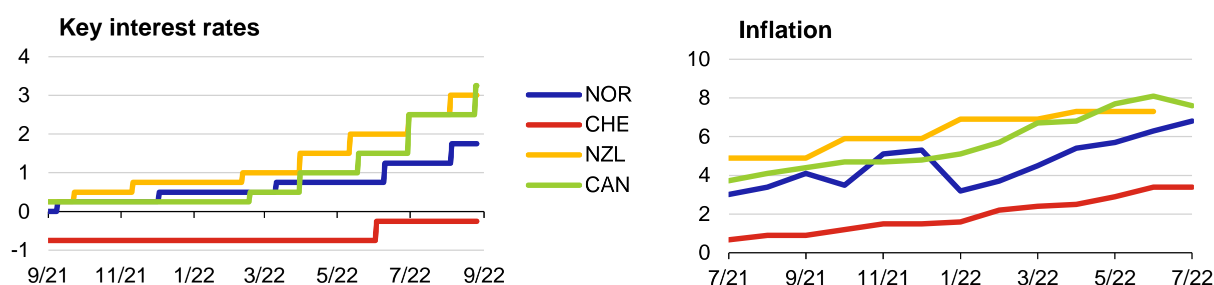
The **Fed** continued to raise the federal funds rate (FFR), this time by 150 bp overall to a range of 2.25–2.5% at its latest two meetings. With effect from September, as planned, it increased the pace of the quantitative tightening launched in June. The FOMC members' June forecast indicates a unanimous preference to raise rates above 3% this year. In this rate-raising cycle they are expected to reach 3.8% next year and fall slightly in 2024. The FFR is thus expected to be well above the long-run neutral level of around 2.5% over the next two years. The FFR midpoint is projected at 3.4% at the end of this year (1.9% in the March forecast), 3.8% (2.8%) in 2023 and 3.4% (2.8%) in 2024. Real GDP in the USA is projected to grow by 1.7% (2.8%) this year, 1.7% (2.2%) in 2023 and 1.9% (2.0%) in 2024, i.e. close to the long-term average (1.8%). The unemployment rate will be between 3.7% and 4.1%, i.e. close to the natural unemployment rate (4%), this year and the subsequent two years. PCE inflation will be 5.2% (4.3%) this year, 2.6% (2.7%) in 2023 and 2.2% (2.3%) in 2024.

The **BoE** its key interest rate further, by 75 bp overall to 1.75%. Inflationary pressures in the UK and the rest of Europe have intensified significantly, largely because wholesale gas prices have almost doubled since May. The BoE expects the rise in gas prices to be reflected in a sharp fall in real household income in 2022 and 2023 and related negative consumption growth. CPI inflation will exceed 13% in 2022 Q4 and stay very high for much of 2023. The UK will enter recession in 2022 Q4 and GDP growth is forecasted to be negative in 2023 and 2024. The BoE is reducing its government and corporate bond holdings by ceasing to reinvest maturing principal. It has yet to commence actively selling government bonds from its portfolio, but the sales are likely to start soon after the September meeting.

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)	23 Jun (+0.50) 18 Aug (+0.50)	16 Jun (+0.50)	13 Jul (+0.50) 17 Aug (+0.50)	13 Jul (+1.00) 7 Sep (+0.75)
Current basic rate	1.75%	-0.25%	3%	3.25%
Latest inflation	6.8% (Jul 2022)	3.4% (Jul 2022)	7.3% (2022 Q2)	7.6% (Jul 2022)
Expected MP meetings	22 Sep 3 Nov 15 Dec	22 Sep 15 Dec	5 Oct 23 Nov	26 Oct 7 Dec
Other expected events	22 Sep and 15 Dec: publication of Monetary Policy Report	28 Sep: publication of Quarterly Bulletin	23 Nov: publication of Monetary Policy Statement	26 Oct: publication of Monetary Policy Report
Expected rate movements[1]	↑	↑	↑	↑

Note: [1] direction of expected change in rates in next three months is 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** raised its key interest rate twice in a row by 50 bp to 1.75% and is likely to increase it further at its September meeting (a faster increase in rates than expected in June). According to Governor Ida Wolden Bache, a markedly higher policy rate is needed to ease the pressures in the Norwegian economy and to bring inflation down towards the target. There is a risk that little spare capacity in the Norwegian economy and persistent global price pressures will lead to a further acceleration in inflation. On the other hand, the rise in interest rates and high inflation may cool down the housing market and curb household consumption faster than currently envisaged.

The **SNB** surprisingly raised its policy rate by 50 bp to -0.25% in June to counter increased inflation pressure. It cannot be ruled out that further increases in the rate will be necessary in the foreseeable future to stabilise inflation in the target range in the medium term. To ensure appropriate monetary conditions, the SNB is also willing to be active in the foreign exchange market as necessary. The SNB's new conditional inflation forecast (which assumes that the SNB policy rate will be -0.25% over the entire forecast horizon) expects inflation of 2.8% for 2022, 1.9% for 2023 and 1.6% for 2024. The SNB still anticipates GDP growth of around 2.5% for 2022. Unemployment is likely to remain low. This favourable forecast is based, among other things, on the assumption that the global economy continues to grow and that the war in Ukraine does not escalate further. The global supply bottlenecks and further increases in commodity prices could also slow growth.

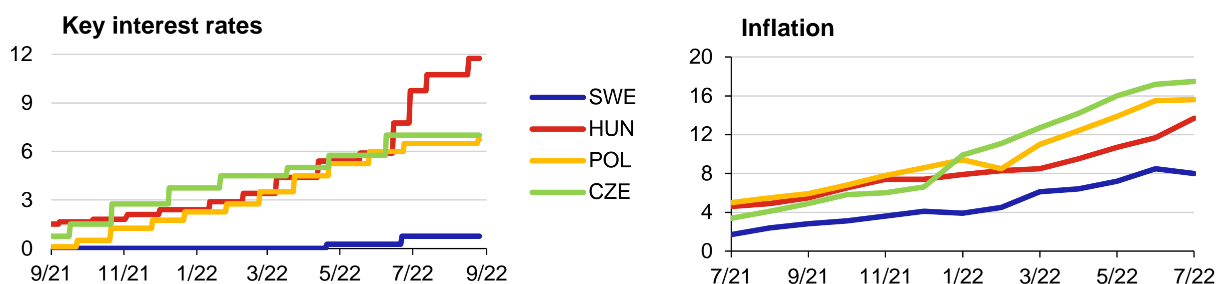
The **RBNZ** kept tightening monetary policy, raising its key rate by 50 bp twice in a row to 3%. Core inflation remains too high and labour resources remain scarce. High employment, continued fiscal support, elevated terms of trade and sound household balance sheets are supporting spending. However, production is being constrained by acute labour shortages, heightened by seasonal and COVID-19 related illnesses. In these circumstances, spending and investment continues to outstrip supply capacity and wage pressures are rising. A range of indicators highlight broad-based domestic pricing pressures. Monetary conditions thus need to continue to tighten to bring inflation back within its 1–3% target range.

The **BoC** raised its policy rate twice in a row, by a total of 175 bp to 3.25%, continuing its policy of quantitative tightening. Given the outlook for inflation, the rate will need to rise further according to the BoC. Despite a slight easing of inflation in July because of a drop in petrol prices, the overall price pressures broadened further, particularly in services. Surveys suggest that short-term inflation expectations remain high. With higher mortgage rates, the housing market is pulling back as anticipated, following unsustainable growth during the pandemic. Canada's GDP grew by 3.3% in Q2. Economic growth will moderate in 2022 H2 as global demand weakens and monetary policy gets tighter in Canada. According to the BoC's July forecast, the Canadian economy will grow by 3.5% this year, 1.75% in 2023 and 2.5% in 2024. Inflation will fall to around 3% by the end of 2023 and return to the 2% target by the end of 2024.

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)	29 Jun (+0.50)	28 Jun (+1.85) 13 Jul (+2.00)[2] 26 Jul (+1.00) 30 Aug (+1.00)	7 Jul (+0.50) 7 Sep (+0.25)	22 Jun (+1.25) 4 Aug (0.00)
Current basic rate	0.75%	11.75%	6.75%	7%
Latest inflation	8% (Jul 2022)	15.6% (Aug 2022)	16.1% (Aug 2022)	17.5% (Jul 2022)
Expected MP meetings	19 Sep 23 Nov	27 Sep 25 Oct 22 Nov	5 Oct 9 Nov 7 Dec	29 Sep 3 Nov
Other expected events	20 Sep and 24 Nov: publication of Monetary Policy Report	27 Sep: publication of Inflation Report	16 Nov: publication of Inflation Report	11 Nov: publication of Monetary Policy Report
Expected rate movements[3]	↑	↑	↑	→

Note: [1] CPIF – consumer price index including fixed interest rate; [2] rate increased at non-monetary policy meeting; [3] direction of expected change in rates in next three months taken from Consensus Forecasts or, in the case of the CNB, from central bank's forecast.



The **Riksbank** increased its repo rate by 50 bp to 0.75% in June. According to its forecast, the rate will be raised further and will be close to 2% at the start of 2023 (a faster increase compared with the previous forecast). Asset holdings will shrink faster in 2022 H2 than was decided in April (the Riksbank will purchase bonds for SEK 18.5 billion instead of the earlier decided SEK 37 billion). With this monetary policy, the Riksbank expects inflation to fall next year and be close to 2% from 2024. The current forecast projects CPIF inflation of 6.9% in 2022, 4.2% in 2023 and 2.0% in 2024. GDP will grow by 1.8% this year, 0.7% in 2023 and 1.3% in 2024.

The **MNB** is continuing to tighten monetary conditions significantly, having raised its key interest rate by a total of 585 bp to 11.75% to suppress second-round inflationary risks resulting from negative supply effects and to anchor inflation expectations. The MNB will continue the cycle of interest rate increases until the outlook for inflation stabilises around the target in a sustainable manner and inflation risks become evenly balanced at the monetary policy horizon. It is also monitoring developments in financial market risks and stands ready to intervene using every instrument in its monetary policy toolkit. Since July, the MNB has been holding daily swap tenders providing foreign currency liquidity to local banks. It has also introduced three measures to enhance monetary transmission further (see *News*).

The **NBP** again decided to raise its policy rates, by a total of 75 bp to 6.75%. This increase should, among other things, curb inflation expectations. The NBP stated it may intervene in the foreign exchange market, in particular to limit fluctuations of the zloty exchange rate that are inconsistent with the direction of monetary policy. According to a preliminary estimate, GDP growth amounted to 5.5% year on year in 2022 Q2. According to the NBP's July forecast, it will reach 4.7% in 2022 as a whole and slow in the subsequent two years to 1.4% and 2.2% respectively. The NBP expects inflation of 14.2% this year, 12.3% in 2023 and 4.1% in 2024.

The **CNB** increased its two-week repo rate by 125 bp to 7% in June and left it unchanged in August. Owing to extraordinary cost pressures in an environment of exceptionally high uncertainty, the CNB is currently looking at a monetary policy horizon that is two quarters further ahead than previously. Inflation will rise slightly above 20% in the coming months and will remain in double figures for part of next year. This will reflect continued growth in gas and electricity prices for households, a further acceleration in food price inflation and persisting high core inflation. According to the current forecast, inflation will reach 16.5% in 2022, 9.5% in 2023 and 2.4% in 2024. GDP grew by 4.8% year on year in 2022 Q1, but will slow considerably during 2022 and decrease slightly year on year in 2022 H2. This will be due above all to a downturn in household consumption. The forecast expects GDP to grow by 2.3% in 2022, 1.1% in 2023 and 3.8% in 2024.

II. NEWS OVER THE LAST THREE MONTHS

ECB introduces new bond purchase instrument to protect monetary policy transmission

At its July meeting, alongside a 0.5 pp increase in interest rates, the European Central Bank introduced a Transmission Protection Instrument (TPI) to support the effective transmission of monetary policy to individual countries. In practice, this means, in particular, limiting the risk that interest rate rises combined with an end to net asset purchases to fight inflation will translate into an excessive increase in spreads between the yields on individual countries' government bonds (especially between the yield on German government bonds and yields on bonds of the southern euro area countries, headed by Italy). This would significantly increase the cost of servicing the southern countries' sovereign debt and put considerable pressure on their fiscal sustainability. In other words, the instrument aims to combat fragmentation in the euro area bond market (which is why it is sometimes referred to as an anti-fragmentation instrument).

In the event of a TPI being activated, the Eurosystem would buy (on the secondary market) bonds of countries affected by a non-fundamental deterioration in financial conditions. These would be bonds with maturities between one and ten years. Bonds can only be purchased in the case of countries meeting a number of specified conditions, in particular in the area of compliance with EU fiscal rules and fiscal sustainability. Conversely, bond purchases should not be made if the rise in yields is the result of a country's fundamentals. The activation of the TPI will be decided by the Governing Council of the ECB based on an assessment of market developments, the fulfilment of the mentioned conditions, and consistency with the price stability mandate.

In addition, the ECB is reinvesting the principal of maturing assets purchased under the APP and PEPP programmes. In the case of the PEPP programme, the ECB plans to continue reinvesting fully at least until the end of 2024. The ECB's flexible approach to these reinvestments constitutes a first line of defence against pandemic-related risks to monetary policy transmission (fragmentation; unlike the reinvestment of maturing principal, however, purchases under the TPI programme are not restricted ex-ante). While the TPI has not yet been activated, ECB data show that under the PEPP, a significant amount of the proceeds from the repayment of German, French and Dutch bonds have been reinvested in Italian, Spanish and Greek bonds in recent months.

Forward guidance on the decline

The key central banks, the ECB and the Fed, are abandoning the use of forward guidance. In the past, they used it in an attempt to increase the predictability of their policy and to strengthen its effects by shaping the expectations of market participants. On the other hand, they have in some cases locked themselves out of the ability to respond to new situations and data in the current period of high uncertainty. For example, the ECB declared in the past that a rate hike would not occur before the end of net asset purchases, which at the time was scheduled to occur by the middle of this year at the earliest, and thus prevented itself from proceeding with a rate hike in June if it wanted to preserve its credibility. According to Governor Lagarde's statement, the ECB does not now offer any forward guidance and will make decisions on a meeting-by-meeting basis based on incoming data. The Fed is also in a complicated situation. After its chief Jerome H. Powell said after the May meeting that the central bank would not consider a 75 bp rate hike at the next meeting, subsequent new inflation data changed the situation and the Fed eventually raised rates by 75 bp in June. Powell then stated in July that (similar to the ECB) the Fed would now act on a meeting-by-meeting basis according to incoming data and will not provide very clear guidance for its future actions.

Jerome H. Powell confirms priority of reducing inflation at Jackson Hole

The traditional annual meeting of central bankers took place at Jackson Hole at the end of August. The highlight was the speech given by the Chair of the US Fed Jerome H. Powell. In his speech, he reiterated the Fed's determination to fight the current high inflation. Reducing inflation is likely to require a sustained period of below-trend economic growth, and higher interest rates, slower economic growth and softer labour market conditions will inevitably come at a cost to households and businesses. But a failure to restore price stability would mean far greater pain.

MNB introduces three new measures to support its policy

At its August meeting, the Hungarian central bank, in addition to making a 1 pp rate hike, decided to introduce three new instruments to enhance the transmission of its restrictive monetary policy at a time of high volatility on the financial markets. These are, first, an increase in the reserve requirement ratio, second, the establishment of regular central bank discount bill auctions and, third, the introduction of a longer-term deposit instrument with the aim of sterilising liquidity from the banking system at longer maturities than currently.

Riksbank to have new governor; staff changes at other central banks as well

At the end of this year, Stefan Ingves will retire as Governor of the Swedish Riksbank. He has held the role since 2006 and is now coming to the end of his fourth term. The Riksbank's General Council (the body appointed by parliament to supervise the central bank and appoint its management, without interfering in its actual decision-making) has already approved Ingves' successor, Erik Thedéen, who will take over at the beginning of next year. He has so far headed the Swedish office for the regulation of financial markets.

Pål Longva has been appointed as the new Deputy Governor of the Norwegian NB, filling the vacancy in the bank's management after the previous Deputy Governor, Ida Wolden Bache, moved up to the position of Governor in March this year. At the Bank of Canada, Timothy Lane, who has spent more than 13 years as a Deputy Governor, will leave in September. In the US, the Senate gave final approval to Michael Barr for the Fed's Board of Governors, with four years to serve as Vice Chair for Supervision (but the term on the Board of Governors itself runs until 2032). For the first time since 2013, all seven seats on the Board of Governors are thus filled (for more on recent personnel changes, see *News* in previous issues of Central Bank Monitoring).

RBA views exit from yield curve control as disorderly and awaits independent review…

In June, the Reserve Bank of Australia published a review of its yield curve control (YCC) policy. YCC was launched after the pandemic outbreak in March 2020, when the target yield for three-year government bonds was set at 0.25%. In November of the same year, the target yield was lowered to 0.1%. In November 2021, the RBA failed to maintain the yield at a level consistent with the target and subsequently abandoned the policy. In retrospect, YCC initially fulfilled its purpose, but gradually its transmission waned and the exit was disorderly and associated with increased volatility in the bond market, resulting in some reputational damage to the central bank. The RBA considers the possible reuse of YCC at some point in the future to be unlikely, although it has not been completely ruled out.

After the Australian central bank was criticised for postponing interest rate hikes for too long in the face of rising inflationary pressures, and after even its governor acknowledged some mistakes, in July the country's government announced a comprehensive review of the RBA. This is to include the central bank's objectives, the implementation of its policies, the governance of the institution and its communication with the public, and also to take into account the interactions between monetary, fiscal and macroprudential policies. The review will be led by an independent three-member expert panel and the final report is to be submitted to the government by March 2023.

…and BoE may also face mandate revision

The new British Prime Minister Liz Truss said (before her appointment) that she wanted to change the Bank of England's mandate so that the central bank could control inflation more effectively. The BoE has failed in the current economic situation, according to the new Prime Minister. However, it is not clear from her comments what specific changes might eventually be made to the mandate. In addition, there are ongoing discussions in Britain about financial sector regulation. Both Truss and her opponent in the battle for the prime minister's seat, Rishi Sunak, have supported greater powers for ministers to intervene in the regulatory process. However, BoE Governor Andrew Bailey has warned against the politicisation of financial regulation.

III. SPOTLIGHT: HOUSING MARKETS AND THEIR LINKS WITH MONETARY POLICY

This article describes house price developments mainly in the countries we regularly monitor in Central Bank Monitoring. It analyses how the housing market affects headline inflation and hence also monetary policy decisions, and presents the latest findings on how monetary policy affects the housing market.

Central banks monitor house prices partly because significant imbalances and a major correction on the housing market pose a threat to financial and general macroeconomic stability. House prices have risen in many countries around the world in recent years – especially in Hungary, New Zealand and the Czech Republic among the countries we monitor. Moreover, house prices feed through to inflation in many countries, and property investment makes up part of GDP, so they are also relevant to monetary policy. Academic research addresses the issue of how monetary policy affects the housing market, but it does not offer a uniform answer.

Recent housing market developments

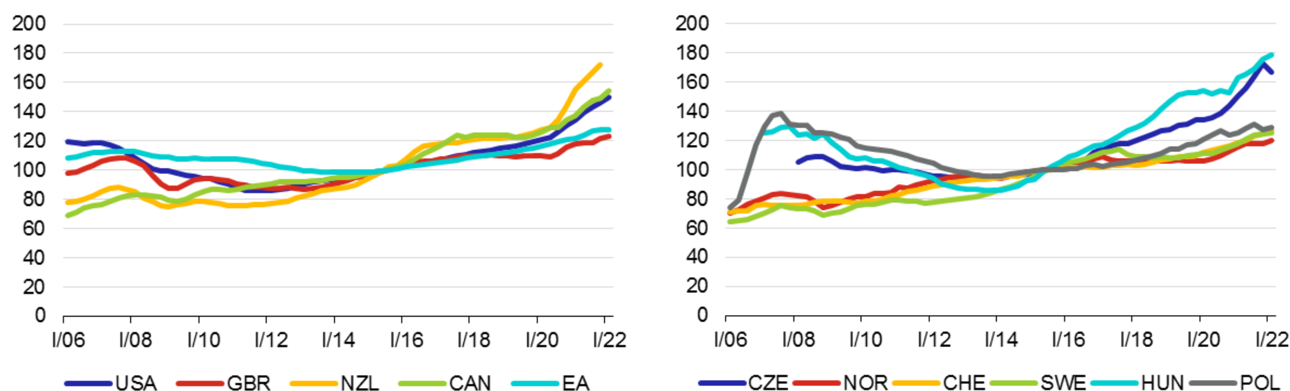
Central banks monitor housing market developments for a number of reasons. For example, the bursting of a housing bubble is a potential risk to financial stability, investment in housing forms part of GDP, and house prices – or indicators derived from them – are included in the consumer price index in many countries. House prices have recently been rising rapidly in advanced economies on the back of favourable financing conditions, low unemployment and long-running GDP growth. Moreover, low interest rates have made property an attractive investment opportunity for many people. House prices were also very strongly affected by the pandemic, which caused a change in demand. In particular, there was an increase in interest in properties with larger floor areas and more rooms and properties located outside city centres. Shortages of construction materials caused by disrupted and overburdened supply chains led to bottlenecks on the supply side. Over the last four decades, economic slowdowns usually been followed by declines in house prices. However, following the contraction in 2020, house prices accelerated further, partly due to the highly specific features of this episode. This trend has reversed in many countries only in recent quarters and in the outlooks for the quarters ahead. Igan et al. (2022) show that the international synchronisation of house prices has strengthened, as 60% of house price movements in developed countries and the euro area can now be explained by a common global factor due to the global nature of the pandemic and the similar reactions of central banks and governments.

The rising house prices observed in many countries in recent years do not necessarily signal imbalances on their own. Changes in disposable income, cheap loans, supply shocks, falling unemployment, rising prices of materials and demographic factors may be economic reasons for fundamental-based growth in house prices. However, house prices may depart from market fundamentals if there is a widespread expectation among consumers that the current growth in house prices will continue. If the majority of buyers have such expectations, house prices may continue to be driven upwards by buying "for fear of missing the opportunity" and by expectations of high returns on house purchases. This self-fulfilling mechanism may lead to exponential growth in house prices, with the potential consequence that the housing market will become disconnected from economic fundamentals (especially the income base) until investors start to be cautious, the economic policy stance changes, money stops flowing into the housing market and house prices undergo a correction or an outright burst of the bubble.

The following paragraphs offer a view of housing market developments using standard ratios. Figure 1 focuses on the real house price index (the house price index adjusted for inflation). It shows that house prices have been following an upward trend in all the countries regularly monitored in Central Bank Monitoring since at least 2018 and that the trend has intensified in most countries since 2020. In many countries, the real house price index even exceeds the levels observed at the time of the global financial and economic crisis. According to the latest data, New Zealand, Hungary and the Czech Republic have the highest growth in real house prices compared to 2015.

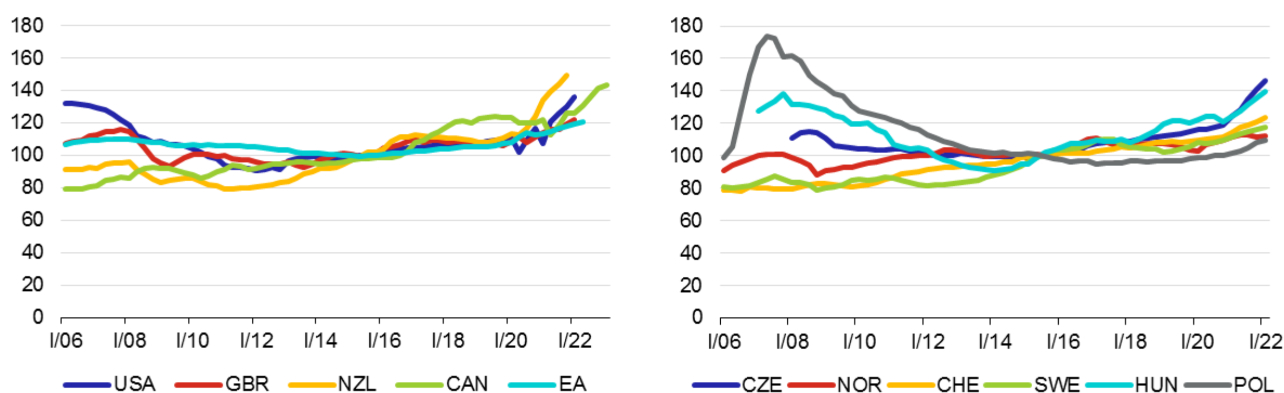
Another indicator is the price-to-income ratio, that is, the ratio of the nominal house price index to nominal disposable income per capita. This indicator serves as a measure of the affordability of owner-occupied housing – the lower the ratio, the more affordable is property. Figure 2 shows that housing affordability has worsened the least in Poland, Sweden and Norway. By contrast, the Czech Republic, Hungary, Canada and New Zealand have seen the greatest deterioration in the affordability of owner-occupied housing. The affordability of housing in the Czech Republic was also the focus of a 2021 OECD study, which mentions housing affordability problems, especially in cities, for many Czech households and a shortage of housing supply in cities. The evolution of housing affordability in Poland is noteworthy, as we see a marked improvement in housing affordability compared with the period around the global economic crisis. This improvement is due

Figure 1: Real house price index



Note: Real house price index; quarterly data; 2015 = 100.
Source: OECD.

Figure 2: Price-to-income ratio



Note: Ratio of nominal house price index to nominal disposable income per capita; quarterly data; 2015 = 100.
Source: OECD.

both to a fall in house prices, as a housing bubble emerged in Poland between 2002 and 2008 and subsequently deflated, and to rising disposable income, which was among the fastest-growing in the world in 2019 and 2020.[1]

Another housing market indicator monitored is the price-to-rent ratio, that is, the ratio of the nominal house price to the rental price. It shows how the value of buying over renting – and more generally the value of home ownership – changes over time. Figure 3 shows the highest ratios for the Czech Republic, Hungary, Canada and New Zealand. These countries have recorded the fastest growth in nominal house prices relative to rents since 2015. However, price-to-rent ratios have also risen in other countries. In the USA, for example, rents increased at an unprecedented pace during the pandemic, but house prices rose even faster than rents from the start of the pandemic.[2] Norway, Switzerland and Poland recorded the lowest values of this index. In Norway, for example, an undersupply of rental properties is currently causing rents to go up further. Rents are thus rising at a similar pace as house prices.

Of the countries we monitor, the change in all three ratios is the greatest for the Czech Republic, Hungary, New Zealand and Canada. This suggests that house price growth in these markets has been very fast in recent years. In June 2022 a Bloomberg Economics team prepared an analysis of housing markets based on the price-to-rent and price-to-income ratios, together with real and nominal price growth and loan growth. It rated the housing markets in New Zealand, the Czech Republic, Hungary, Australia and Canada as the most risky (based on 2022 Q1 data).

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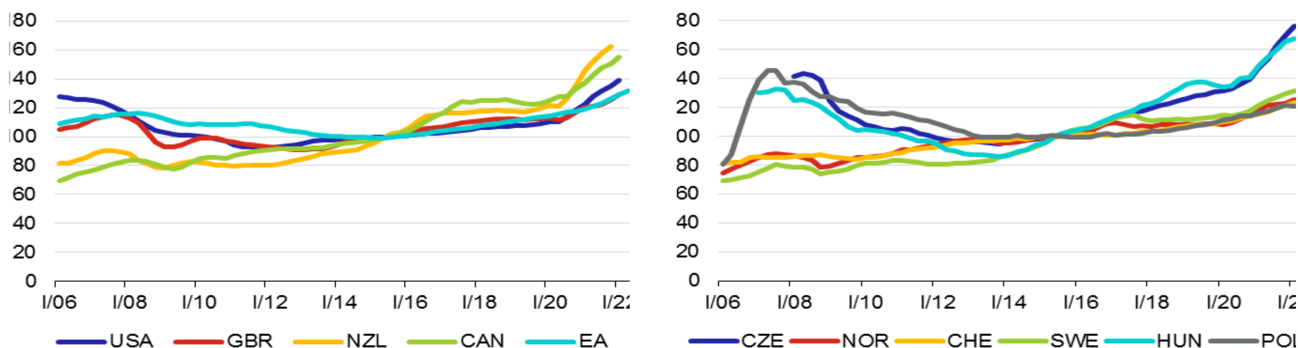
[1] According to OECD data, disposable income in Poland increased by 5.2% year on year in 2019 and 4.2% in 2020, while the average increase in OECD member countries over the same periods was 1.5% and 3.2% respectively.

[2] In September 2021, for example, the average year-on-year increase in rents and house prices was 11% and 18.9% respectively. The Joint Center for Housing Studies of Harvard University sees the causes of house price growth in a supply shortage coupled with strong demand and low interest rates. Potential higher-income buyers are staying in rented accommodation for longer due to insufficient supply and high house prices. This in turn is pushing up rents.

Figure 3: Price-to-rent ratio



Note: Ratio of nominal house price index to rental price index; quarterly data; 2015=100.
Source: OECD.

In many countries, however, the housing market is now cooling down somewhat due to the latest economic developments and interest rate hikes. As regards the above-mentioned countries, the RBNZ expects house prices to drop next year, due partly to its monetary policy tightening. With its high share of home ownership (together with a strong preference for owner-occupied housing and a widespread perception of property as an advantageous and safe investment), the Czech Republic has the largest gap between house prices and income in the whole of the EU. This is only deepening the concerns about future housing market developments. However, a cooling of the Czech housing market has been evident in recent months. In Hungary, by contrast, the government has introduced a home purchase programme for families in order to boost birth rates. Moreover, house prices in Hungary are now rising due to high energy prices and a limited number of construction workers, two factors linked with Russia's aggression against Ukraine (these factors are affecting housing markets in other countries as well). Desjardins Economics expects a 23% decline in house prices in Canada by the end of next year. In Toronto, for example, house prices have been falling since February.

The USA finished seventh in a ranking of the most risky housing markets drawn up by a research team from the Dallas Fed. The team expressed concern that US house prices are becoming unhinged from market fundamentals. In their comments they argue that the price-to-rent ratio in the USA has been rising since the start of the pandemic at a faster rate than what market fundamentals would justify.

Housing market developments and consumer price inflation

An important aspect through which housing market developments enter central banks' monetary policy decisions is the cost of owner-occupied housing, which is included via imputed rent in many countries' consumer price indices. Imputed rent comprises the costs associated with home ownership and maintenance and with owner-occupied housing. In many cases, it makes up a significant percentage of the consumer basket. However, there is no international consensus on a single standard method for measuring imputed rent. This makes it more difficult to compare inflation across countries.

Most of the central banks we monitor therefore take housing market developments into account in their monetary policy decisions because imputed rent is part of the price index they target.[3] The commonly used methods for measuring imputed rent are the user cost approach, the rental equivalence approach and the net acquisition approach. Under the user cost approach, housing costs are measured directly. They include operating expenses, wear and tear, and capital costs. The user cost approach is applied in Sweden, for example. Under the rental equivalence and net acquisition approaches, costs are measured, respectively, as the change in rents for comparable homes and the change in new house prices. Under the rental equivalence approach, households play two roles: they are both providers and consumers of services. This approach only uses the implicit price of services, which includes the market rent for an equivalent property in the same area. Under the net acquisition approach, a house purchase is recorded as household consumption at the time of purchase, regardless of whether the property is purchased for investment or for consumption. This approach only takes into account purchases of new housing – if a property is sold on between households, its price is not included in imputed rent. The rental equivalence approach is used in Norway, Switzerland and the USA. By contrast, the net acquisition approach is applied in the Czech Republic and New Zealand. Under the user cost and net acquisition approaches, therefore, house prices themselves enter the calculation of headline inflation more or less directly. If a country does not use the imputed rent concept, housing costs can only be taken into account in measuring inflation through operating costs (such as water and energy charges). This approach is applied in the UK, for instance.

[3] Different theoretical options with regard to central banks' approach to reflecting house prices in their monetary policy decisions, in particular the inclusion of house prices in consumer price indices, were described in *Spotlight* in the September 2008 issue of Central Bank Monitoring.

Imputed rent in national consumer price indices thus differs in the method used to record it and in the weights that it has in consumer price indices. For example, imputed rent accounts for 12.22% of the consumer basket in the Czech Republic, 13.85% in Norway and 20.31% in Switzerland.[4]

The ECB and the BoE apply a different approach to the housing market in their monetary policy decisions. In its monetary policy, ECB targets HICP inflation, which does not reflect housing market developments and does not contain imputed rent (as the HICP measures the prices of explicit money transactions). However, in a review of its monetary policy strategy in 2021, the Governing Council of the ECB concluded that the HICP, while generally being an appropriate measure for assessing whether price stability is being achieved, would better represent the inflation rate that is relevant for households if it captured the costs related to owner-occupied housing. However, according to its statement, the full inclusion of the costs of owner-occupied housing is a multi-year project, and the Governing Council in its monetary policy decision-making will, in the meantime, take into account other supplementary inflation measures that reflect housing market developments. In the UK, the statistical office in 2017 started publishing the CPIH, which includes imputed rent, as an official national inflation index. However, the CPIH is not used for inflation targeting. The BoE targets inflation calculated using the CPI excluding imputed rent (the calculation includes only housing operating costs – see above).

Monetary policy and house prices

Besides the direct effect of house prices on the inflation rates targeted by central banks, there have long been discussions about the effect monetary policy has on house prices and whether monetary policy should aim to them affect directly (over and above their contribution to the headline inflation rate). The effect of the monetary policy rate on the housing market is often debated in connection with the causes of the last great economic crisis in the USA, as the Fed was criticised for having contributed to the housing bubble with its low rates, which made mortgages very cheap and attractive to customers. Taylor (2007) shows that easy monetary policy has an overheating effect on the housing market. By contrast, Dokko et al. (2011) argue that monetary policy has only a limited impact on the housing market. Havránek et al. (2021) reach a similar conclusion in their meta-analysis. They show that the response of house prices to monetary policy is not very strong on average (a rate increase of 1% lowers house prices by a maximum of 1.2% on average in the next two years) but that monetary policy interest rates may help slow the growth of housing bubbles in countries with developed mortgage markets and later in the business cycle. Nocera and Roma (2018) find that monetary policy rate hikes affect housing markets in euro area countries, but their results also display differences in the size of the effect of monetary policy across countries.

Academic studies also examine unconventional monetary policy instruments and their impact on housing markets. Rahal (2016) focuses on the effect of a growing amount of central bank assets and finds that an unconventional monetary policy shock has a statistically significant effect on house prices and the volume of mortgages. The ECB's quantitative easing has affected house prices in Germany, France, Spain and Italy, with the size of the response varying across countries (Lenza and Slačálek, 2018).[5] Rosenberg (2019) compares the effects of the monetary policy rate and changes in the central bank balance sheet in Scandinavian countries. His results show that the impact of unconventional monetary policy on housing markets in these countries is stronger and more persistent than that of conventional monetary policy.

Another topic discussed in the literature is that a slowdown in fundamentally unjustified growth comes at the cost of a change in inflation (which might not always be consistent with hitting the inflation target) and higher unemployment. Svensson (2017) shows that the costs of leaning against the wind[6] outweigh the benefits by a large margin in most cases. Leaning against the wind leads to a weaker economy even in the absence of a crisis. Moreover, Svensson sees additional costs associated with the magnitude of the crisis if it hits an economy weakened by leaning against the wind. Adrian et al. (2020) show that including financial variables in the central bank's monetary policy reaction function yields significant benefits in reducing the probability of a recession due to lower household borrowing, and that the conclusions of Svensson (2017) therefore apply only in a simplified model. Benati (2021) examines the trade-off between stability of real house prices and stability of economic activity. His results show that a 1% decline in GDP is associated with a 3% drop in real house prices.

Closely related to this is the issue of the appropriate monetary policy reaction to perceived housing market imbalances. One line of literature asserts that monetary policy should focus solely on its usual objectives, as its effect on the loan and housing markets is limited and macroprudential tools are deemed more effective in influencing the two markets. The view that monetary policy should focus solely on price stability while macroprudential policy should pursue financial stability (and the two policies should therefore function separately) is presented by Smets (2014) as the "modified Jackson Hole

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[4] These percentages are valid for 2022 and are taken from the Czech Statistical Office, Statistics Norway and the Swiss Federal Statistical Office.

[5] The other euro area countries were not analysed in this article.

[6] Leaning against the wind is a monetary policy that is tighter than what would be consistent with standard flexible inflation targeting disregarding the effects on financial stability.

consensus”.[7] This view of the monetary policy mandate is supported by Kockerols and Kok (2019) and Svensson (2017), for example. Conversely, another stream of literature says that the interest rate should be used to slow growth in financial imbalances, as financial cycles cannot be fully tamed with macroprudential instruments alone. In other words, monetary policy should respond to the financial cycle jointly, and in coordination with, macroprudential policy (Borio and Lowe, 2002; Juselius et al., 2017; Borio et al., 2018).

Sweden’s Riksbank and New Zealand’s RBNZ provide examples of situations where central banks communicate that they take housing market developments into account in their monetary policy decisions (beyond directly capturing house prices in the consumer basket via imputed rent). Between 2010 and 2014, the Riksbank raised its policy rate from 0.25% to 2% to slow household debt and house price growth, even though this policy led it to undershoot the inflation target and increased unemployment. The monetary policy strategy statement of Norway’s NB mentions counteracting the build-up of financial imbalances as a secondary objective and discusses the impacts of persistently low interest rates and the costs in the form of lower demand involved in setting higher interest rates to mitigate the build-up of financial imbalances. In New Zealand, Finance Minister Grant Robertson instructed the central bank in 2021 to consider the impact of monetary policy on housing when making decisions, as the government wants to support affordable housing for first-home buyers and low-income borrowers. The opposite approach was taken by the governor of the Australian RBA when he said in November 2021 that the RBA would not lift the interest rate to cool the property market, as lower prices would mean lower wages and fewer jobs, which he felt would be a poor trade-off. In his opinion, the way to lower house prices is to reduce the value of the land on which dwellings are built, for example by redesigning taxation.[8]

Conclusion

House prices in the countries we monitor have been rising apace in recent years. Some central banks have thus faced the question of whether they should use monetary policy to respond to housing market developments. Most of the central banks we monitor reflect house price developments in their monetary policy decision-making using the concept of imputed rent in the consumer price index. However, there is no consensus among central banks or academics on whether the central bank should respond to house prices by means of monetary policy beyond including them in imputed rent. Academic research also examines how monetary policy affects housing markets. Although the literature finds that monetary policy has some influence on house prices, there is again no single view regarding the strength of the effect.

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[7] The Jackson Hole consensus says that financial stability concerns are only taken into account by the monetary authority to the extent that they affect the outlook for price stability and economic activity. This view of monetary policy was widely shared before the global financial and economic crisis.

[8] Since his statement, however, the RBA has increased the rate by 0.5% three times in response to rising headline inflation.

IV. SELECTED SPEECH: Christopher J. Waller: Monetary policy in a world of conflicting data

In his July speech at the Rocky Mountain Economic Summit in Idaho, member of the Federal Reserve Board of Governors Christopher J. Waller discussed the reasons behind the conflicting data on the US economy's outlook and the implications for the Fed's monetary policy.

Very tight labour market but declining economic activity

Recent data from the US economy have sparked a debate about what was behind the decline in GDP in the first half of 2022, in a situation where several indicators signal that the labour market is not weakening, but strengthening. This question, which many economists are puzzling over, is addressed by Governor Waller.

In his view, there are numerous indicators for assessing the strength of the labour market. Every major one shows that the labour market is very strong and, in historical terms, very tight. In the first half of 2022, the US economy created 2.7 million jobs and the unemployment rate stabilised at pre-pandemic levels of around 3.5%. Job vacancies are unprecedentedly high, with nearly two jobs for every person looking. Other labour market indicators are about as tight as just before the pandemic.

Turning to GDP, there are signs of slowing in economic activity, and some argue that a recession has already started. However, Governor Waller doesn't see how that squares with the labour market data mentioned above. In addition, there are other reasons why he is very cautious about interpreting data and forecasts of slowing (or negative) GDP growth. For example, real GDP is estimated to have shrunk by 1.6% in the first quarter, while real gross domestic income *increased* by 1.8%. These two indicators are basically measuring the same activity in different ways, and in the past when such wide gaps in the two numbers have appeared initially, they tend to move toward each other when the data are finalised. Measures of manufacturing activity have also moderated, but rather than a coming recession, it looks like consumers are returning to their previous habits and shifting their spending from goods to services. These factors, along with the indicators from the labour market, convince Waller that the US economy did not enter a recession in the first half of 2022.

Persistently high inflation and its implications for monetary policy

Today we know that supply bottlenecks, including the tight labour market, have contributed to the current high levels of inflation. We also know that strong demand driven by excess savings, significant fiscal stimulus and accommodative monetary policy has also contributed. Therefore, it is worth emphasising that both supply and demand factors played a large part in driving inflation. In this regard, Waller says that the causes of inflation do not affect his approach to monetary policy decision-making, as excessive inflation needs to be reduced to the target regardless of its source. High inflation can push up longer-run inflation expectations and thus push up prices even more and make inflation harder to get under control.

The FOMC responded to the persistently high inflation with the fastest pace of monetary tightening in close to 30 years. It clearly signals the FOMC's commitment to get inflation under control as soon as possible. Waller judges that the target range for the federal funds rate at 2.25–2.50% (reached after the 75 bp rate hike that Waller supported in this speech and that was later adopted at the July meeting) is close to a neutral level that neither stimulates nor restricts demand, assuming that the economy is growing moderately and unemployment is roughly where it is now. Based on what we know about inflation today, Waller expects that further increases in the target range will be needed to make monetary policy restrictive, but that will depend on incoming data he receives before the September meeting.

Waller anticipates a decline in inflation will come as actual and anticipated rate hikes cool consumer and labour market demand. The decline will also be assisted by continued improvement in goods supply bottlenecks and an increase in labour force participation, which is still significantly lower than it was before the pandemic. He hopes these supply recoveries will happen, but his expectations for policy don't rely on it.

In talking about where monetary policy is headed, it is helpful to get a fix on where it is right now. Some argue that the current monetary policy stance is actually still further away from its neutral level, as current inflation is so much higher than the federal funds rate. Waller disagrees with that, as spending decisions that require borrowing are based on an outlook that extends several years. This means taking into consideration longer-term real rates, which are tied to the expected path of interest rates and inflation over the next several years.

Waller concludes that we can't be very certain about the path of the economy more than a few months in the future. However, he thinks a soft landing is very plausible, mainly thanks to the strong labour market. Although there is uncertainty about the future course of the pandemic, and the global risks related to the war in Ukraine are considerable, Waller reaffirms his strong conviction that continued policy tightening will be appropriate to move inflation down towards the 2% target.

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