

Quarterly report

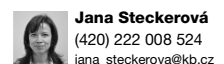
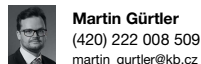
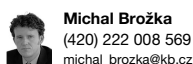
Czech Economic Outlook

Rollercoaster ride



©iStock

- **The economy is heading for stagnation** Missing components and materials for production are severely limiting the expansion of the economy. This year, we expect GDP growth at a rate of 1.9%, with the main driver being the creation of inventories. We expect growth to accelerate to 3.5% next year.
- **Inflation continues to accelerate** Rising energy prices will likely be added to rising housing prices in the coming months. We estimate inflation at 3.6% this year and 4.8% next year.
- **CNB is likely to continue raising interest rates rapidly** We expect the key repo rate to increase to 2.25% by end-2021 and peak at 3% in 1Q22. However, even higher rates are the risk.
- **The peak in interest rates and government bond yields is slowly but surely approaching** We expect rates and yields to peak in the middle of next year and we could see the first signs of a decline thereafter. The supply of government bonds will continue to be low compared to the first half of the year, which will hamper their further rise relative to IRS.
- **The koruna is teetering between higher rates and a stronger dollar** The IR differential has significantly exceeded its pre-COVID levels and is pushing CZK towards stronger levels. This is countered by the USD, which will continue to strengthen against the euro. Overall, we expect the koruna to strengthen at a slower pace compared to the first half of this year.



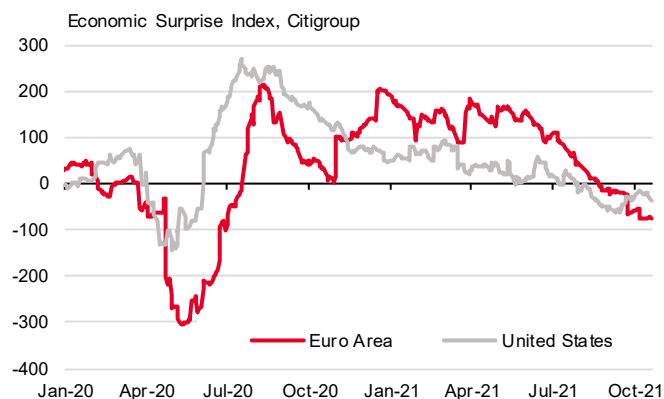
Something's gone wrong



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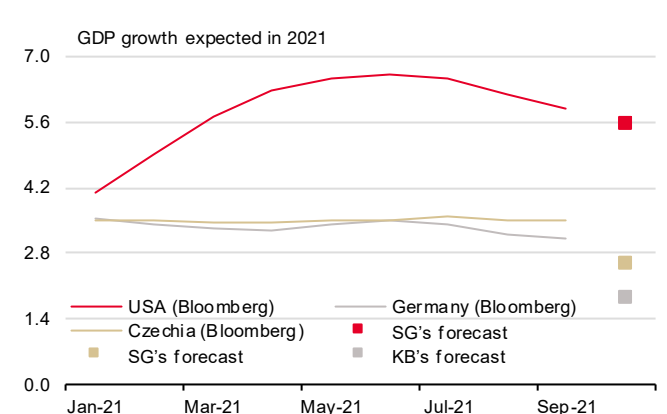
The rapid or what could even be considered rash easing of the anti-pandemic measures in spring also resulted in a quick recovery of economic activity. Indeed, that was the subject of the July edition of our *Czech Economic Outlook: Economy revving up*. However, the engine of the Czech Republic's mainstay industry, i.e. automotive, has quickly seized up.

Economic indicators have been disappointing since summer



Source: Macrobond, Citigroup, Economic and Strategy Research, Komerční banka

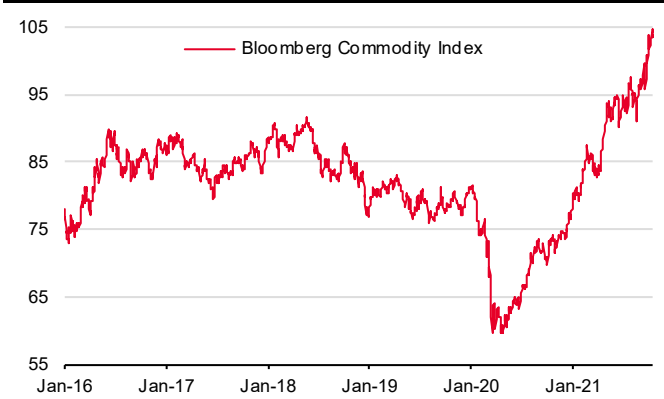
This year's growth prospects have begun to deteriorate



Source: Bloomberg, Economic and Strategy Research, Komerční banka

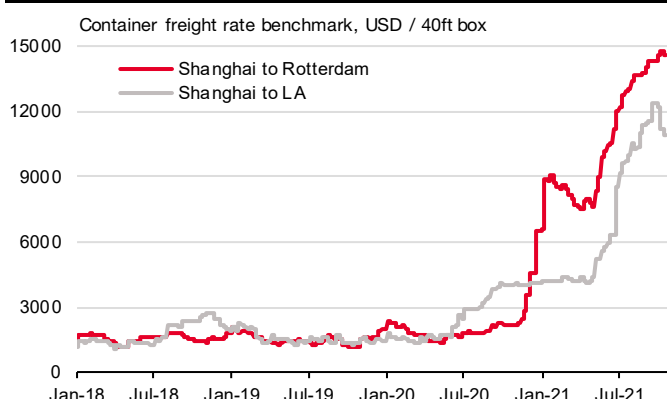
The shortage of components, in this case mainly chips, has prevented the completion of the auto manufacturing process: a large number of almost completed but immobile automobiles have filled up all the parking capacities in and around the production premises. Thus, the August all-works furlough for Czech car factories was extended. Unfortunately, the situation has not improved since September, quite the opposite. For the Czech economy, all this has nearly resulted in disaster: in mid-October, Škoda Auto announced a complete production shutdown citing the shortage of components, and noting that this unfavourable situation could persist until the end of the year.

Commodity prices surging



Source: Bloomberg, Economic and Strategy Research, Komerční banka

Container shipping dramatically more expensive



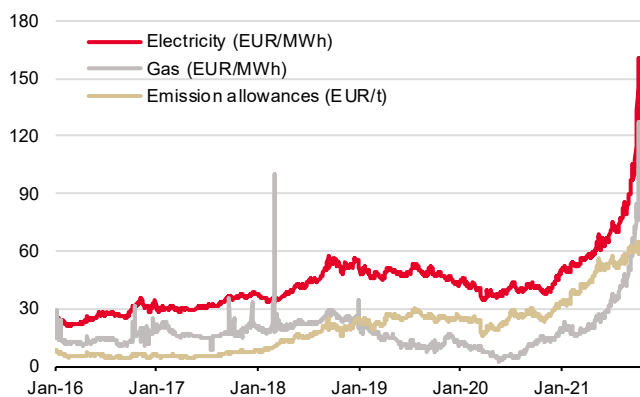
Source: Bloomberg, Economic and Strategy Research, Komerční banka

However, the chips crisis is merely part of the problem. Shortages of raw and other materials are visible in most segments of industry and in construction; the workforce shortage and/or its limited mobility is also a major problem. To a considerable extent, the problem is a consequence of the COVID-19 pandemic and the subsequent response of governments and economic policies. Anti-pandemic measures have paralysed the global production chain to a large extent, and production relationships have been disrupted. Even within the EU, the free movement of goods and the workforce has become more complex.

Having experienced the 2007-08 global financial crisis and the European sovereign debt crisis, manufacturing companies in particular reduced their production during the pandemic. They were afraid that the pandemic recession would cause the demand side to collapse and they would be left with unsold products. **Demand, however, has not collapsed.** The reason for this is that economic policymakers had also learned a lesson and decided to give significant impetus to their respective economies at the very beginning of the pandemic. Central banks slashed their interest rates to zero, or even under zero in many countries. Where such manoeuvring space did not exist, such as at the ECB, asset purchase programmes were boosted. Governments also provided robust support to households, companies, and labour markets in the form of significant fiscal stimuli.

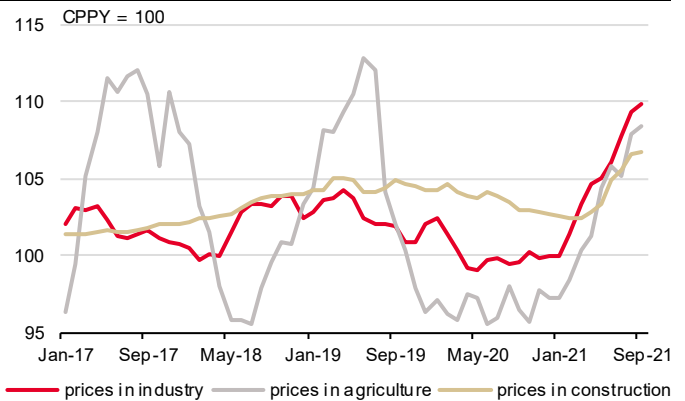
The recovery in economic activity, which began this year, and the strengthening of demand, prompted by forced savings, have hit a paralysed supply side. The result is clear pressure for prices to grow. First of all, we have seen steep price increases in the primary sectors, i.e. in industrial and agricultural producer prices as well as the construction industry. Moreover, energy prices, electricity and gas for example, mirror the structural changes in this market spurred on by the green transition. As a result, consumers are likely to see even more significant price hikes, although the government is seeking to reduce the impacts through a lower value-added tax. Box 2 discusses the impacts of higher energy prices on consumer price inflation.

Electricity and gas prices rising fast at exchanges



Source: Bloomberg, Economic and Strategy Research, Komerční banka
Note: spot prices

Prices in Czech primary sectors rising fast



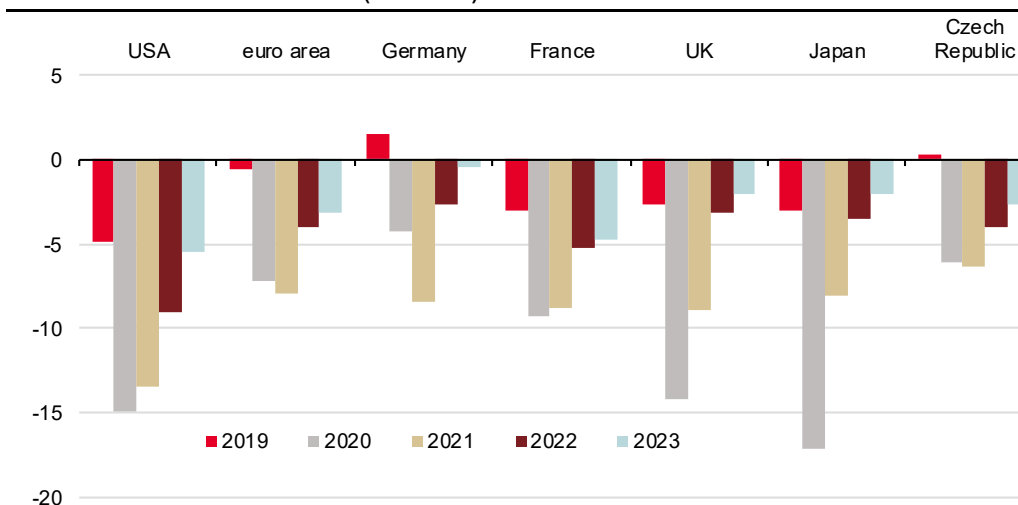
Source: CZSO, Economic and Strategy Research, Komerční banka

Unsurprisingly, the rising costs of inputs are felt in consumer price inflation as well. Czech consumer price inflation is breaking all its records, in particular in core inflation. And in terms of the year-on-year dynamics, Czech inflation may even reach the 6% mark during the first half of 2022. It is thus no wonder that the Czech central bank recently opted for a quick return from extremely low interest rates and is ready to continue along this trend. During 2022, we believe the CNB's key rate will hit 3%. The transmission mechanism whereby higher interest rates change inflation normally takes one to one and a half years to work. The exchange rate channel works faster, with a stronger koruna supporting less expensive imports. Thus, the CNB's Board decided to return to the release of yields from forex reserves. For more details see Box 3.

Generally speaking, as the pandemic situation has normalised, adverse economic impacts have been significantly reduced, and economic policies have begun to gradually depart from very relaxed positions as we discuss in Box 1. With its rate hike in June, the CNB was one of the first central banks to kick off the return trip back to normal. Other regional

central banks have responded in the same vein. And the main central banks, such as the Fed and ECB, have also started to discuss the future of their asset purchase programmes. Fiscal policies are responding similarly, with an overwhelming majority of countries already envisaging much smaller deficits in 2022, than in the COVID years of 2020 and 2021. A regrettable exception is the Czech Republic, where the outgoing cabinet was planning fiscal consolidation over a long period of seven years, although, in an international comparison, Czech COVID-specific fiscal stimulus was not among the most robust. However, representatives of the coalition that won the recent general election have signalled their intent to move public finances back to long-term sustainability as one of their new cabinet’s priorities.

Public finance deficits 2019-2023 (in % GDP)



Source: CSO, Economic and Strategy Research, Komerční banka, SG Cross Asset Research / Economics

The challenges that the Czech economy is facing continue to be significant. **The shortage and significantly higher prices of materials for production have added further uncertainty to the development of our macroeconomic forecast and the current *Czech Economic Outlook*.** Nevertheless, we believe the country will successfully cope with the issues **and return to its pre-pandemic level in the second half of 2022.** By the start of 2023, inflation should also return to the CNB’s tolerance level, i.e. under 3%.

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External environment and assumptions



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Supply shortages overshadow economic outlook

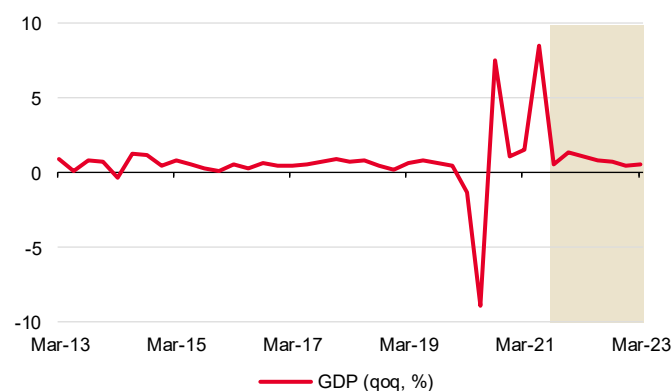
Due to ongoing supply shortages, we have revised the outlook for the second half of this year for both the US and euro area. Nevertheless, we still believe it will be a temporary problem that will fade next year. Renewed car production, replenished inventories and consumers utilising accumulated savings should all lead to solid GDP dynamics in 2022 and 2023. Recently, inflation has shot up in the US, euro area, as well as in the CEE economies and it is moving well above central banks' targets. The Czech, Hungarian and Polish central banks have already reacted by hiking interest rates and similar steps are likely to follow. The Fed will probably announce the details of tapering in November to create the space for possible rate hikes - but we do not expect this to happen until the beginning of 2023. In the euro area, we expect the first rate hike in the middle of 2024.

US: GDP growth likely to go lower

We have revised US GDP growth lower.

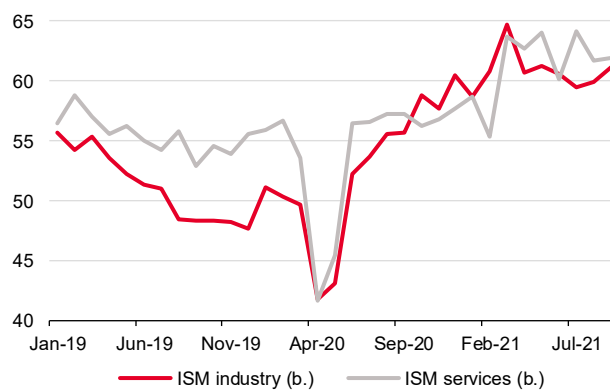
Earlier in 2021, the world economy was on track for record growth for the year. Together with a gradual fading of pandemic crises, GDP dynamics had been revised higher, and the timeframe for countries to return to pre-pandemic activity levels had even been brought forward. For the US, this milestone came as early as 2Q21, and in the case of the euro area, it had been expected by year-end. All that changed, however, when the previously upbeat outlook was overturned by global supply shortages affecting many industries, the car industry being particularly hard hit. Falling inventories and insufficient car production had been sufficient arguments for us to revise American GDP for 3Q21 from our previous 6.0% (SAAR) to current 5.6%. However, this is still more of a postponement of the faster revival, which is caused by the bottlenecks, than by the problems on the demand side. Against that, demand is robust, leading indicators are also still strong (ISM in services and industry is still above 60 points). After the problems with subcontracting disappear, we expect an acceleration of production and a replenishment of missing stocks. This should lead to slightly higher GDP growth in 2022 than we originally expected (revised to 4%).

US: we have revised down GDP growth for 3Q21 (qoq, %)



Source: SG Cross Asset Research/Economics

However, ISM indices promise further expansion



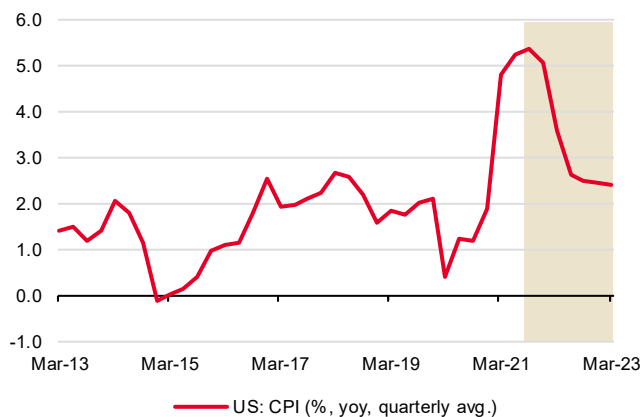
Source: SG Cross Asset Research/Economics

Inflation pressures should disappear.

Inflation has surprised substantially on the upside in recent months. Mainly energy prices and prices of inputs for production have gone up, but core prices have remained elevated too. Core inflation was 4.0% in September, with headline inflation at 5.4%. The question now is, what can we expect next? We still believe that the current price growth will be temporary and that the inflationary pressures should ease towards the end of this year and into next year. At

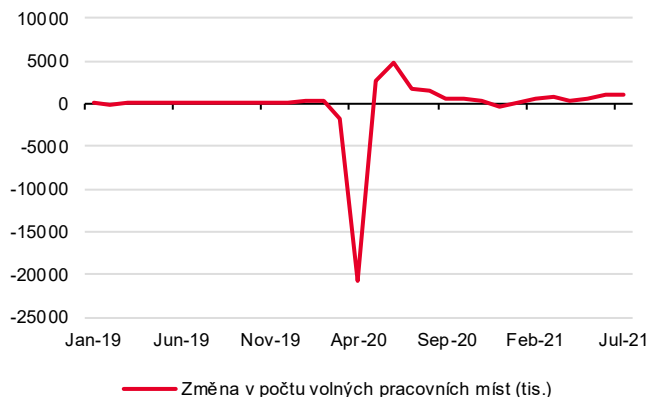
the same time, we do not expect inflation to fall much more below the Fed's target, as we saw in past years. In the longer term (2024-2025), according to our forecast, inflation should settle around 2.2%. However, upward risks remain: input prices are still rising, and the current energy crisis is a cause for concern. In our opinion, these factors will subside, but the question now is what will follow and when? In our view, the most probable scenario is that input prices will stop rising but will not fall in the near term.

Acceleration of US inflation should be temporary



Source: SG Cross Asset Research/Economics

The US labour market has still not recouped the COVID losses



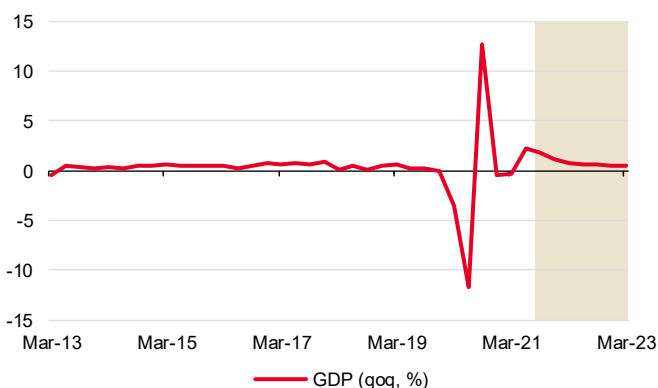
Source: SG Cross Asset Research/Economics

Euro area: we see inflationary pressures as temporary

We have revised our GDP forecast lower, especially for Germany.

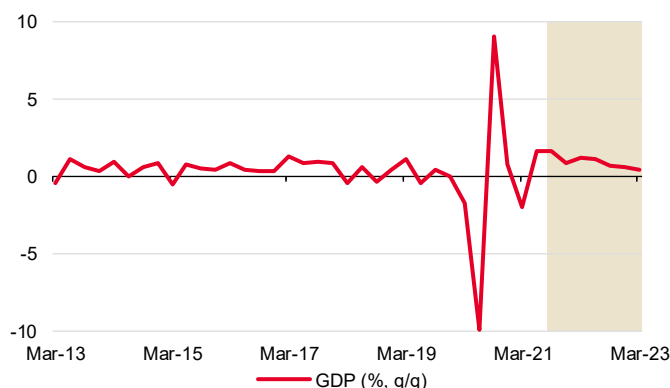
The euro area is struggling with similar troubles to the US. The global supply chain bottlenecks are hampering production and pushing up raw material and input component prices. As a result, we have revised down our forecast for the euro area from 5.1% to 5.0%. This revision is a consequence of the change in the forecast for the German economy, where we assume GDP growth will be 0.3pp lower than we previously assumed (2.6% vs 2.9%). But, as in the US, it should only be a momentary delay before the recovery kicks in.

GDP growth in the euro area (% qoq)



Source: SG Cross Asset Research/Economics

We have revised down our outlook for Germany (HDP, qoq)



Source: SG Cross Asset Research/Economics

We assume that the supply shortages will begin to ease at the turn of the year, with the whole situation normalizing in 2H22. Deferred demand and the need to restore missing stocks will then represent a strong positive potential for GDP growth in 2023. For next year, we have left GDP growth for the euro area unchanged (at 4.0%). There is also a question over how exactly households will handle their accumulated savings, now at record levels in many

euro area countries. If households start to utilise them, which we expect, this should be a strong impetus for economic growth.

Inflation should return to around 1% next year.

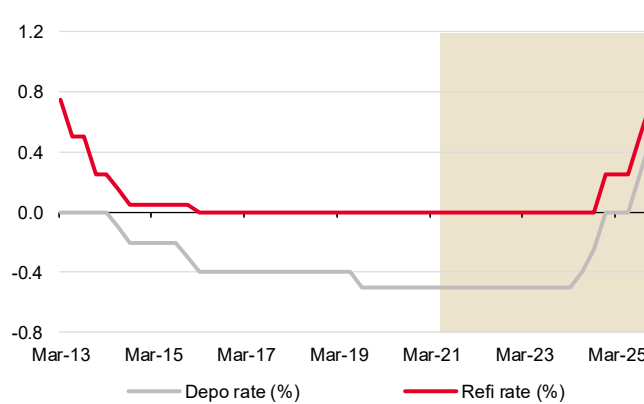
As in the US, inflation has risen to unprecedented levels in the euro area. In September, it reached 3.4%, with its core component at 1.9%. We expect inflation to remain around these levels for the rest of this year. The effect of the statistical comparative from last year should keep it at higher levels: just the reduction of the German value-added tax in 2020 added 50bp to the total year-on-year inflation figure. For the whole of this year, harmonized inflation should reach 2.2% on average, and core inflation 1.3%. Generally, we consider the current rise in consumer prices to be a return to pre-crisis levels. After prices catch up with what they lost during the pandemic crisis, we expect harmonized inflation to fall to an average of 1%, i.e. slightly above the trend since 2012. However, the risks overall are skewed towards higher inflation rather than lower.

The euro area: inflation has risen to unprecedented levels



Source: SG Cross Asset Research/Economics

Rate hikes are still not within sight in the euro area



Source: SG Cross Asset Research/Economics

Box 1: The era of ultra-loose monetary and fiscal policy is slowly coming to an end

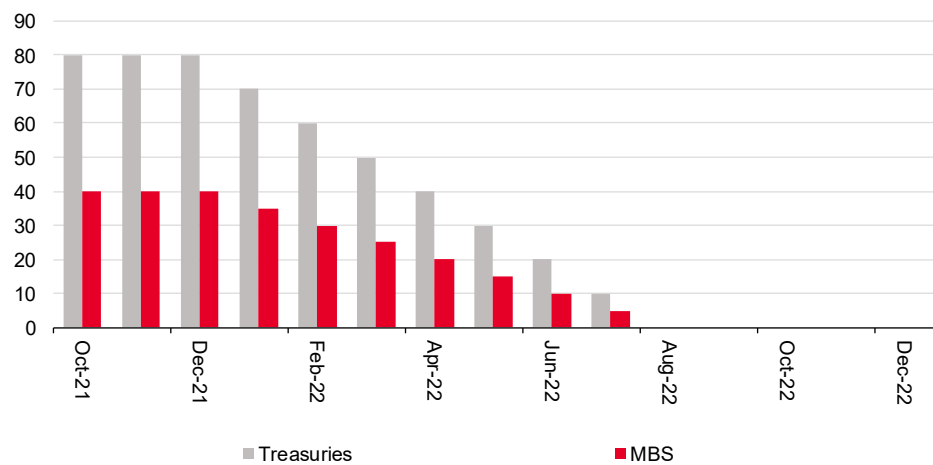
Central banks around the world are gradually starting to move away from ultra-loose monetary policy. Those that have implemented quantitative easing programmes have already started tapering (the BoE, and the Hungarian and Polish central banks) or are preparing to do so (the Fed and the ECB). Many central banks have already started to normalise interest rates (Brazil, Mexico, Russia, the Czech Republic, Hungary and Poland), while others are preparing the ground for such a move (the Fed).

Monetary policy normalisation will start by tapering

The US central bank’s policy is now particularly closely watched. The Fed has already announced that it will start reducing asset purchases if economic developments continue as expected. Its QE programme is currently running at a rate of \$120bn per month. While the bank has not yet announced a specific course of action, it is widely expected to do so at the 2-3 November meeting. The Fed intends to end the QE programme by mid-2022, which implies a \$15bn-a-month reduction in purchases. There are no rules that prohibit running a QE programme and hiking rates simultaneously, but it would be difficult for the Fed to communicate monetary policy easing and tightening at the same time. According to September’s dot plot, nine governors of the federal reserve banks prefer to raise interest rates in 2022, eight in 2023 and one in 2024. Our forecast assumes the first rate hike will take place in March 2023. This ties in with the median itself as well as the Fed’s inflation outlook, which assumes that inflation will slow to 2.2% next year. We expect the central bank to raise interest

rates at each meeting, where it has its new forecast, i.e. in June, September and December, up to 2.00-2.25%.

Tapering in the US (\$bn)



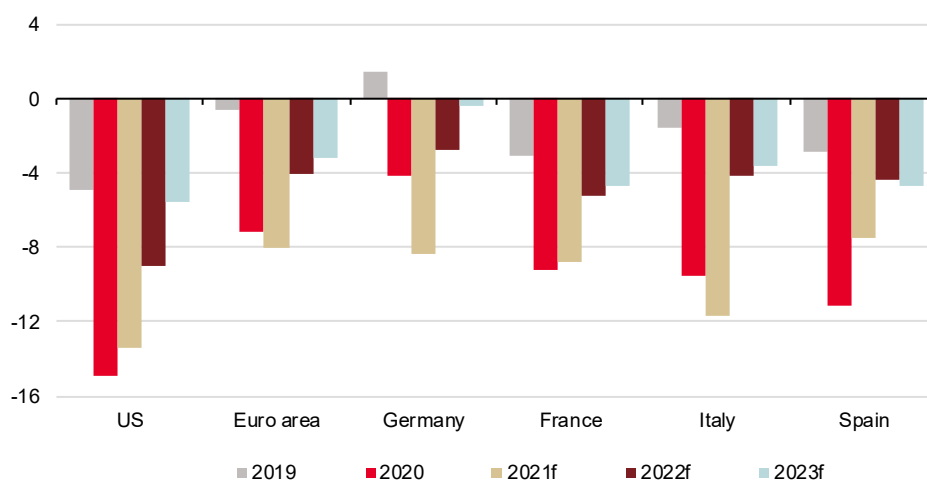
Source: SG Cross Asset Research/Economics

The European Central Bank currently has two asset purchase programmes. The pandemic emergency purchase programme (PEPP), which can total up to €1.85tn and is generally expected to end in March next year, and the standard programme of asset purchases (APP), which runs at €20bn a month and has no time limit. The volumes purchased under the PEPP are adjusted by the central bank every quarter according to the current situation. Euro area inflation exceeded 3% in August, prompting the ECB to announce that it will buy fewer assets under the PEPP in the fourth quarter, which does not mean the start of "tapering". In addition, asset purchases at the beginning of next year may be increased in order to prevent the financial market conditions from being unduly tightened as the end of the PEPP approaches. The ECB will probably not make a final announcement on the end of the PEPP programme until December, when it will have autumn data from the real economy and more visibility on how the COVID situation is developing. This should help it decide whether to end the PEPP in March or slightly later. In any case, we think the ECB will try to keep the end as smooth as possible. Therefore, we expect it to increase purchases under the standard programme (the APP) in April from the current €20bn per month to €50bn in 3Q22, before decreasing them to €30bn per month and further to €15bn in the final quarter of next year. At the same time, we assume that the ECB will launch a TLTRO IV programme in June 2022. We expect the APP programme to end in June 2023. A rate hike is still far off, in our view, and we do not expect one until the middle of 2024. In ending the PEPP and increasing the APP, the ECB will also have to deal with the capital limit on the purchase of bonds within one issue or from one issuer (currently 33%). It has already done this for some types of bonds. The ECB could thus raise the limit (we believe that this is legally possible by up to 50%) or add new assets to the APP (such as equities).

Fiscal restrictions should have less of an impact than in the past
Not only monetary policy but also fiscal policy should start to return to normal. The support that governments provided to individual economies during the pandemic crisis was unprecedented, exceeding even that provided during the Great Recession. While before the pandemic, the public finance deficit in the US was less than 5%, last year it was almost 15%. The euro area public finance deficit was less than 1% in 2019, but last year it was over 7%. And, the results will not be much better for this year. However, from 2022 onwards, our forecast assumes significant fiscal restrictions in all major economies. Our view is that the fiscal tightening will be unprecedented, with deficits in many cases shrinking to half their

current size. The question arises, of course, as to how such a sharp reduction in fiscal spending will be reflected in the development of aggregate demand and GDP. In our view, the impact could be significantly smaller than in the past, due to two factors. First, the influence of automatic stabilisers, the effect of which has been strengthened by the scope of fiscal support, and which should act in the opposite direction at a time of rapid economic recovery, i.e. in the direction of rapidly reducing public finance deficits. The second major reason is the accumulated savings of households, which are reaching record levels in many countries. These now represent a significant cushion that should dampen the negative effects of fiscal restrictions on aggregate demand. The impact of the reduction in fiscal spending should therefore be significantly smaller this time than we have been used to seeing in similar cases in the past.

Public finance deficit (% of GDP)



Source: SG Cross Asset Research/Economics

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CEE region: monetary policy normalization gathering pace

Polish central bank's first rate hike since 2012.

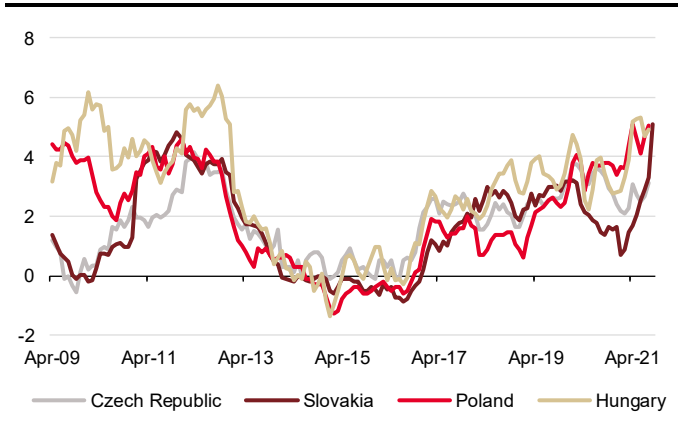
CEE economies have not been immune to the sharp acceleration in inflation. Polish inflation rose to 5.8% in September, well above the central bank's 2.5% target. The acceleration was due to fuel prices (28.6% yoy), as well as higher food prices and core inflation. In addition, according to analysts and the central bank itself, inflation has still not peaked and will rise by the end of the year. Concerns about unanchored inflation expectations drove the central bank to a surprising increase in interest rates by 0.4pp to 0.5% in September - surprising because the central bank announced previously that it did not want to start a cycle of tightening monetary conditions before ending asset purchases (but it has announced another tender in October). It has also repeatedly stated that inflationary pressures were beyond its control and would certainly not tighten monetary conditions before November, when it will have a new forecast.

We expect the Polish central bank to tighten monetary policy further.

Given inflation well above the target and the robust recovery of the domestic economy, we assume that the Polish central bank will continue to tighten monetary conditions. We expect a further 50bp increase in rates at the November meeting, and 25bp at the December meeting. At the end of next year, the key rate should be 2.75%, according to our estimate. The asset purchase program is likely to end in the near future. Governor Glapiński said that, while QE remains in the bank's portfolio of instruments, it has expired. At the same time, however, he admitted that if the zloty exchange rate was too volatile, the central bank would

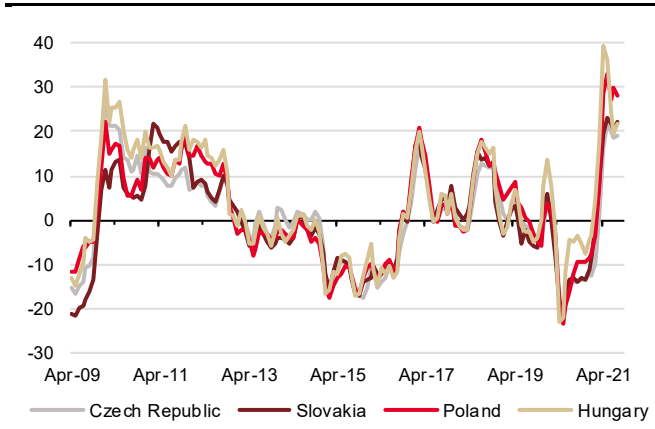
be ready to intervene. This, together with the weakening euro and another pandemic wave, will probably limit the gains of the Polish zloty by the end of the year. Next year, however, we expect it to strengthen towards EURPLN4.35 (in the middle of the year). The real economy should also do well. According to the Bloomberg consensus, GDP growth should reach 5.1% in 2022, the same level as this year.

Inflation in the region has surged (in %, yoy)



Source: SG Cross Asset Research/Economics

Fuel prices (% , yoy)

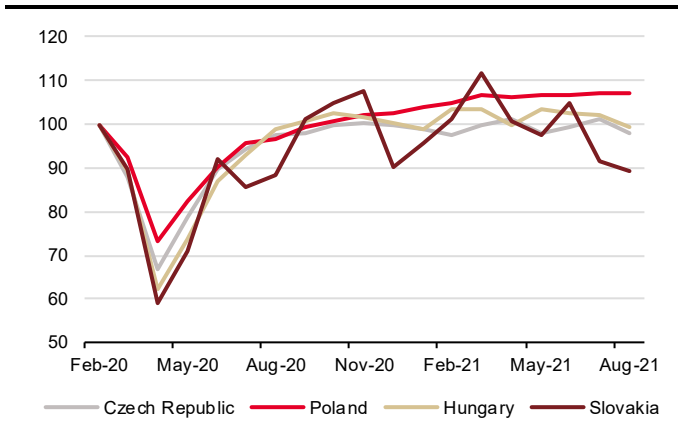


Source: SG Cross Asset Research/Economics

Lack of production components could hurt Hungarian economy

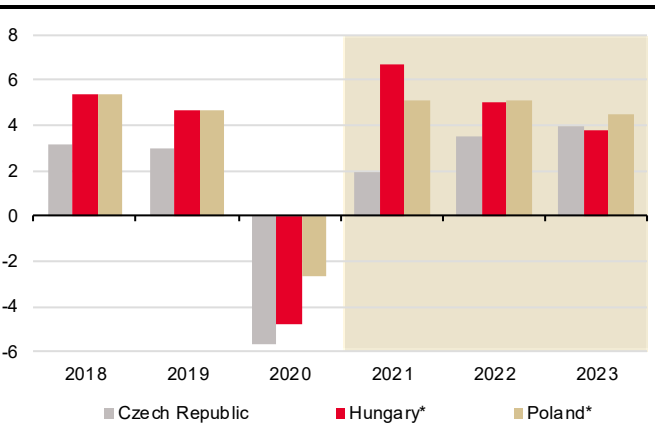
Inflation still above the central bank’s target in Hungary too. Here, it jumped to 5.5% in September (the MNB’s inflation target is 3%), while core inflation reached 4%. The Hungarian central bank has tightened monetary policy, the first to do so in the CEE region (in June). So far, it has raised the key three-month deposit rate three times, to 1.35% (twice by 30bp, then by 15bp in September). Given that inflation is likely to rise further in the coming months, we expect the bank to hike the key interest rate further. In December, we expect the key rate at 2.25%, in December 2022 at 3.25%.

The industry is being hampered by a lack of components GDP growth (% , yoy) (February 2010=100)



Source: SG Cross Asset Research/Economics

GDP growth (% , yoy)



Source: SG Cross Asset Research/Economics, *Bloomberg consensus

The Hungarian forint is likely to be held back from any further meaningful gains by the growing number of COVID cases for the rest of the year. However, we expect the currency to strengthen next year (330EUR/HUF in 3Q22). For the real economy, which is highly industrially oriented and tied to the automotive industry, the lack of production components poses a risk. This has already been reflected in industrial production, which fell by 2.7% month-on-month in August. So far, however, analysts polled by Bloomberg expect economic growth of 6.7% this year and 5.0% next year.

Macroeconomic outlook

The outlook for the economy deteriorated again



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Main changes

GDP:

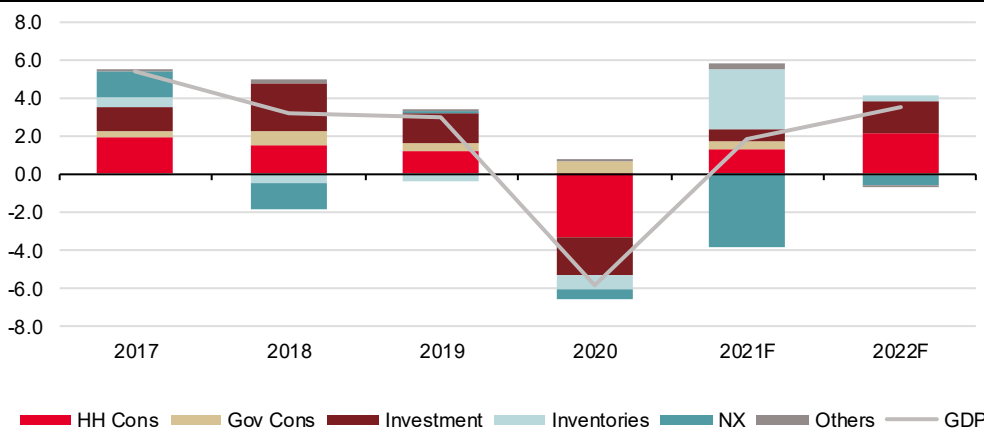
For 2021, we have decreased our GDP forecast to 1.9% from our previous estimate of 4.2%. In 2022, we expect the economy to grow by 3.2%.

Inflation:

For 2021, we have raised our inflation estimate to 3.6% from 2.8% previously. In 2022, we expect it to average 4.8%.

The expansion of the Czech economy slowed sharply in the second half of the year due to supply chain shortages resulting in a lack of components and materials for production. We do not expect a full resumption of deliveries until the middle of next year, which is a key assumption and at the same time a risk to our forecast. On the contrary, inflation continued to accelerate, and we now expect it to return to below 3% in the first half of 2023. We therefore expect the CNB will likely raise interest rates to 3%. The risks of the pandemic have intensified slightly again but are still significantly weaker than before the rollout of the COVID-19 vaccination campaign.

GDP growth will be driven mainly by investment in inventories and lagging household consumption (%)



Source: CZSO, Macrobond, Economic & Strategy Research, Komerční banka

Change to GDP outlook (% , yoy)



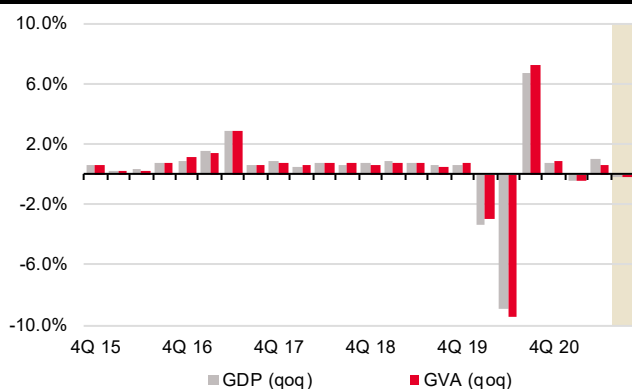
Source: CZSO, Macrobond, Economic & Strategy Research, Komerční banka

The economy is close to stagnation

The spring easing of anti-pandemic measures was followed by a sharp recovery in the economy.

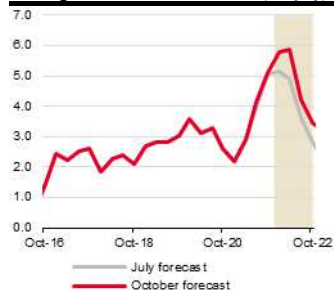
However, the deteriorating situation due to a shortage in the supply of components (in particular chips) and other materials needed in the manufacturing and construction industries became apparent in the second quarter. Economic growth in the second

GDP probably began in the second half of 2021 with stagnation



Source: CZSO, Macrobond, Economic & Strategy Research, Komerční banka

Change in inflation outlook (% , yoy)



Source: CZSO, Macrobond, Economic & Strategy Research, Komerční banka

quarter thus reached a relatively weaker pace of 1.0% qoq. In yoy terms, this represents 8.1%, given the low base effect from 2020, but our expectations and the estimates of other analysts were about one percentage point higher. Above all, however, it was generally expected that the recovery would be fully reflected in the second half of the year, although fluctuating supplies of components and materials would be a significant drag. Unfortunately, the monthly data indicate that this limiting effect was stronger than we expected in the

summer months. Proof of this is the drop in car production in August by a very significant 55% mom (seasonally adjusted). It is generally not advisable to draw strong conclusions from the development of industrial production in the summer months due to the use of plant-wide holidays, which may intensify in the absence of subcontracting to production. However, the announcement by Škoda Auto, the largest domestic carmaker, that it will significantly reduce or stop production at all three of its Czech plants from 18 October onwards highlights continuing weakness in this segment. In addition, the drop in car production has a significant impact on other industries and, in part, on services that are suppliers to the automotive industry. Given the low level of production, we expect some growth in industry, including car production, for the fourth quarter, but only at a very slow pace. Car production itself is likely to be highly variable.

We anticipate that the strong disruption in supply chains will persist until next year. During the first half of 2022, we expect only a small improvement in the supply chain situation and the complete disappearance of these problems only in the second half of 2022. From the point of view of our current forecast, this is a key assumption, and at the same time its main risk.

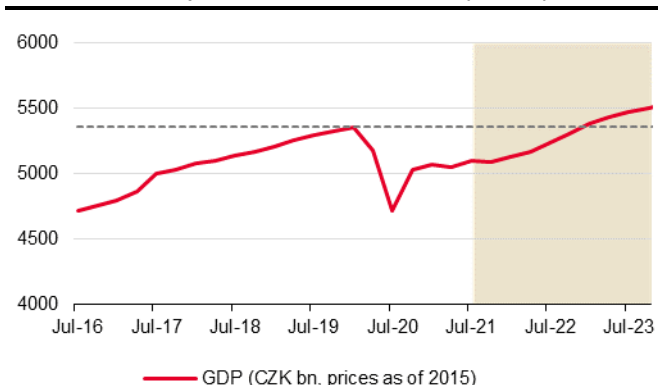
Missing components and materials reduce the output potential of the economy.

The return of GDP to the pre-crisis level is postponed to 2022

In our previous forecast, the spring loosening of anti-pandemic measures led to rapid economic growth and the achievement of pre-pandemic levels by the end of this year.

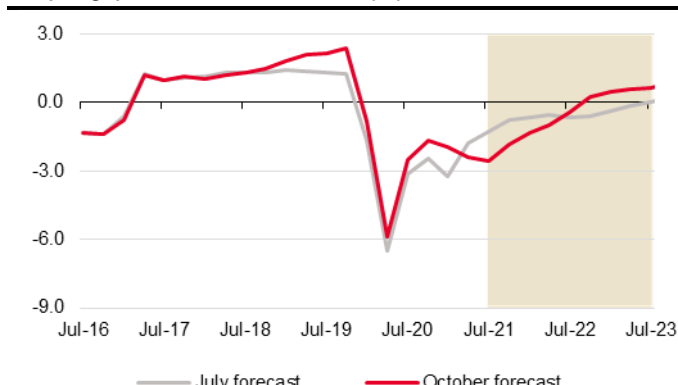
We now expect the economy to stagnate in the second half. We have therefore significantly reduced our full-year GDP growth estimate to 1.9% vs our previous estimate of 4.2%. For the same reason, we also reduce our 2022 forecast to 3.2%. The expected end of supply chain problems should lead to accelerated economic growth from the second half of next year, where GDP should reach its peak in terms of quarter-on-quarter dynamics. In this scenario, the Czech economy will grow at an above-average rate of 4.0% in 2023. However, compared to our previous forecast, we expect the pre-pandemic level of GDP to be reached about three quarters later, in 3Q22. In terms of implications for inflation and monetary policy, it is important to note that we expect a slowdown in potential output growth until mid-next year due to the lack of capacity in the economy, which leads to inflationary pressures. We thus expect the closing of the negative output gap to be as fast as in our previous forecast, i.e. in the middle of next year.

GDP to return to pre-crisis level in Q3 2022 (CZKbn)



Source: CZSO, Macrobond, Economic & Strategy Research, Komerční banka

Output gap to close in 2H of 2022 (%)



Source: Economic & Strategy Research, Komerční banka

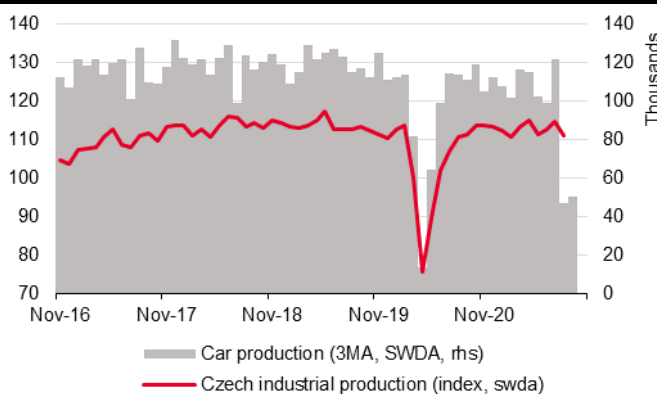
The industry is increasingly constrained by delayed deliveries of components.

Production does not work without chips

At the beginning of the summer, the prevailing expectation was that the problems with the lack of components would be at least partially alleviated by the end of this year, and that from 2022 onwards, the limited supply should gradually grow. Unfortunately, the

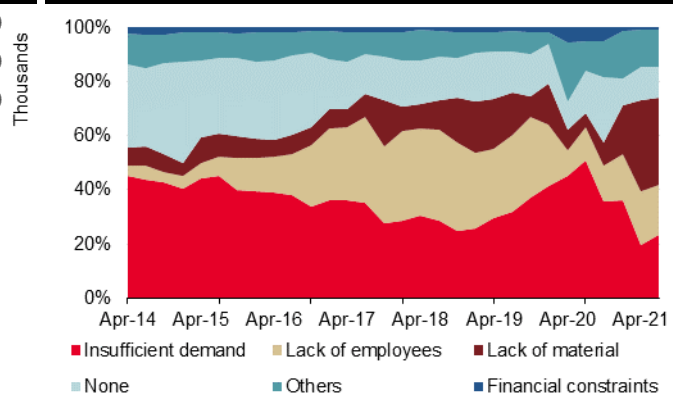
problems intensified during the summer and expectations of a significant improvement, according to anecdotal evidence, have shifted to the middle of next year. Opinions, however, vary widely, which means considerable uncertainty about these assumptions. Fluctuations in chip supply cause large variations in car production, while there are still significant differences between individual car manufacturers. For example, the carmaker Hyundai has secured more deliveries of production inputs, while the VW Group and thus the most important carmaker in the Czech Republic, Škoda Auto, has limited deliveries. As a result, Škoda Auto has announced a significant reduction or complete cessation of production in the period from October to the end of the year. Evidence of supply chain disruption is most visible for chips but is also significant in the lack of supply of several materials needed for industrial and construction production. The industry has been going through significant monthly fluctuations since the end of anti-pandemic measures in the spring.

Car production is a major brake on industrial expansion



Source: CZSO, Macrobond, AutoSAP, Economic & Strategy Research, Komerční banka

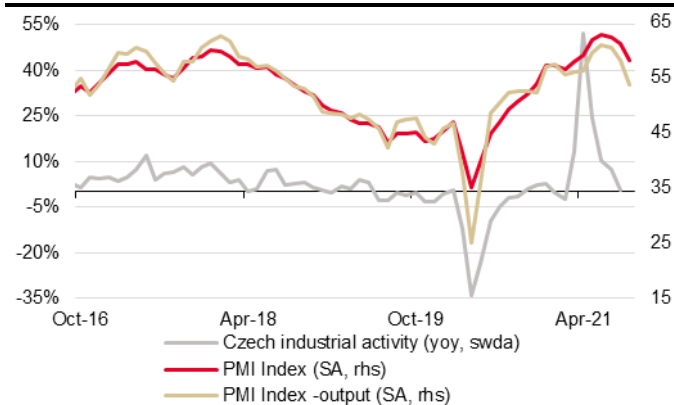
Barriers of growth in industry



Source: CZSO, Macrobond, Economic & Strategy Research, Komerční banka

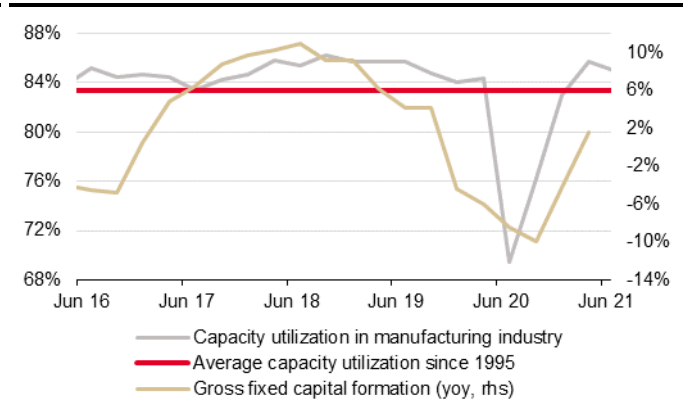
All in all, we expect a decline in industrial production of 0.4% qoq in the third quarter. For the rest of the year, we estimate on average slight growth with a gradual acceleration next year, where our assumption of improved component deliveries from the middle of the year will play a key role. For the whole of this year, our forecast assumes growth in industrial production of 8.7%, which is a weak figure in the context of its 7.1% decline in the previous year. **The pre-pandemic level of industrial production was in fact reached as early as the autumn of 2020 and has more or less stagnated since then.** Only thanks to last year's low base effect, this year's growth looks high. However, without the chip-related supply chain problems, it would not be a problem for the Czech industry to achieve an expansion of around 20% this year.

Leading indicators show deceleration of manufacturing



Source: CZSO, Macrobond, Economic & Strategy Research, Komerční banka

Capacity utilisation is above the long-term average

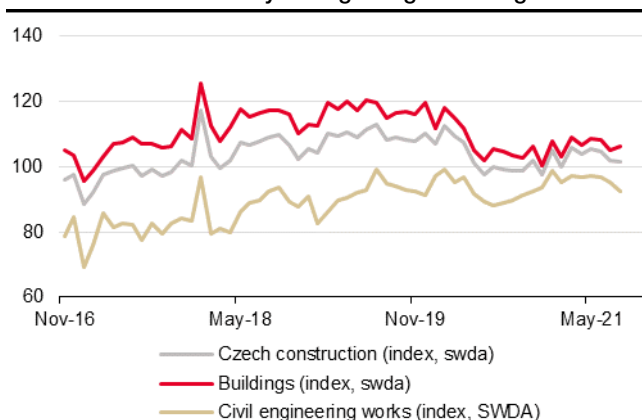


Source: CZSO, Macrobond, Economic & Strategy Research, Komerční banka

After a promising first half, the construction industry turned down. Materials and staff are lacking.

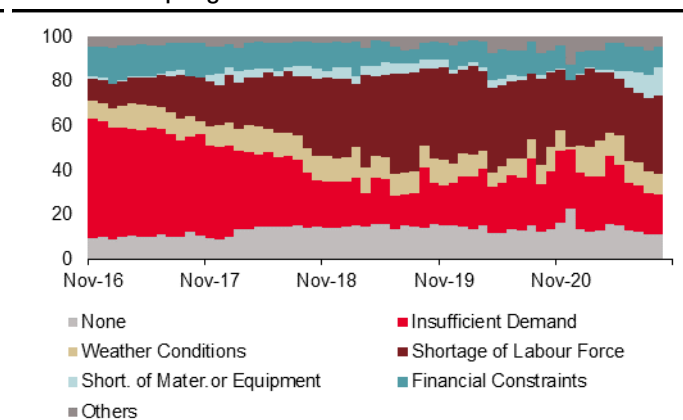
For the construction sector, due to usual macroeconomic lags for this year and with regard to the expected recovery in the second half of the year, we had forecast stagnation or weak growth. During the first half of the year, however, we were perhaps too pessimistic, as monthly data showed surprisingly decent growth dynamics. In the methodology of national accounts, value added in construction grew by 1.2% qoq in the first quarter and by 0.5% qoq in the second quarter. During the third quarter, however, monthly data point to a decline, as companies reported growing difficulties due to a lack of employees and materials. With regard to the lack of employees, there is pressure on wage growth and more expensive construction work, which saw a yoy rise in price of 6.8% in August. Yoy, the price of building materials has increased 16.5% on average. For some projects, the increase in prices is so significant that there is often a rejection of already agreed or planned orders. This significant increase in the cost of construction also contributes to a high increase in real estate prices. **For residential real estate for this year, we estimate an average price growth of 8.5%. For the rest of this year, we do not expect a significant improvement in the supply of materials and do not expect this to happen until next year, when EU funds and public investment should play a significant role, as we stated in our previous forecast. For this year, we expect stagnation in the construction industry on average, but we still predict its expansion to be close to 9% in 2022–23.**

The construction industry is stagnating on average



Source: CZSO, Macrobond, Economic & Strategy Research, Komerční banka

Barriers to output growth in construction



Source: CZSO, Macrobond, Economic & Strategy Research, Komerční banka

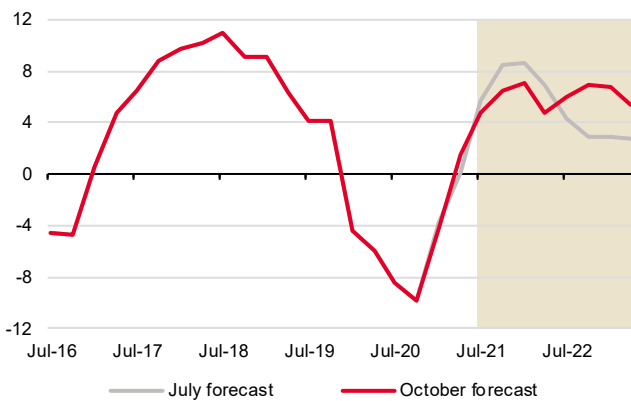
Without household consumption, the economy would decline in the second half of the year.

Household consumption is the driving force of the economy

In the second quarter, household consumption grew at a very decent pace of 6.5% qoq and 7.4% yoy. Fixed capital investments added 4.2% qoq and 1.5% yoy over the same

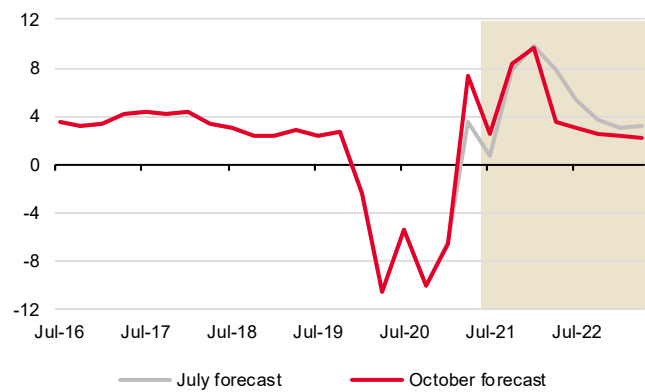
period. Monthly data show that in the case of household consumption, we can expect further expansion in the third quarter. The positive development on the labour market and this year's wage growth should also lead to this, although we will probably still see considerable fluctuations in dynamics here as well. An obstacle to the faster expansion of domestic consumption is accelerated inflation, which, in addition to a real reduction in purchasing power, also causes a deterioration in consumer confidence and thus consumer appetite. As we mentioned earlier, the year-round drive of economic growth this year will be high inventory creation, which rose sharply at the end of last year. However, since the spring, the imaginary baton has been passed over to household consumption. **Investment growth will be slower due to ongoing shortage of components and materials.** However, eliminating problems in the supply of components should lead to a significant acceleration in production and investment. Next year, the main drivers of the economy are likely to be household consumption and investment in fixed capital, which will also support the cycle of EU funds, which we discussed in our previous forecast. For the whole of this year, we expect growth in household consumption of 2.7% and fixed investment of 2.0%. For next year, we expect them to accelerate to 4.6% and 6.1%, respectively.

Investments expansion slower in the near term (% , yoy)



Source: CZSO, Macrobond, Economic & Strategy Research, Komerční banka

Household consumption will be the GDP driver (% , yoy)



Source: CZSO, Macrobond, Economic & Strategy Research, Komerční banka

For this year, we have estimated a deterioration in the foreign trade balance in our previous forecasts, given the expected growth in household consumption and investment. However, the development of industry and thus exports deteriorated more significantly than we expected during the summer. Given that we do not expect a significant improvement in the current situation by the end of the year, we assume a much larger reduction in the full-year foreign trade surplus. Our forecast shows approximately CZK63bn in the national methodology, after last year's record result of CZK180bn. Next year, we see a chance for a quick turnaround, if our assumption of improved component deliveries from the second half of the year is fulfilled. Even so, we still expect a further reduction in the foreign trade surplus to CZK23bn in 2022.

Fiscal policy: the economy saves public finances

Our April forecast is gradually materialising, so our latest forecast has only undergone cosmetic changes. The state budget is heading for a deficit of CZK400bn this year (6.6% of GDP) and, given the slower investment activity at the end of the year, the resulting deficit could be even slightly lower. Direct tax collections have come in well ahead of the Ministry of Finance's expectations and we expect an improvement in the collection of some indirect taxes in the remainder of the year. The state budget for next year has been approved by the government and is awaiting discussion in the Chamber of Deputies. Given the timing of the legislative process and the post-election negotiations, we see a risk of a provisional budget.

However, this should not be a major problem for the economy. Municipalities are running record surpluses, while health insurers have been hit hard by pandemic-related expenses. Overall, we see the deficit widening to 6.3% of GDP this year and only showing signs of consolidation next year. Government debt will likely rise to 41.8% of GDP this year and increase further to 43.4% of GDP in 2023.

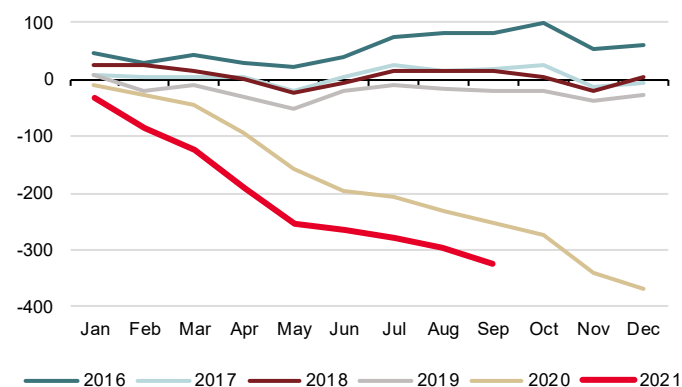
We maintain our forecast for this year's state budget deficit unchanged at CZK400bn. We assume that tax revenues will grow above budget during the year and that "COVID" spending will be lower as a result.

Investments will determine the final state budget deficit this year

In the first nine months of this year, the government had already accumulated a deficit of CZK326.3bn (5.3 % of GDP). Total revenue grew by 2.0% year-on-year and expenditure by 7.2%. The month-on-month widening of the deficit, although CZK28.2bn higher compared to previous months, is still below the average pace for this year. Tax collections remain the main reason for the improved state performance, but spending is also lower than planned.

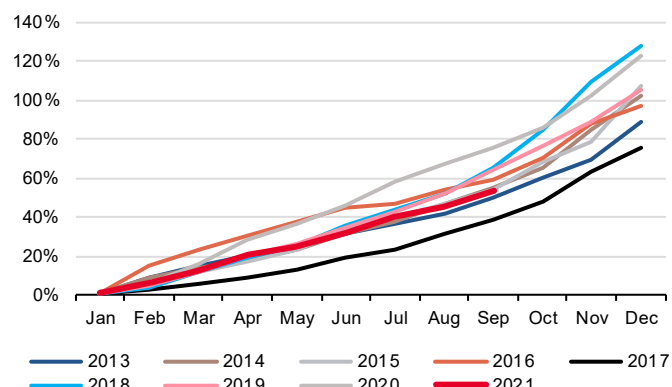
On the revenue side, direct taxes in particular helped to improve the result. Corporate income tax collections received a quarterly advance, which increased the total collection to 123% of the full-year estimate. The positive trend also continues for personal income tax, for which the state collected CZK10bn more than planned in the first nine months of the year. Insurance premiums are also on a similar trend. On the other hand, indirect taxes, led by excise duties, continue to lag behind. However, in our view, the latter will no longer catch up with the full-year estimate due to an unrealistic forecast of consumption of taxed items. On the other hand, we still expect a slight improvement in VAT collections. Overall, the revenue side of the state budget brought in CZK33.6bn more than the proportional part of the approved plan.

Development of the state budget (CZKbn)



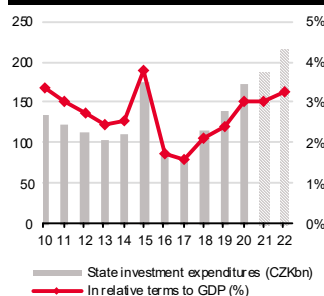
Source: Finance Ministry, Macrobond, Economic & Strategy Research, Komerční banka

Government investment activity vs MinFin plan (%)



Source: Finance Ministry, Macrobond, Economic & Strategy Research, Komerční banka

Government investment



Source: Finance Ministry, Economic & Strategy Research, Komerční banka

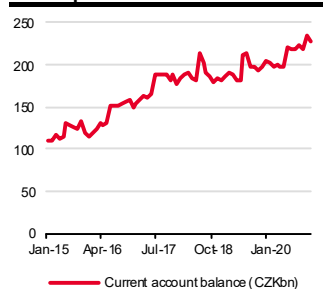
On the expenditure side, current expenditure rose by 8.4% year-on-year in the first nine months of the year, while investment fell by 5.9%. The main item increasing expenditure is the already pre-financed transfers to business and non-business entities, which weighed on the budget, especially in the first half of the year. On the other hand, savings have been made in the area of civil servants' salaries and investment. In the first case, full use can be expected at the end of the year in the form of remuneration. In the case of investments, however, the pace of implementation lags behind previous years. While 54% of the budget has already been spent this year, last year at this time it was 75% and in the previous two years was higher again. The combination of an ambitious plan and problems in the construction sector is likely to have hit the limits of the economy, and the state's ability to invest will thus be crucial for the final deficit of this year's state budget.

Although the pace of the widening of the state budget deficit increased again in September, it is still significantly better than the Ministry of Finance's forecast. The

revenue side, led by direct taxes, confirms our assumption of better macroeconomic conditions than the government's plans. On the other hand, the expenditure side is no longer as burdened by pandemic-related expenditure. Thus, the resolution of the problematic investment spending will be crucial for the final deficit. **We continue to assume a final government budget deficit of CZK400bn (6.6 % of GDP).** However, the results for the last three months of 2021 suggest a risk that the final deficit could be even slightly lower.

The state budget for next year has been approved by the government and sent to parliament with a proposed deficit of CZK376.6bn (6.2 % of GDP). The proposal includes, among other things, an increase in investment to a nominally record level of CZK218bn (3.6 % of GDP). In relative terms, however, it continues to lag behind the record years even after excluding 2015, which was positively affected by a one-off drawdown of EU funds. On the revenue side, however, the proposal suggests a similar story to this year, i.e. an underestimation of tax revenues, led by direct taxes. **Thus, we still expect a better result of CZK300bn (4.9 % of GDP) compared to the Ministry of Finance's forecast.** Given the timing of the legislative process and the elections for the Chamber of Deputies, we see a significant risk of a provisional budget that would delay the entry into force of some measures, including the increase in civil servants' salaries. However, given the size of this year's budget, by which the government would have to be guided, we do not see a significant risk to the economy.

Municipal reserves



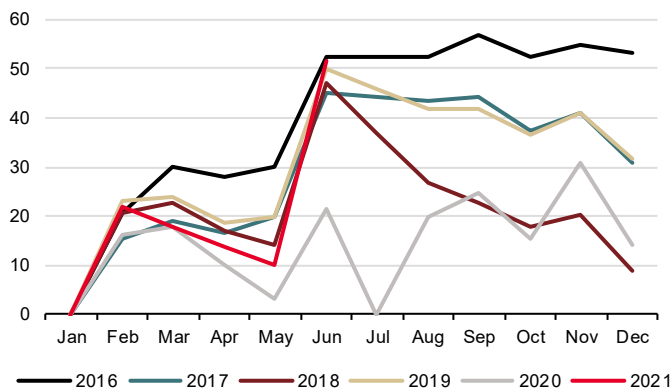
Source: Finance Ministry, Economic & Strategy Research, Komerční banka

Municipalities in record surplus, health insurers catch up with COVID

In the first half of the year, the municipal economy surged to a surplus of CZK52bn, which is at historically record levels. The biggest contributor to this was the half-year advance payment of corporate income tax, which surprised significantly. Moreover, it is also likely to have a positive impact on the September budget figures. As the state budget has already shown, corporate income tax has reached 123% of the full-year figure within the first nine months of this year. However, the final quarter will see a rise in the pace of some spending, led by investment. Thus, **we expect a slight deterioration of the current surplus to CZK40bn by the end of the year.** Compared to our July forecast, we have thus improved the estimated surplus by CZK20bn. We expect a similar budget result for next year. Given the further significant growth of municipal current account reserves to a record CZK300bn, we do not expect new discussions on adjustments to the budget allocation of taxes or additional transfers from the state budget.

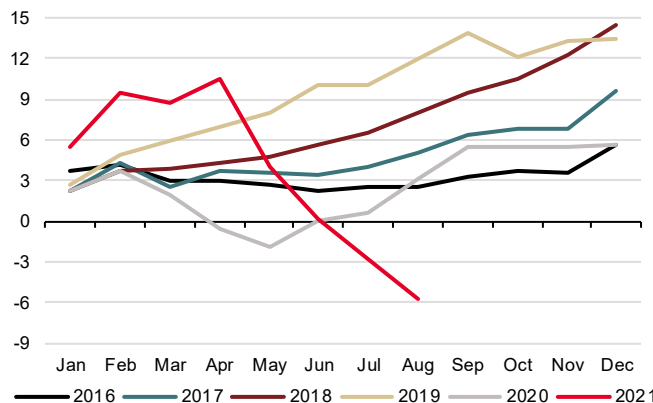
Health insurers have been plagued by increased costs related to the pandemic since May, which have been reimbursed with delays. The August budget result showed a widening of the deficit to CZK5.8bn, the worst result in modern history. Moreover, the risk remains the development of the pandemic in the coming months. Thus, we are now counting on a deficit of CZK10bn for this year. Next year, however, health insurers are likely to return to a surplus of CZK10bn. Moreover, a further increase in payments for state insureds is underway, which is a positive risk to our forecast.

Municipal finances (CZKbn)



Source: Finance Ministry, Macrobond, Economic & Strategy Research, Komerční banka

Health insurers finances (CZKbn)



Source: Finance Ministry, Macrobond, Economic & Strategy Research, Komerční banka

In our view, this year's public finances will end with a slightly deeper deficit than last year. For next year, we expect the first signs of consolidation in the government's finances. Public debt will peak in 2023.

Public finance forecasts

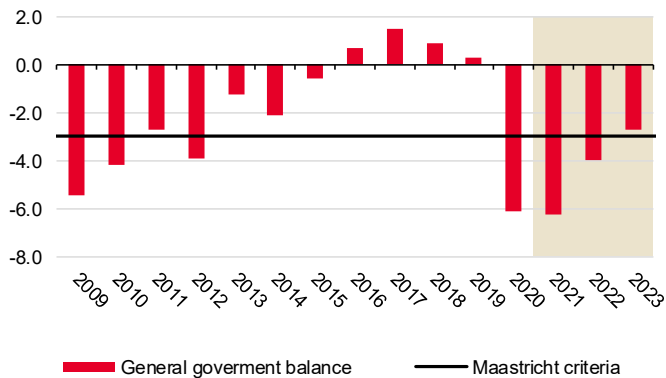
| | 2019 | 2020 | 2021f | 2022f | 2023f | 2024f |
|------------------------|--------|--------|--------|--------|--------|--------|
| Balance (% GDP) | 0.3 | -6.1 | -6.3 | -4.0 | -2.7 | -1.5 |
| Fiscal effort (pp GDP) | -0.8 | -3.8 | -0.8 | 1.8 | 1.3 | 1.1 |
| Public debt (CZKbn) | 1739.9 | 2153.0 | 2553.0 | 2853.0 | 3078.0 | 3228.0 |
| Debt ratio (% GDP) | 30.0 | 37.8 | 41.8 | 42.8 | 43.4 | 43.4 |

Source: CZSO, MinFin, Economic & Strategy Research, Komerční banka

Public deficit to peak this year

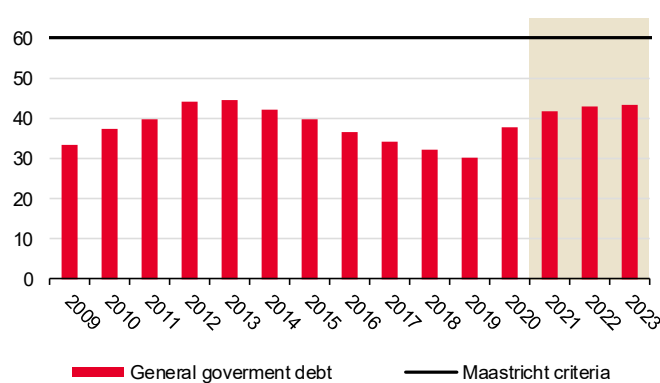
Our state budget forecast is gradually materialising, so our updated outlook for public finances as a whole has seen only cosmetic adjustments. The overall deficit this year is expected to reach 6.3% of GDP according to the ESA2010 methodology, two-tenth higher than in the previous year and the highest in modern history. The main reason is better macroeconomic developments and the associated higher tax collection compare with Ministry of finance. In the direction of a lower general government deficit, municipalities continue to operate with record surpluses. On the other hand, health insurance companies have fallen into deficit. For next year, we expect the deficit to fall to 4.0% of GDP. Public sector debt is expected to rise further this year to 41.8% of GDP, peaking at 43.4% of GDP in 2023.

Public finance balance (% of GDP)



Source: CZSO, Economic & Strategy Research, Komerční banka

Public debt (% of GDP)



Source: CZSO, Economic & Strategy Research, Komerční banka

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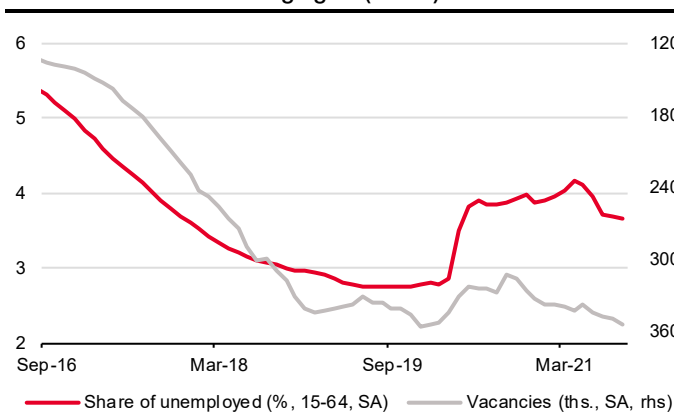
Labour market is getting tighter

Renewed economic growth has led to a further reduction in the unemployment rate. The number of vacancies has risen to a new record. Problems with supply of components in industry should slow down the reduction of unemployment for the rest of this year, but unemployment could continue its declining trend next year. The unemployment rate is close to equilibrium and we expect it to fall below this level next year. In 2021, wage growth is being driven by the public sector, with the dynamic being strongly influenced by one off rewards in healthcare. In real terms, accelerated inflation is currently very limited, so that the average real wage for next year should even fall slightly, according to our forecasts.

Complications with the supply of components in industry could slow down the decline in unemployment.

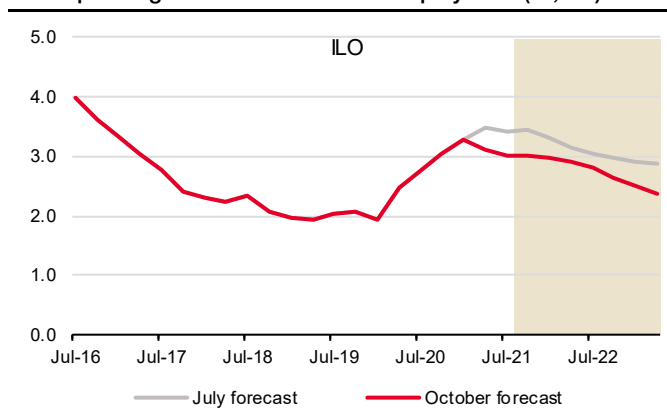
The seasonally adjusted unemployment rate in the MLSA methodology was 3.6% in September. Unemployment peaked at 4.2% in April this year and has been declining since then, despite the closure of employment support programs after lockdown measures were lifted. The reason for the reduction is, as usual, mainly the growing economy, which requires new employees to be hired. Given the number of risks and uncertainties, we expected a rather short period of stability of the unemployment rate after the end of the spring of this year, followed by a slight decline, especially next year. In this sense, the development during the summer was slightly better than we expected in the July forecast. The number of job vacancies in the country bottomed in October 2020 and grown since then to a record 360,000 in September this year. This is even higher than in 2019, when the tightening of the market was a significant problem for many companies and at the same time an argument in favour of tightening monetary policy. Currently, the higher number of job vacancies suggests that the economy is returning to similar trends. However, the difference is so far in the unemployment rate: in the course of 2019, it was, in our view, significantly below the equilibrium level (NAIRU), while now it is roughly close to it. **With our projected economic expansion next year, we expect unemployment to fall further below equilibrium**, so this development will also be an argument for higher CNB interest rates. However, labour market developments for the rest of this year may not be as clear-cut. We expect stagnation or only a gradual increase in employment, especially in companies that are facing a shortage of materials for production. For example, some Skoda Auto employees stay at home for 85% of their salary, and some car suppliers are talking about a similar regime. The government is currently negotiating the use of the Antivirus program, which would again prevent possible redundancies, if the sector's problems persist. **By the end of this year, we expect the unemployment rate to stagnate and gradually decline over the course of next year.**

Number of vacancies rising again (MLSA)



Source: MLSA, Macrobond, Economic & Strategy Research, Komerční banka

We expect a gradual decrease in unemployment (% , SA)



Source: MLSA, Macrobond, Economic & Strategy Research, Komerční banka

Growth in the average wage in the second quarter exceeded estimates, reaching 11.3% year on year, which was 8.2% in real terms after adjusting for inflation. At first glance,

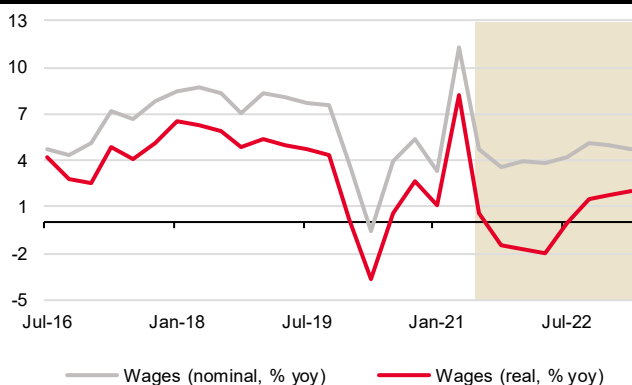
however, the extremely strong data are mainly the result of a comparison with last year's second quarter, when the dynamics of the average wage fell sharply by 3.1% qoq. After adjusting for seasonal effects, the quarter-on-quarter growth of the average wage in 2Q21 was still 1.2%. The tight labour market is an important factor in expecting pressure on wage growth in the private sector as well. However, for the time being, the public sphere remains the driving force. Wage growth accelerated here from 4.9% yoy in the first quarter to 17.7% yoy in the second quarter. This development was mainly due to the health and social care sector, where the remuneration of health professionals responsible for COVID care contributed to wage growth by almost 44% year-on-year. In the private sector, wage growth in 2Q21 reached 8.8% year on year. In the key manufacturing industry, wages rose by a significant 11.3% after 2.2% in the first quarter. The abolition of the super-gross wage, which was reflected in the growth of net income, may have caused lower pressure on wage growth in the private sector this year.

This year's growth in the average wage should be supported mainly by the public sector.

In the third quarter, the part of health care remuneration that was not paid in the previous quarter should still be paid. However, in terms of total average wage dynamics, remuneration in this sector will likely slow down growth. In the manufacturing industry, monthly data show a year-on-year rate of close to 6% and in construction between 6-7%. Overall, we believe that wage growth will be rather weak in 3Q, reaching 4.7% year on year. With regard to accelerating inflation, this means growth in real terms of only 0.6%. With regard to the above mentioned difficulties in the manufacturing industry, we expect rather weaker wage growth by the end of the year and an acceleration next year, when the tightening of the labour market will be more pronounced. Given the pace of inflation, this means that the average real wage is likely to fall in the short term.

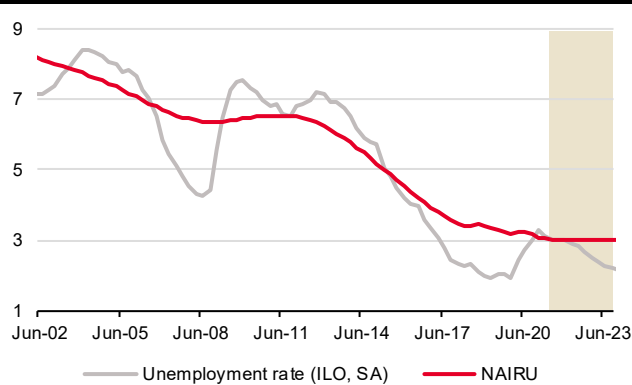
For this year, we expect an increase in the average wage of 5.7%, next year 4.3% and then, given the tightness of the labour market, a further acceleration above 5%. In real terms, this would mean an increase in the average wage by 2.1% this year and a decrease of 0.5% in 2022.

We expect a slowdown in average wage growth (% , yoy)...



Source: CZSO, Macrobond, Economic & Strategy Research, Komerční banka

...while the upward pressure on wages should rise (%)



Source: CZSO, Macrobond, Economic & Strategy Research, Komerční banka

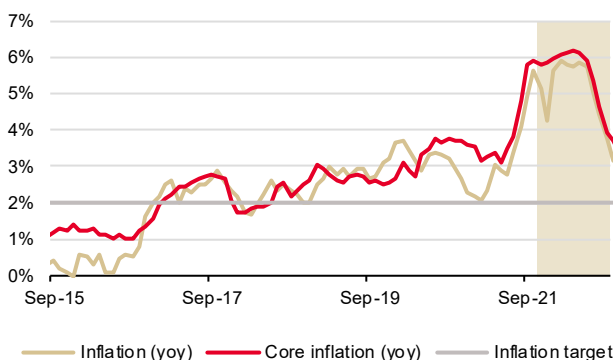
Inflation is heading towards 6%

Consumer prices are likely to rise by an average of 3.6% this year. In our view, core month-on-month inflation is currently peaking, but it should slow down quite gradually. This is due to renewed domestic price pressures, especially for housing related prices. In addition, significant price increases are still ongoing in the manufacturing sector. A strong price boost is set to come now from the energy sector, and it is likely that this will only be partially offset by lower taxes. Petrol station prices are rising due to the higher oil price, but here we expect a slight reduction next year, which would, however, dampen the stronger dollar. Against that, we still expect a moderate rise in food prices.

Core inflation accelerated further.

Year-on-year consumer price inflation rose to 4.1% in the third quarter, beating all estimates. In addition, the critical core prices, which do not include volatile food and energy items, accelerated quarter on quarter. Year-on-year, core inflation moved to 5.8% in September. It is still true that part of the price increases should be of a temporary nature, especially in connection with the opening of services after the spring easing of lockdown measures. However, there are a growing number of reasons to expect the current inflationary pressures to be more persistent. One of these is the growing shortfall of components and materials for production, which leads to higher prices in industry and construction. The year on year growth in industrial producer prices was 10% in September. For construction work, it was 6.8% yoy and in the case of building materials, a high 16.5% yoy. This development partly feeds into consumer prices, albeit with a delay. However, housing-related costs came to the fore as the main price driver of summer inflation data. Among other things, this includes, to a significant extent, the so-called imputed rents derived from the development of real estate prices and the above-mentioned building materials and works. The cost of owner occupied housing is growing strongly this year, contributing a strong 0.8% to year on year inflation in September. We continue to expect core inflation to slow down quite gradually. In year-on-year terms, at the turn of the year, we will probably see a figure close to 6%. **Next year, a reduction in core inflation, a slowdown in price increases abroad and tighter domestic monetary conditions should help reduce core inflation.**

Year-on-year inflation is heading for 6%



Source: CZSO, CNB, Macrobond, Economic & Strategy Research, Komerční banka

Rise of food prices should accelerate quite slowly



Source: CZSO, Macrobond, Economic & Strategy Research, Komerční banka

For the rest of 2021, we expect the price of oil to be close to \$80 / barrel (Brent) and to fall below this level over the next year.

The price of Brent crude oil rose above \$70 / barrel during the third quarter and continued to rise above \$80 in October. The rise in prices at petrol stations has thus been proceeding at a slightly higher pace than we expected since the beginning of the year, and it continues to be pro-inflationary. In addition, we can see how the situation has shifted by looking at the extremely low prices last year. Compared to last September, there has been a 20%+ increase in prices at petrol stations. We assume that the increased oil prices will continue for the rest of the year and that the pro-inflationary effect of petrol prices will persist

for the time being. For next year, however, we already anticipate a gradual reduction in the oil price on world markets down to a range of about \$73-75 / barrel, driven by increased supply and a global easing of upward pressure on energy commodity prices. The effect of prices at petrol stations should be slightly disinflationary next year.

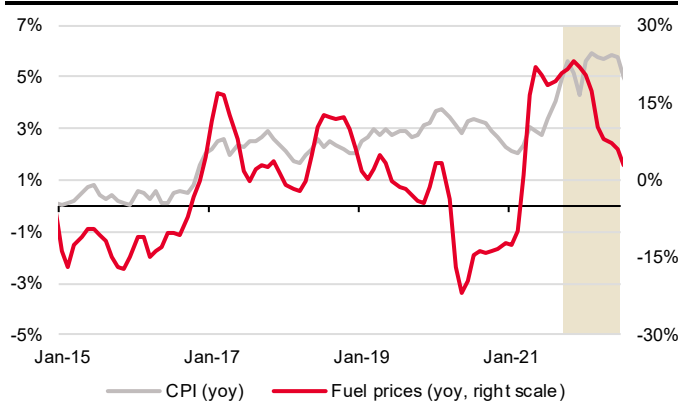
Food prices rose slightly above estimates in the third quarter, although their development remains subdued on average. For the whole of 2021, we estimate food prices to rise by less than 1%. With regard to the development of prices in agriculture and the rise in energy prices, we expect the growth of food prices to accelerate towards 2% next year, which is a very moderate development compared to other items in the consumer basket. However, we would remind readers that food prices are highly volatile.

The strong rise in energy prices should be partly offset by a reduction in VAT.

Regulated energy prices are a significant item that will likely affect price developments in the short (up to one year) and possibly also in the medium term. We address this issue in more detail in Box 2. We expect electricity, gas and heat prices for consumers to rise sharply, especially in the fourth quarter of this year and in the first quarter of next year. In the fourth quarter, price growth will likely be dampened by the waiver of VAT payments on energy for November and December. Against that, at the beginning of the year, we expect the resumption of VAT payments, albeit at a reduced rate of 10%. In summary, this means that we expect headline inflation to be lower due to VAT, but monetary policy inflation to be close to 6.5% yoy at the turn of the year. Thus, it is a larger fiscal impulse rather than lower inflation due to lower VAT that would give the CNB a reason to raise interest rates less. The question now is to what extent the new CNB forecast will take into account changes in VAT. Our estimated corridor between monetary policy and headline inflation indicates where inflation could be in the CNB's forecast, depending on the inclusion of regulated prices. However, the key difference is likely to be in the view of core inflation, which accounts for more than half of the consumer basket.

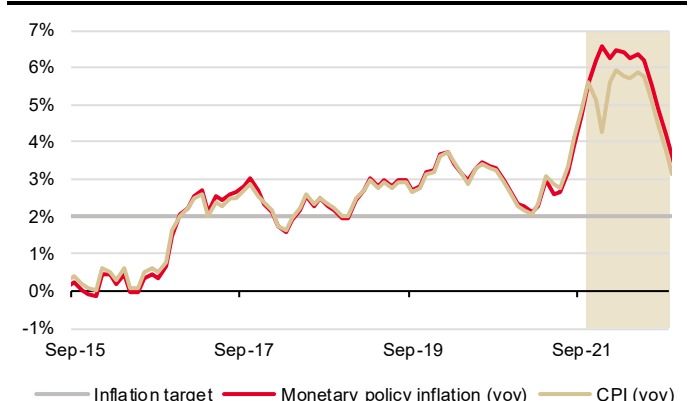
The planned renewal of excise duties on tobacco and alcohol next year should counteract the lower VAT rate on energy. In full-year terms, lower VAT and higher excise duties should roughly cancel out each one's contribution to year-on-year inflation, by our estimates.

Prices at petrol stations increased further



Source: CZSO, Macrobond, Economic & Strategy Research, Komerční banka

Monetary policy inflation should rise to above 6%



Source: CZSO, CNB, Macrobond, Economic & Strategy Research, Komerční banka

Overall, we expect annual inflation to peak at levels close to 6% between early April and May next year. The expected easing of price pressures should lead to significant disinflation, especially in the second half of next year. At that time, moreover, the year-on-year CPI expression will meet the growing base from this year, and we should see a rapid decline to 3%. However, we expect a return below 3% yoy only in the course of 2023. For the beginning

of 2023, we also expect a renewed increase in energy taxation from a reduced VAT rate to the standard 21%, which will almost certainly increase inflation again.

Overall, we estimate that inflation will average 3.6% this year and accelerate to 4.8% next year, with core inflation at 5.0%, vs an estimated rate of 4.3% this year.

Box 2: Energy prices on the rise

Electricity market prices have started to rise sharply this year. There are several mutually supportive reasons for this. In the beginning, there was a political decision to withdraw part of the emission allowances from the market, which led to an increase in their price. Emission allowances are directly linked to energy pricing. The increase in the price of emission allowances was then further supported by the vision of a shift away from ‘dirty’ energy. This has resulted in the shutdown of Europe’s coal and nuclear power plants. In 2022, for example, the last nuclear power plant in Germany is to be shut down, and even the latest developments in this plan are unlikely to change anything. At the same time, in terms of demand, there is a shift towards electrification in transport and a shift away from internal combustion engines, which is a minor issue for the time being, but the trend is clearly upward. These variables and the shift away from fossil fuels have been known for several years, which is why we have been anticipating an acceleration in energy price growth for some time now. The decline in electricity prices in 2020 was thus rather an unexpected exception related to the rapid arrival of the coronavirus pandemic and the associated slowdown in the global economy.

Other strong short-term or medium-term phenomena add to the above factors this year.

The harsh winter at the beginning of 2021 led to a reduction in Europe’s natural gas reserves (LNG) to 75% of the average. In the spring, the economy recovered sharply. This led to an increase in current and expected energy demand, which further increased demand for emission credits. The growth of Asian economies, especially China, has also led to an increase in demand for energy raw materials, but there have also been supply disruptions and rising prices for energy raw materials such as LNG and coal. In the case of Europe, there has been a reduction in natural gas supplies, both from the North Sea (due to technical difficulties) and from Russia for geopolitical reasons. To these factors was added the low production of wind power plants this year due to low wind weather. The vision of continuing supply difficulties and the risk of a harsh winter represent a mix that has further driven up energy prices.

Trends in the price of emission allowances (EUR/MT)



Electricity price trends (EUR/MWh)



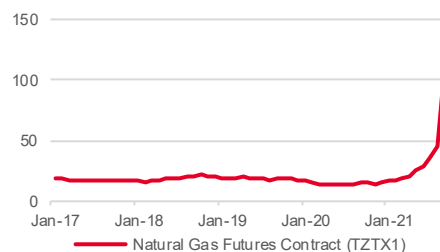
Source: Economic and Strategy Research, Komerční banka, Bloomberg

For the storm on the energy market to be truly perfect, we can even observe a strong rise in the price of the commodity needed for nuclear energy. Coincidentally, the price of uranium, which is not directly related to the above commodities, has also risen, from levels below USD30/lb to above USD45/lb. Given the delay in the translation of uranium prices to energy

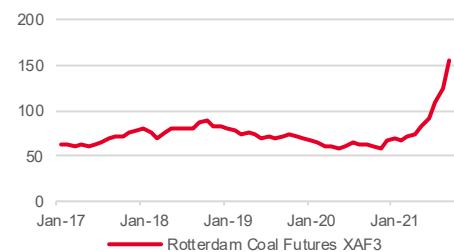
prices, no impact can be expected under this heading in the next two years; however, beyond three years, this factor also points in favour of higher prices.

What can be expected going forward? The outlook is highly uncertain given the current price volatility. Should high gas prices continue, electricity prices will remain higher. In addition, the cost of switching from coal to gas energy production would be too high, and therefore coal production would continue to an even greater extent. Gas emits about half as much CO₂ as coal, which implies pressure on the price of emission allowances. At the beginning of October, natural gas prices fell from EUR116/MWh to EUR85/MWh, with signs of a possible agreement on Nord Stream 2. The agreement on the launch of the gas pipeline on the northern route is an important influencing factor that has the potential to reduce gas prices in the coming months. In terms of price trends next year, the agreement has a significant chance of being signed. However, these negotiations can last several months, and the winter period is ahead of us and gas demand can easily beat estimates if temperatures are below average. Demand from Asian countries is also unlikely to ease in the short term. We expect the market price of gas to decrease to EUR70/MWh in the first quarter and to fall further to EUR40/MWh next year, i.e. at a still historically above-average level.

Gas price trends (EUR/MWh)



Coal price trends (USD/MT)



Source: Economic and Strategy Research, Komerční banka, Bloomberg

With this scenario of global electricity prices, we also expect to see an increase in prices for consumers in the Czech Republic. The impact should be gradual and partial for several reasons. Firstly, the final price is slightly more than half the market price, and secondly the increase in distribution cost should be relatively low. Another factor dampening the growth of energy prices is the fixing of prices for some customers. In the case of the largest electricity supplier, ČEZ, the share of households with a fixed price is about one half. This would cause a lag in the price increase depending on electricity price trends in the coming years. However, prices should vary significantly from one supplier to another. CEZ has already announced that it expects electricity prices to rise by around 30% from January and by as much as two-thirds in the case of gas. Pražská plynárenská announced that it would increase the price of gas for some customers by an average of 25% starting in November. Customers whose energy supplier has gone bankrupt, such as Bohemia Energy with 900,000 clients, should experience a sharp rise in prices. With regard to the bankruptcies of other smaller companies, the number of such affected customers should total over 1m, and customers will be gradually forced to switch to another supplier from October or to stay with the so-called supplier of last resort for a limited time. Here, however, the current market price of electricity and possibly transition fees will apply, which will mean an increase in energy costs in the tens to hundreds of percent. In response to the sharp rise in energy prices, which could hit both households and businesses hard, European countries have implemented various forms of relief. In the case of the Czech Republic, we expect a 10% reduction in energy VAT from December. In October, however, the government announced that it would waive VAT collection in November and December 2021 and is discussing further steps. We continue to anticipate that a reduced VAT rate will apply to energy for next year through the end of the year. **On average in this scenario, we expect electricity prices to increase by less than 18%, and in the case of**

gas, by 21% by the end of 2022. Following gas prices, heat prices would also rise to a similar extent. Under our scenario, the contribution of regulated prices to the increase in year-on-year inflation would be 1.2pp from October to the end of 2022, while without the assumed use of a lower VAT rate, the contribution would amount to approximately 1.8pp.

Risks: component shortfall is the chief concern

The current statistics show that infections are rising sharply again. However, we believe that with the vaccination of a significant part of the population (57%) or natural immunization, the risks of a further negative impact on the economy from COVID are significantly reduced. The main risks we see include:

- **Problems in supply chains.** We assume that, over the course of 2022, the problems in the supply of components and materials for production will ease but that this will only be more definitive by the middle of the year. Any further deterioration in or delay to this development would negatively affect the outlook for the economy and could lead to higher price pressures and possibly have a negative impact on the Czech koruna.
- **Other waves of pandemics and mutations.** In our baseline scenario, we do not anticipate the re-closure of various sectors of the economy. However, given the existing and potential mutations in COVID-19, the risk of such a development is still significant and could substantially limit economic growth. Further waves of the pandemic could also require a loosening of monetary policy, or at least to tighten it less, as well as greater fiscal expansion.
- **Capital outflows from emerging markets.** The period of withdrawal from the US Fed's highly relaxed monetary policy may bring significant changes in global capital flows and contribute to higher volatility in foreign exchange markets. This could also affect the exchange rate of the Czech koruna, with an impact on interest rates and inflation.
- **Price development after the pandemic.** We continue to assume that the current global inflation wave is to some extent transient. The risk for both global and domestic price developments would be that this wave persists longer – in turn, monetary policy would likely respond by raising interest rates faster.

Key economic indicators

| | Q1 21 | Q2 21 | Q3 21 | Q4 21 | Q1 22 | Q2 22 | Q3 22 | Q4 22 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 |
|--|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|------|------|------|
| GDP and its breakdown | | | | | | | | | | | | | | |
| GDP (real, yoy) | -2.5 | 8.1 | 1.2 | 1.1 | 2.4 | 2.6 | 4.1 | 4.9 | -5.8 | 1.9 | 3.5 | 4.0 | 2.5 | 2.2 |
| Household consumption (real, yoy) | -6.6 | 7.4 | 2.5 | 8.3 | 9.7 | 3.6 | 3.0 | 2.6 | -7.1 | 2.7 | 4.6 | 2.2 | 2.1 | 2.3 |
| Government consumption (real, yoy) | 3.6 | 3.1 | 2.7 | -0.6 | -0.1 | -0.3 | 0.0 | 0.3 | 3.4 | 2.2 | 0.0 | 0.8 | 1.5 | 2.1 |
| Fixed investments (real, yoy) | -4.3 | 1.5 | 4.7 | 6.5 | 7.0 | 4.7 | 6.0 | 6.9 | -7.2 | 2.0 | 6.1 | 4.8 | 3.6 | 4.2 |
| Net exports (contribution to yoy) | -0.9 | 0.0 | -6.0 | -8.3 | -3.4 | 0.7 | 2.3 | 4.0 | -0.5 | -3.8 | -0.6 | 3.4 | 0.3 | 0.0 |
| Inventories (contribution to yoy) | 1.7 | 3.2 | 3.8 | 3.9 | 0.1 | -0.3 | -0.8 | -1.8 | -0.8 | 3.1 | 0.3 | -1.2 | 0.0 | -0.1 |
| Monthly data from the real economy | | | | | | | | | | | | | | |
| Foreign trade (CZK bn) | 65 | 16 | -12 | -6 | 18 | 2 | -1 | 4 | 180 | 63 | 23 | 125 | 133 | 133 |
| Exports (nominal, yoy) | 11.2 | 40.8 | 11.2 | -1.6 | -1.2 | -1.2 | 0.1 | 6.6 | -5.7 | 13.7 | 1.0 | 5.1 | 3.6 | 2.5 |
| Imports (nominal, yoy) | 8.2 | 40.4 | 20.2 | 7.6 | 3.9 | 0.2 | -1.0 | 5.5 | -6.9 | 18.0 | 2.1 | 2.5 | 3.5 | 2.6 |
| Industrial production (real, yoy) | 3.2 | 29.9 | 0.4 | 0.3 | 2.8 | 3.0 | 5.7 | 6.4 | -7.1 | 8.5 | 4.4 | 4.1 | 2.7 | 2.3 |
| Construction output (real, yoy) | -5.6 | 3.4 | 0.7 | 2.7 | -2.1 | 6.6 | 10.3 | 12.1 | -5.1 | 0.3 | 9.1 | 8.8 | 5.0 | 2.7 |
| Retail sales (real, yoy) | -1.7 | 7.9 | 3.9 | 8.6 | 11.3 | 3.1 | 2.6 | 2.5 | -0.6 | 4.7 | 4.9 | 3.7 | 4.1 | 3.2 |
| Labour market | | | | | | | | | | | | | | |
| Wages (nominal, yoy) | 3.3 | 11.3 | 4.7 | 3.6 | 4.0 | 3.8 | 4.3 | 5.1 | 3.1 | 5.7 | 4.3 | 5.3 | 5.5 | 5.6 |
| Wages (real, yoy) | 1.1 | 8.2 | 0.6 | -1.4 | -1.7 | -2.0 | 0.0 | 1.6 | 0.0 | 2.1 | -0.5 | 2.4 | 3.7 | 3.6 |
| Unemployment rate (MLSA) | 4.2 | 3.7 | 3.5 | 3.8 | 3.8 | 3.3 | 3.4 | 3.4 | 3.6 | 3.8 | 3.5 | 3.0 | 2.8 | 3.0 |
| Unemployment rate (ILO 15+) | 3.3 | 3.0 | 3.1 | 3.0 | 3.1 | 2.8 | 3.0 | 2.6 | 2.6 | 3.1 | 2.9 | 2.4 | 2.2 | 2.4 |
| Employment (ILO 15+, yoy) | -1.4 | -0.9 | -0.8 | 0.7 | 1.0 | 1.1 | 1.4 | 0.4 | -1.3 | -0.6 | 1.0 | 0.6 | 0.2 | -0.2 |
| Consumer and producer prices | | | | | | | | | | | | | | |
| CPI Inflation (yoy) | 2.2 | 2.9 | 4.1 | 5.1 | 5.8 | 5.9 | 4.2 | 3.5 | 3.2 | 3.6 | 4.8 | 2.8 | 1.7 | 2.0 |
| Taxes (contribution to yoy inflation) | 0.0 | 0.2 | 0.2 | -0.8 | -0.3 | -0.2 | -0.2 | 0.8 | 0.0 | -0.1 | 0.0 | 1.2 | 0.1 | 0.0 |
| Core inflation (yoy) (*) | 3.3 | 3.3 | 4.8 | 5.7 | 6.0 | 6.1 | 4.5 | 3.3 | 3.4 | 4.3 | 5.0 | 2.1 | 2.0 | 2.2 |
| Food prices (yoy) (*) | 0.3 | -0.8 | 1.4 | 2.4 | 2.4 | 3.1 | 1.6 | 1.5 | 4.5 | 0.8 | 2.1 | 0.6 | 0.7 | 1.4 |
| Fuel prices (yoy) (*) | -7.2 | 19.5 | 19.4 | 20.0 | 16.1 | 7.7 | 2.9 | 1.7 | -11.4 | 12.9 | 7.1 | 0.0 | 0.2 | 0.0 |
| Regulated prices (yoy) (*) | 0.2 | 0.1 | 0.3 | 8.5 | 10.3 | 10.6 | 10.1 | 3.0 | 3.2 | 2.2 | 8.5 | 1.6 | 2.3 | 2.6 |
| Producer prices (yoy) | 1.5 | 5.3 | 9.0 | 10.1 | 9.1 | 6.7 | 3.6 | 2.4 | 0.1 | 6.5 | 5.4 | 1.4 | 1.6 | 1.9 |
| Financial variables | | | | | | | | | | | | | | |
| 2W Repo (% , average) | 0.3 | 0.3 | 0.7 | 1.8 | 2.6 | 3.0 | 3.0 | 3.0 | 0.8 | 0.8 | 2.9 | 2.6 | 2.5 | 2.5 |
| 3M PRIBOR (% , average) | 0.4 | 0.4 | 1.0 | 2.2 | 2.9 | 3.2 | 3.2 | 3.2 | 0.9 | 1.0 | 3.0 | 2.7 | 2.7 | 2.7 |
| EUR/CZK (average) | 26.1 | 25.6 | 25.5 | 25.2 | 25.0 | 24.9 | 24.8 | 24.8 | 26.5 | 25.6 | 24.9 | 24.4 | 24.0 | 23.6 |
| External environment | | | | | | | | | | | | | | |
| GDP in EMU (real, yoy) | -1.2 | 14.3 | 3.4 | 5.0 | 6.1 | 4.4 | 3.1 | 2.4 | -6.5 | 5.0 | 4.0 | 2.0 | 1.7 | 1.5 |
| GDP in Germany (real, yoy) | -3.1 | 9.4 | 1.9 | 2.0 | 5.4 | 4.8 | 3.8 | 3.6 | -4.9 | 2.6 | 4.4 | 2.1 | 1.6 | 1.4 |
| CPI in EMU (real, yoy) | 1.1 | 1.8 | 2.7 | 3.0 | 1.9 | 1.8 | 1.2 | 1.3 | 0.3 | 2.2 | 1.6 | 1.3 | 1.4 | 1.5 |
| Brent oil price (USD/bbl, average) | 60.9 | 66.8 | 74.8 | 79.0 | 75.0 | 73.0 | 73.0 | 73.0 | 42.4 | 70.4 | 73.5 | 75.3 | 77.0 | 78.1 |
| EURIBOR 1Y (% , average) | -0.5 | -0.5 | -0.5 | -0.4 | -0.4 | -0.3 | -0.2 | -0.1 | -0.3 | -0.5 | -0.3 | 0.2 | 0.7 | 0.9 |
| EUR/USD (quarter eop, year average) | 1.20 | 1.20 | 1.18 | 1.18 | 1.16 | 1.14 | 1.12 | 1.14 | 1.14 | 1.19 | 1.14 | 1.18 | 1.22 | 1.24 |

Source: CZSO, MLSA, Bloomberg, Macrobond, Economic & Strategy Research, Komerční banka
 Note: (*) these parts of inflation are adjusted for the primary effect of indirect tax changes

CNB Focus



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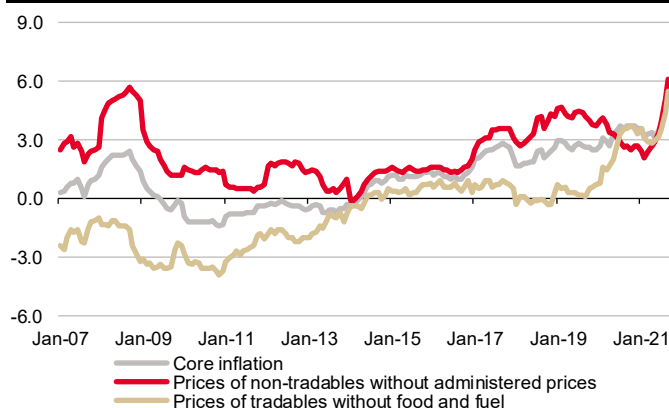
Central bank to accelerate pace of policy tightening

The CNB is likely to continue raising interest rates rapidly. At the next meeting in November, we expect the key repo rate to be increased by another 50bp, but an even higher rate hike is the risk. The central bank is likely to focus on fighting inflation, which we forecast to peak at 6%. However, the crisis in the car production industry and the renewed spread of coronavirus might hinder the rising interest rates. In spite of this, we expect them to increase to 3% in 1Q22. With an easing of strong inflationary pressures, our forecast envisages a gradual reduction of the repo rate to 2.5% over 1H23.

The CNB significantly accelerated its monetary policy tightening in September, surprisingly raising the repo rate by 75bp. It reacted to inflation well above the 2% target and to the related increase in inflation expectations.

At the September meeting, the Czech National Bank (CNB) raised interest rates by a significant 75bp, beating the market consensus of 50bp. The key repo rate thus increased to 1.5%, vs only 0.25% at the beginning of June. In contrast to the two previous rate hikes of the standard 25bp, the central bank significantly accelerated the pace of monetary policy tightening. The reason was inflation, which has surprised with a rapid rise of 2pp in the last three months and reached 4.9% yoy in September. This is the highest level since October 2008. In its August forecast, the CNB expected September inflation at 3.2%. Even more alarming is the core inflation, adjusted for food, energy and administered prices, which climbed to 5.8% yoy in September – the historical high of the time series that began in 2007.

Core inflation rose to a record 5.8 in September, with prices of both services and goods rising rapidly (% yoy)



Source: CZSO, CNB, Economic & Strategy Research, Komerční banka

In the last two quarters, firms' inflation expectations have risen above the upper limit of the CNB's tolerance band (% yoy)



Source: CNB, Economic & Strategy Research, Komerční banka

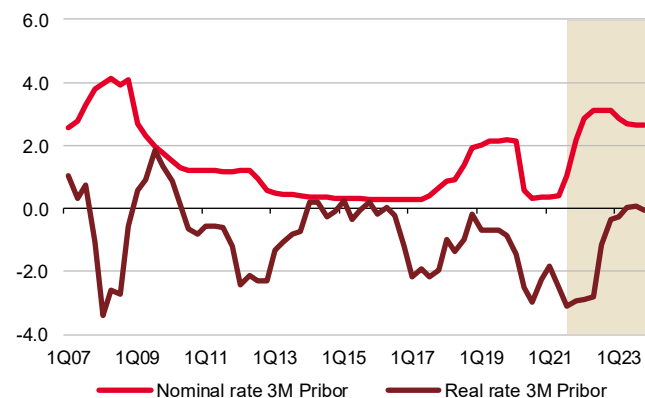
The rapid rise in consumer prices is widespread in the Czech economy and is beginning to have a negative effect on inflation expectations and cause fears of a deteriorating financial situation among households and firms. The fact that current inflation is not only driven by a limited number of items in the consumer basket directly related to persistent problems in supply chains is evidenced by the structure of core inflation. Within this, the prices of non-tradables (mostly services) showed growth of 6.1% yoy in September. While 72% of these prices grew month on month, 33% of them printed a 1% or higher mom increase. In the previous months, non-tradable price increases were similarly broad-based. However, prices of tradables did not lag significantly behind, with September growth of 5.5% yoy. More than the level of current inflation, the CNB is concerned with an increase in inflation expectations. The latest (September) central bank survey of company managers shows that they expect inflation of 3.4% yoy at the one-year horizon and 3.6% yoy at the three-year horizon. This is well above the CNB's 2% target, and even above the 3% upper limit of its tolerance band. The steadily growing trend of these expectations is also unfavourable.

Moreover, the CZSO survey shows that consumers are also worried about rising prices, which is reflected in their decreasing confidence in the economy, which reached a six-month low in October.

According to our forecast, CNB interest rates will continue to rise rapidly, reaching 3% in 1Q22. Inflation should peak at 6% yoy in 1H22.

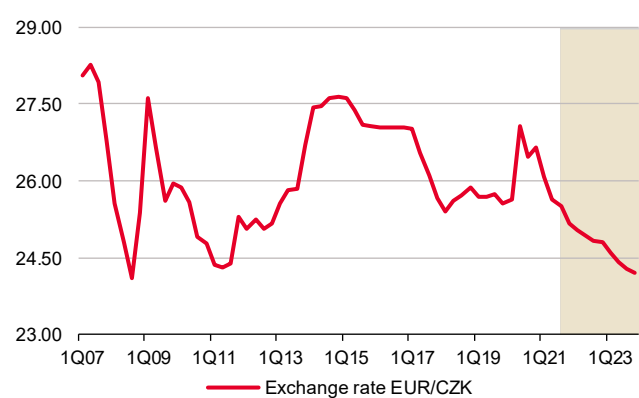
The economy is likely to be stagnant for the rest of the year, but the CNB should prioritise fighting inflation. The economic outlook for 2H21 deteriorated mainly due to persistent supply-side bottlenecks in the car production industry, an important component of the Czech economy. Many car producers have had to reduce or stop production. We have therefore significantly reduced our forecast for full-year GDP growth this year from 4.2% to 1.9%. The CNB August forecast was for 3.5%, but it is also likely to be revised down in November. The widening gap between demand for and supply of cars is likely to push prices up further, not only for new cars but also for used ones. The crisis in car production will thus continue to be pro-inflationary. The CNB, with its clear mandate for price stability in the law, is therefore likely to continue raising interest rates. In our view, inflation has not yet said its last word and should be rising further. We expect it to reach a peak in 2Q22, at an average of 5.9% yoy. In addition, interest rates are still about halfway to their policy-neutral level, which, according to the central bank, is between 2.5% and 3%. Due to high inflation, real rates will remain negative at least until the end of 2022. The CNB's rate decision can also be affected by the fact that the Czech government has approved financial support for car producers in the form of compensation for part of wage costs.

In our view, interest rates will reach 3% at the beginning of 2022, but in real terms they will remain negative (%)



Source: CNB, Economic & Strategy Research, Komerční banka

We expect the strengthening of the Czech koruna to resume, bringing its rate below EUR/CZK25 in the next year



Source: CNB, Economic & Strategy Research, Komerční banka

According to our forecast, the key two-week repo rate is likely to rise to 2.25% by end-2021 and should reach 3% in 1Q22. We thus expect the CNB to continue tightening monetary policy at a rapid pace. At the next meeting in November, we expect a 50bp hike in interest rates, but an even more significant increase is the risk. An interrupted strengthening of the Czech koruna might favour a more-than-50bp hike. We are for 50bp due to the increased uncertainty associated with the downturn in the car production industry and the renewed spread of the virus. In December, we believe the repo rate will increase by the standard 25bp. At the end of the year, the financial markets are dominated by lower liquidity, and because the bank's meeting is brought forward due to the Christmas holidays, the board will not have the usual set of information on economic developments. In February, however, we again expect an increase of 50bp. At the beginning of next year, the rise in energy prices will be fully reflected in inflation, and the usual January effect of resetting prices of a large number of goods and services may also be more pronounced. According to our forecast, the central bank will complete the cycle of raising interest rates in March, when we expect a 25bp hike. However, given the dynamic development of inflation in recent months, we cannot rule out that interest rates will eventually go above 3%. In 1H23, on the other hand, our forecast

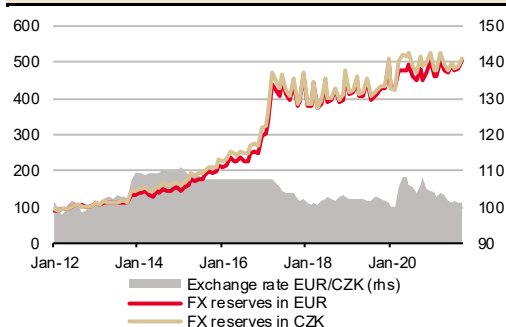
includes a gradual decline in the repo rate to 2.5%, due to the expected easing of strong inflationary pressures. The lower interest rates in 2023 may also be affected by the development of fiscal policy, as the winners of the Czech parliamentary elections have declared their determination to consolidate public finances more quickly than the current plan of the Ministry of Finance. However, no significant changes to the current nature of loose fiscal policy can be expected for the next year.

Box 3: The CNB’s high level of FX reserves and the possible impact on the koruna

The FX reserves of the Czech National Bank (CNB) increased significantly during the period of its exchange rate commitment from November 2013 to April 2017. The central bank artificially weakened the koruna by buying euros, not allowing the exchange rate to go below EUR/CZK27. The reason for this was strong disinflationary trends, and even the threat of deflation, amid an economic downturn that the CNB could no longer fight by the standard method of reducing policy interest rates. The key repo rate reached technical zero (0.05%) at the end of 2012, and so an unconventional instrument, FX intervention, was next in line.

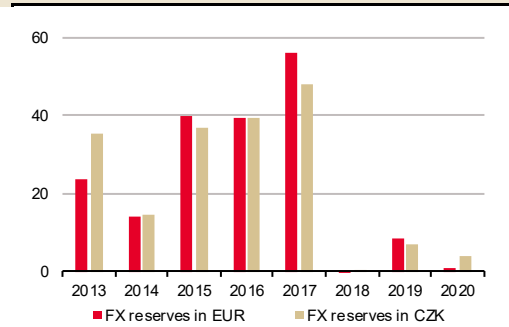
After the koruna initially weakened by about 5%, the CNB was largely satisfied with a verbal commitment only, but from about mid-2015 it was forced to re-enter the FX market more actively and intervene against the strengthening of the koruna. This is reflected in the graphs on FX reserve changes below. They show the reserves in so-called convertible currencies, i.e. without reserves at the IMF, gold reserves and other marginal items (assets denominated in euros dominate the central bank’s balance sheet). In September, convertible currencies made up about 90% of total FX reserves. While FX reserves in euros grew by close to 20% yoy in 2013 and 2014 (the +30% growth of reserves in korunas in 2013 was due to financial markets’ strong reaction to the CNB’s exchange rate commitment), growth accelerated to 40% in 2015 and 2016 and even topped 50% in 2017. The significant increase in FX purchasing by the central bank at the beginning of 2017 was due to financial market speculation on the end of the exchange rate commitment. The volume of FX reserves in convertible currencies quadrupled over the period of the exchange rate commitment.

FX reserves are now about five times the 2012 level (average 2012 = 100)



Source: CNB, Economic & Strategy Research, Komerční banka

FX reserves grew fastest over 2015-2017 (year-end values, %, yoy)

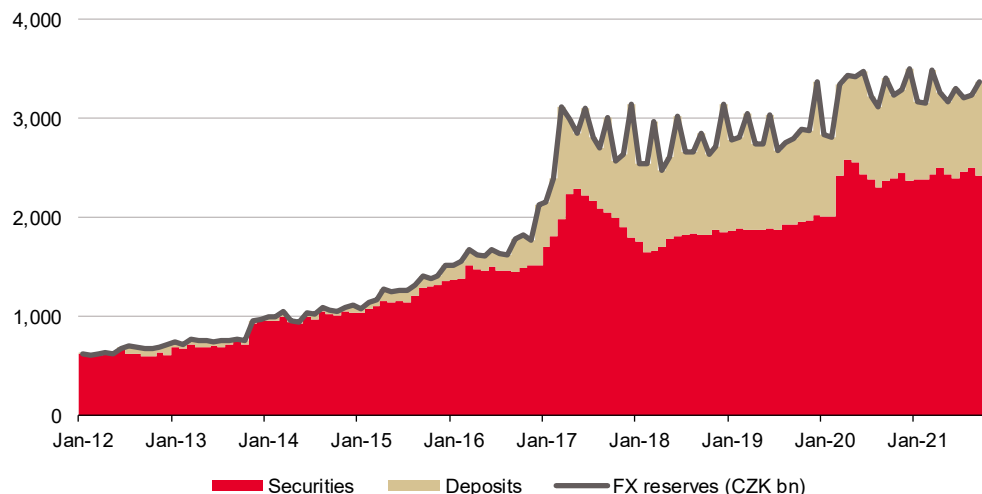


Source: CNB, Economic & Strategy Research, Komerční banka

As the strongest effects of the pandemic subside, the CNB has decided after nine years to resume selling off part of the return from FX reserves beginning in January 2022. The central bank used to have a programme for selling FX reserves but terminated it before the exchange rate commitment started. Its main purpose was to slow the growth of reserves due to the yields they generated. The reserves are still increasing, even in the absence of intervention in the FX market. In 2019 and 2020, they increased by a total c.10%. According to the latest data, they had climbed to c. CZK3.4tn (almost 60% of nominal Czech GDP in 2020) in September, five times higher than 2012 levels. The main reason is capital gains and income

in the form of dividends and coupons from financial assets held by the central bank. Since October 2017, the CNB has divided FX reserves into two parts: liquidity and investment tranches. Funds in the liquidity tranche are for standard monetary policy purposes – primarily exchange rate adjustments or to cover any shortage of FX in the Czech Republic. They include short-term money market instruments, more than half of which are foreign currency deposits in foreign central banks. With the investment tranche, the central bank invests in the capital markets, especially government bonds and partly stock indices, in order to try to realise a profit. At the end of 2020, the market value of the liquidity tranche represented 36% of total FX reserves, with the rest coming from the investment tranche. The share of the investment tranche has increased since October 2017, when the ratio was 1:1. In terms of returns, the liquidity tranche had an average yield of -0.33% in 2020, when 80% of it was allocated to the euro money market. The investment tranche, on the other hand, saw an average return of 4.79% amid capital gains from bond and equity portfolios – shares accounted for 20% of the investment tranche, the rest were bonds. However, FX reserves are also generated as a result of the currency conversion of EU funds, which the CNB carries out for the Czech state. In this respect, a significant contribution can be expected in the coming years.

The increase in the value of the CNB’s FX reserves in the last two years or so is related to capital gains from bond and equity portfolios (CZK bn)



Source: CNB, Economic & Strategy Research, Komerční banka

In relation to selling part of the reserves, only the return from holdings of foreign assets is currently being discussed, as in the past. Total FX reserves in convertible currencies amounted to CZK3.5tn at end-2020, with a 64% share of the investment tranche. The average yield of bonds and equities in the investment tranche was 4.79% in 2020, amounting to c.CZK100bn. This is relatively low compared to the value of trades on the koruna market. The daily volume of trades on the koruna spot market alone ranges from EUR300m to EUR700m, which at the current exchange rate of close to EUR/CZK25.40 equates to CZK7.6bn to CZK17.8bn. In addition, last year’s yield of CZK100bn includes both capital gains and income from coupons and dividends – separate data for each type of return are not available. If the central bank sold only the return from coupons and dividends, the impact on the koruna market would be significantly less than CZK100bn. Capital gains from the bond portfolio, in particular, contributed to the central bank’s accounting profit of CZK91.7bn last year. This served to cover part of the accumulated loss from previous years, which thus decreased to -CZK37.5bn.

Reducing the CNB’s high and growing FX reserves may contribute to a faster strengthening of the koruna in the coming years, but there are a number of questions

outstanding. The central bank would probably not want to use the exchange rate as a tool for tightening monetary policy, although amid the current high imported inflation, it may not be completely out of the question from a technical point of view. FX reserves are likely to be reduced only very gradually to avoid significant fluctuations in the exchange rate. There is also the question of whether the central bank might want to fully offset the above-mentioned losses from previous years, which would lower the sales of FX reserves. Finally, due to rising market interest rates and the significant allocation of the investment tranche to bonds, the gains from holding these assets are likely to decrease significantly. There will also be a decrease in koruna terms due to renewed strengthening of the koruna. At the same time, we do not think the CNB would want to sell the returns from previous years, as these have likely been reinvested in the financial markets. Thus, although some pressure on the stronger koruna due to the sale of the CNB's FX reserves may occur, this impact is unlikely to be strong. On the other hand, the psychological effect of the central bank's presence on the FX market could make the impact slightly stronger.

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Czech IRS market and government bonds



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The peak is slowly but surely coming

Market rates have experienced a meteoric rise over the past few months and have easily surpassed their pre-COVID highs. In our view, the short end of the curve still has room to grow. However, we see the main potential at the longer end. The market significantly underestimates the normalisation of monetary policy in longterm, in turn overestimating the central bank's willingness to cut rates again so quickly. Hedging conditions have deteriorated significantly as rates have risen. At least the inversion of the entire curve offers an opportunity. Government bonds have become significantly richer relative to the IRS due to low supply and persistently strong demand. Supply will remain scarce through the end of the year and will not return to the market until early next year. However, overall borrowing needs will be significantly lower next year compared to this year.

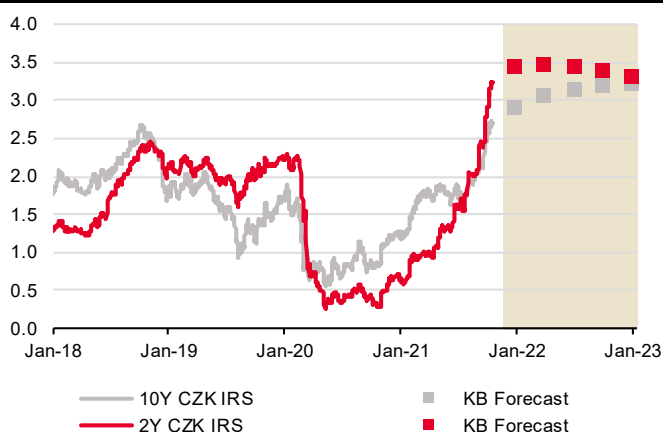
With its aggressive monetary policy, the CNB has shot the IRS curve well above the pre-COVID highs. We expect rates to rise further, especially at the longer end of the curve. The inversion of the curve will persist at least through next year until the first CNB rate cut.

The Czech IRS rate market: leapfrogging the pre-COVID highs

Market interest rates sky-rocketed in the third quarter. The surprising acceleration in inflation and the central bank's reaction catapulted market expectations for the next monetary policy move well above the pre-COVID highs. The short end of the curve has jumped 140-200bps since the beginning of July, while the long end has 'only' rose by 75-100bps. Contrary to our expectations, the entire curve has thus inverted even further and is currently at a new record negative slope and near pre-COVID levels.

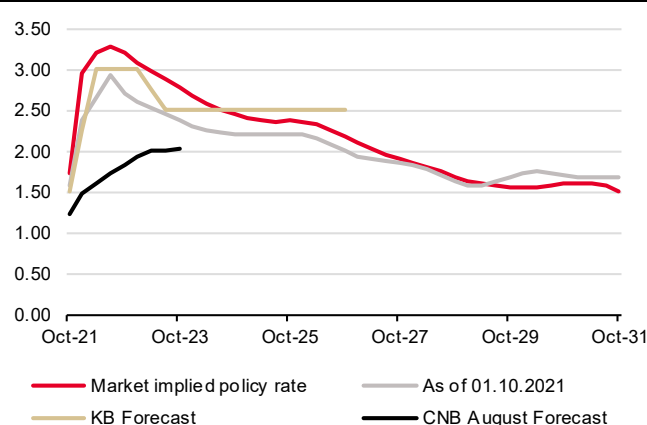
Financial markets are currently expecting CNB hikes to the two-week repo rate to peak at 3.25% in the 6-9 month horizon. Subsequently, rates are expected to move down from their peaks very quickly. We should see the first rate cut as soon as early 2023, followed by a sharp easing of monetary conditions, according to current expectations. Compared to the market, we thus see a similar trajectory for the CNB key rate, including its peak next year. However, we do not expect such a sharp cut in central bank rates in the longer term.

IRS forecast (%)



Source: Bloomberg, Economic and Strategy Research, Komerční banka

Expected CNB key interest rate path



Source: Bloomberg, Economic and Strategy Research, Komerční banka

For the coming months, we expect financial markets to overshoot their expectations for the terminal CNB key rate, thanks to strong hawkish communication from central bankers and the tone of the new forecast. Therefore, despite the record high levels of the short end, we still see room for further upside. However, we see the main potential in longer maturities beyond the horizon of the CNB's peak interest rate hike. In our view, the longer end of the curve still underestimates the normalisation of monetary policy and, in turn, overestimates the willingness of central bankers to cut interest rates again so quickly. We see no reason for such a scenario in the economy at present.

On the other hand, given the CNB's surprisingly aggressive policy and, in contrast, the slower rise in dollar and euro rates compared to our previous forecast, **we have had to reassess our expectations of a return of the curve from an inverted to an increasing shape**. We now expect the curve to maintain an inverted shape for at least the whole of next year. However, it should be helped to normalise by the CNB's interest rate cut signal, which would also bring a fall in the shorter end of the curve at the end of next year.

CZK IRS outlook (end of period, %)

| | 4Q21f | 1Q22f | 2Q22f | 3Q22f | 4Q22f |
|-----|-------|-------|-------|-------|-------|
| 2Y | 3.45 | 3.45 | 3.45 | 3.40 | 3.30 |
| 5Y | 3.25 | 3.35 | 3.40 | 3.35 | 3.35 |
| 10Y | 2.90 | 3.05 | 3.15 | 3.20 | 3.25 |

Source: Economic & Strategy Research, Komerční banka

Deepening of the curve inversion as an opportunity for hedging

Given the significant rise in the IRS curve over the past few months, interest rate risk hedging conditions have deteriorated markedly and for now we see little scope for a significant decline from current levels. However, **the first opportunity could be the November CNB meeting, which could disappoint financial market expectations**. Should the central bank decide to raise the base rate by 'only' 50bps, as our forecast envisages, it would be a disappointment for the markets. We would likely see a short-term fall in market rates from current highs, which could be used to reach better levels for hedging. In addition, the inversion of the entire IRS curve has deepened significantly since our last forecast, which improves conditions in the forward market. Using forward starting IRS allows one to benefit from an inverted curve, and by shifting the start of hedging, one can avoid aggressive pricing at super-short maturities.

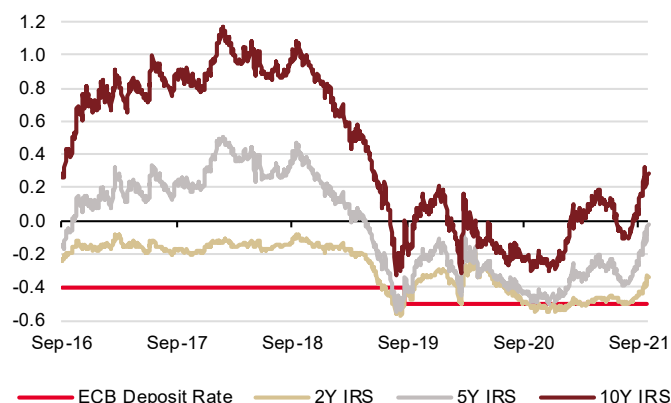
The EUR market offers significantly better conditions for hedging interest rate risk. This is only the beginning of the story that the CZK market has been telling this year. However, in recent weeks, rates here have also started to move and are already reaching new highs in longer maturities. The financial markets are currently expecting the euribor to return to positive territory as early as the turn of 2023 and 2024. Moreover, we expect euro IRS to rise further as the ECB's announcement of the end of its financial asset purchases under the anti-pandemic programme draws near. See more on our forecast in the *External Environment* section. Thus, conditions for hedging interest rate risk will deteriorate further in the coming months.

Forward interest rate swaps (% p.a., vs 6M PRIBOR)

| | | Maturity | | | | | | |
|---------|------|----------|------|------|------|------|------|------|
| | | 6M | 1Y | 18M | 2Y | 3Y | 5Y | 10Y |
| Forward | Spot | 2.68 | 3.14 | 3.15 | 3.25 | 3.20 | 3.07 | 2.72 |
| | 3M | 3.39 | 3.49 | 3.49 | 3.45 | 3.32 | 3.13 | 2.74 |
| | 6M | 3.55 | 3.55 | 3.53 | 3.43 | 3.29 | 3.10 | 2.71 |
| | 9M | 3.53 | 3.54 | 3.45 | 3.37 | 3.24 | 3.05 | 2.68 |
| | 1Y | 3.49 | 3.52 | 3.37 | 3.31 | 3.18 | 3.00 | 2.64 |
| | 18M | 3.49 | 3.31 | 3.23 | 3.16 | 3.06 | 2.89 | 2.57 |
| | 2Y | 3.07 | 3.10 | 3.03 | 3.01 | 2.93 | 2.78 | 2.50 |
| | 3Y | 2.90 | 2.92 | 2.86 | 2.84 | 2.78 | 2.60 | 2.43 |

Source: Bloomberg, Economic & Strategy Research, Komerční banka, as of 22/10/2021

Euro rates are bottoming out (%)



Source: Bloomberg, Economic & Strategy Research, Komerční banka

CZGB supply will remain very low until the end of the year

The supply of government bonds will be limited for the rest of the year, which will hamper yield growth driven by the IRS curve.

The better-than-expected state budget has allowed CZGB supply to be pushed to almost zero in recent months, in line with our forecast, resulting in slower yield growth and an CZGB richening in ASW terms. This has also been supported by higher drawdowns on the budget

reserve and money market funding compared to our previous forecast. We expect very low supply for the rest of the year. According to our calculations, the Ministry of Finance has already covered all this year's maturities of government bonds, T-bills and other liabilities, and thus only the outcome of the state budget will determine the supply in the rest of the year. **We continue to assume a deficit of CZK400bn this year (see more in the *Fiscal Policy* chapter), which would imply an additional financing need of CZK56.8bn.** In our view, only three additional CZGB auctions of around CZK15bn each and one T-bill auction maturing over the end of the year could be sufficient for this purpose. Moreover, we see a real risk that the state budget deficit could be even a few billion lower, which would further reduce the additional supply of CZGBs.

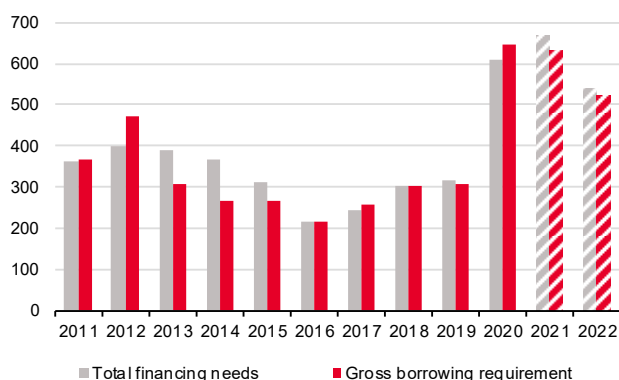
Funding programme and issuance activity (CZKbn)

| | 2022 | |
|--|--------------|--------------|
| | MinFin | KB |
| State budget deficit | 390.0 | 300.0 |
| Transfers and other operations of state financial assets | 0.0 | 0.0 |
| T-Bonds denominated in local currency redemptions | 165.8 | 155.9 |
| T-Bonds denominated in foreign currency redemptions | 74.3 | 70.2 |
| Redemptions and early redemptions on savings bonds | 0.0 | 0.0 |
| Money market instruments redemptions | 0.0 | 10.0 |
| Redemption of T-bills | | 10.0 |
| Redemption of other money market instruments | | 0.0 |
| Repayments on credits and loans | 3.2 | 3.2 |
| Total financing needs | 633.3 | 539.3 |
| Money market instruments | | 27.1 |
| T-bills | | 10.0 |
| Other money market instruments | | 17.1 |
| Gross issuance of CZK T-bonds on domestic market | | 411.4 |
| Gross issuance of EUR T-bonds on domestic market | | 70.2 |
| Gross issuance of T-bonds on foreign market | | 0.0 |
| Gross issuance of savings government bonds | | 10.0 |
| Received credits and loans | | 3.2 |
| Financial asset and liquidity management | | 17.4 |
| Total financing sources | | 539.3 |
| Gross borrowing requirement | | 521.9 |
| Net CZGB issuance | | 255.5 |

Source: Economic and Strategy Research, Komerční banka, MinFin

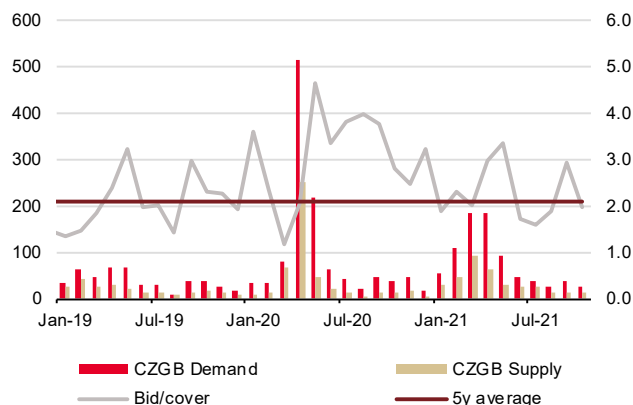
We expect the Ministry of Finance to remain active in the secondary market for the rest of the year, and to reduce borrowing needs for 2022 and 2023 by a few billion more through switch operations. For now, however, we expect the financing needs for next year to reach CZK539.3bn (8.8% of GDP), which would be a significant drop from this year's CZK668.4bn (11.0% of GDP). However, a seasonal increase in primary auctions should return early in the new year, which should ease the pressure on CZGB in ASW terms.

Financing needs (CZKbn)



Source: Economic and Strategy Research, Komerční banka, Bloomberg

CZGB primary market (CZKbn)



Source: Economic and Strategy Research, Komerční banka, Bloomberg

CZGB yield forecast (end of period)

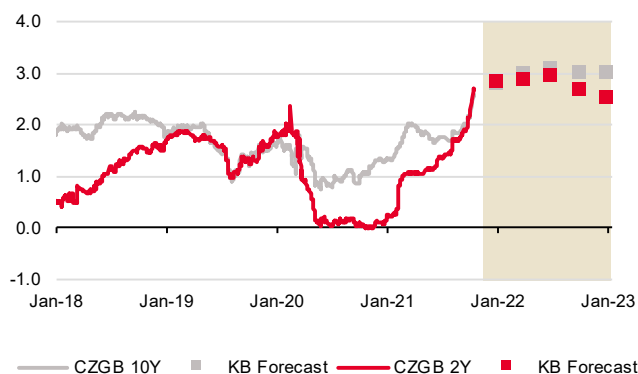
| | 4Q21f | 1Q22f | 2Q22f | 3Q22f | 4Q22f |
|--------------------|-------|-------|-------|-------|-------|
| 2y CZGB yield (%) | 2.85 | 2.90 | 2.95 | 2.70 | 2.55 |
| 5y CZGB yield (%) | 2.80 | 2.85 | 2.95 | 2.80 | 2.75 |
| 10y CZGB yield (%) | 2.80 | 3.00 | 3.10 | 3.05 | 3.05 |
| 10y CZGB ASW (bp) | -12 | -8 | -8 | -15 | -18 |

Source: Economic & Strategy Research, Komerční banka

We expect CZGB yields to peak in the first half of next year

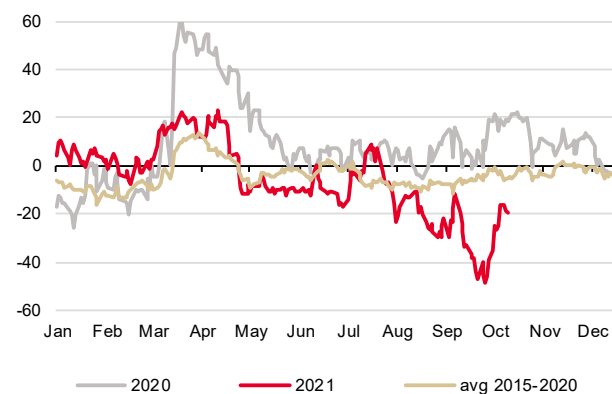
CZGB yields, like the IRS, have rocketed since the middle of this year. The shorter maturities are roughly in the 130-160bps range, while the long end of the curve is up about 85bps. However, due to very low supply of CZGBs and continued strong demand, the increase has not been as large as that of the IRS curve and CZGBs have become significantly richer in ASW terms. As a result, asset spreads reached multi-year lows in most maturities in mid-October. In recent days, the market has seen a partial easing, as CZGB yields have been catching up with the IRS curve. However, we expect ASW to tighten again in the coming weeks due to the low supply in primary auctions and, perhaps surprisingly to some, the final low state budget deficit. **CZGB yields will thus continue to rise at a slower pace than the IRS. By the middle of next year, we expect them to peak in both nominal and relative terms in asset spreads.** In the second half, we should then see the first signs of yields decreasing and CZGBs becoming richer due to the decline in the IRS and seasonally lower supply from the Ministry of Finance.

CZGB yield forecast (%)



Source: Economic and Strategy Research, Komerční banka, Bloomberg

10y CZGB ASW (bp)



Source: Economic and Strategy Research, Komerční banka, Bloomberg

GBI-EM has included three CZGBs and further changes cannot be ruled out

Since the beginning of the year, three CZGBs have been added to the GBI-EM index – CZGB 1.25% Feb-25, CZGB 1.75% Jun-32, and a few days ago, CZGB 1.50% Apr-40. As we expected, this has offset the underweighting of Czech government bonds in the index compared to peers in the region. On the other hand, further inclusion cannot be ruled out. **At the moment, however, the list of additional candidates has narrowed to only CZGB 0.00% Dec-24.** With the increase in issued volume, CZGB 1.95% Jul-37 will also qualify for inclusion, but the others do not meet the index criteria and, given the current composition, we see more chances for shorter maturities. On the other hand, the first bond to leave the index will be CZGB 4.7% Sep-22. We expect the announcement to occur in January or February 2022.

Sovereign rating overview

| | Local currency | Outlook | Foreign currency | Outlook | Next rating review |
|---------|----------------|---------|------------------|---------|--------------------|
| S&P | AA | STABLE | AA- | STABLE | 29-Oct |
| Moody's | Aa3 | STABLE | Aa3 | STABLE | |
| Fitch | AA- | STABLE | AA- | STABLE | 10-Dec |

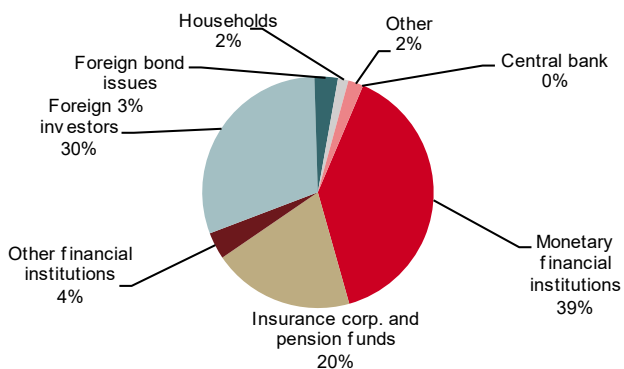
Source: Economic and Strategy Research, Komerční banka, Bloomberg

Government bond overview

| Government bond overview | | | | | | | | | | Rich-cheap analysis | | | | | | | | | |
|--------------------------|-------|-----------------|----------------|-------|-----|-----|-----------|-----|-----|---------------------|------|-----|-----|---------|------|---------------|------|----------------|------|
| Bond | Dur. | Issued last 90D | Issuance limit | Yield | Δ1W | Δ1M | FX hedged | ASW | Δ1W | Δ1M | Min | 90D | Max | Z-Score | Rank | Spline spread | Rank | Carry Roll 90D | Rank |
| 0.00 Feb-22 | 0.3 | 0.0 | 6% | 2.02 | 11 | 95 | -0.43 | -31 | 12 | 38 | -55 | | 5 | 0.5 | 2 | 10.7 | 19 | -28.2 | 20 |
| 0.10 Apr-22 | 0.5 | 0.0 | 100% | 2.20 | 20 | 95 | -0.64 | -49 | 6 | -22 | -65 | | -29 | -0.2 | 7 | -4.6 | 3 | 11.9 | 1 |
| 4.70 Sep-22 | 0.9 | 0.0 | 100% | 2.21 | 13 | 81 | -1.00 | -86 | 12 | 1 | -104 | | -65 | -0.3 | 12 | 2.2 | 12 | 6.1 | 4 |
| 0.45 Oct-23 | 1.9 | 0.0 | 80% | 2.54 | 24 | 78 | -0.69 | -74 | 6 | -9 | -92 | | -26 | -1.1 | 19 | -12.4 | 1 | 8.9 | 2 |
| 5.70 May-24 | 2.4 | 0.0 | 100% | 2.49 | 20 | 75 | -0.65 | -82 | 6 | -6 | -96 | | -40 | -1.1 | 20 | -0.9 | 8 | 6.4 | 3 |
| 0.00 Dec-24 | 3.1 | 0.0 | 34% | 2.51 | 24 | 69 | -0.48 | -67 | 8 | -9 | -83 | | -21 | -1.1 | 18 | 2.4 | 14 | 5.3 | 7 |
| 1.25 Feb-25 | 3.1 | 0.0 | 100% | 2.59 | 20 | 70 | -0.38 | -56 | 6 | -2 | -76 | | -21 | -0.6 | 17 | -4.0 | 4 | 5.7 | 6 |
| 2.40 Sep-25 | 3.7 | 0.0 | 76% | 2.61 | 21 | 69 | -0.26 | -50 | 6 | 0 | -73 | | -18 | -0.4 | 15 | -2.1 | 6 | 4.7 | 8 |
| 1.00 Jun-26 | 4.4 | 0.0 | 100% | 2.61 | 21 | 69 | -0.12 | -46 | 8 | -1 | -72 | | -12 | -0.4 | 16 | 0.9 | 10 | 3.5 | 9 |
| 0.25 Feb-27 | 5.1 | 0.0 | 83% | 2.60 | 20 | 66 | -0.03 | -41 | 6 | 0 | -64 | | -10 | -0.3 | 11 | 3.5 | 16 | 2.7 | 11 |
| 2.50 Aug-28 | 6.2 | 5.0 | 94% | 2.59 | 19 | 64 | 0.14 | -34 | 9 | 2 | -61 | | -1 | -0.2 | 8 | 4.3 | 17 | 1.3 | 13 |
| 2.75 Jul-29 | 6.9 | 4.1 | 83% | 2.59 | 18 | 63 | 0.25 | -29 | 7 | -2 | -57 | | 3 | -0.3 | 9 | 2.2 | 13 | 0.9 | 14 |
| 0.05 Nov-29 | 7.9 | 1.4 | 57% | 2.57 | 17 | 62 | 0.28 | -25 | 6 | -1 | -49 | | 6 | -0.3 | 13 | 3.0 | 15 | 0.6 | 15 |
| 0.95 May-30 | 8.0 | 0.0 | 100% | 2.57 | 17 | 61 | 0.33 | -24 | 6 | -1 | -50 | | 9 | -0.3 | 14 | 1.3 | 11 | 0.5 | 17 |
| 1.20 Mar-31 | 8.6 | 0.0 | 100% | 2.55 | 14 | 58 | 0.41 | -17 | 7 | 3 | -46 | | 10 | 0.0 | 6 | -0.1 | 9 | 0.3 | 18 |
| 1.75 Jun-32 | 9.4 | 17.8 | 50% | 2.53 | 15 | 58 | 0.51 | -17 | 7 | 4 | -47 | | 8 | 0.1 | 3 | -1.7 | 7 | 0.2 | 19 |
| 2.00 Oct-33 | 10.4 | 5.4 | 100% | 2.54 | 11 | 54 | 0.65 | -13 | 6 | 5 | -45 | | 17 | 0.0 | 5 | -6.5 | 2 | 0.5 | 16 |
| 4.20 Dec-36 | 11.2 | 3.0 | 100% | 2.57 | 11 | 51 | 0.85 | -12 | 5 | 8 | -48 | | 21 | 0.0 | 4 | -2.7 | 5 | 2.4 | 12 |
| 1.95 Jul-37 | *13.2 | 5.1 | 10% | 2.55 | 15 | 50 | 0.82 | -7 | 6 | 9 | -44 | | -3 | 1.3 | 1 | 4.4 | 18 | 2.9 | 10 |
| 1.50 Apr-40 | 15.5 | 3.7 | 40% | 2.58 | 10 | 43 | 0.91 | 2 | 4 | 3 | -26 | | 33 | -0.3 | 10 | 42.1 | 20 | 6.1 | 5 |

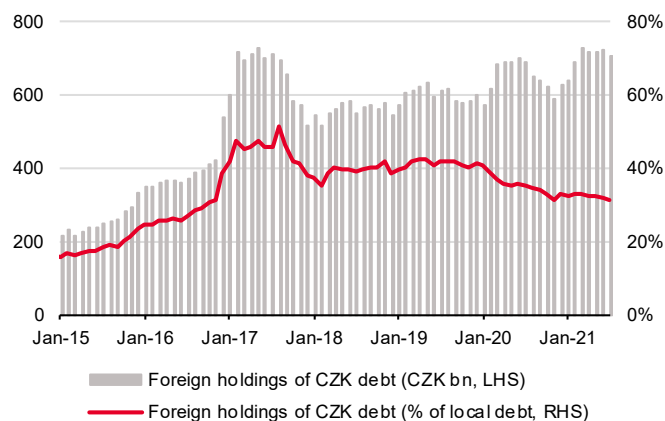
Source: Economic & Strategy Research, Komerční banka
 Note: More details in CZGB Auction Alert

Holdings of CZK government debt (August 2021)



Source: MinFin, Economic & Strategy Research, Komerční banka

The share of non-resident bondholders declines further



Source: MinFin, Economic & Strategy Research, Komerční banka

Czech FX market



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CZK is balancing between higher rates and a stronger dollar

In our view, rising market interest rates and the trend in the US dollar will continue to determine the future direction of the koruna. The interest-rate differential is already well above pre-COVID levels and is pushing the koruna higher. This should be countered by the US dollar, which we expect to continue to strengthen vs the euro. Overall, we therefore expect the koruna to appreciate at a slower pace than in 1H21. By end-2021, we expect it to stand at EURCZK25.10 and 24.80 at end-2022. The biggest risk we see is the trend in the US dollar, which may surprise with its strength and halt or reverse the koruna's appreciation. The very aggressive financial market expectations regarding further interest rate hikes by the CNB may also be an obstacle. If they are not met, the main driver of the koruna's appreciation, the interest-rate differential, could be undermined. Its record level is pushing forward points to new highs. In addition, the slower appreciation of the koruna has allowed the forward rate to rise faster than the spot rate, thus significantly improving hedging conditions for Czech exporters.

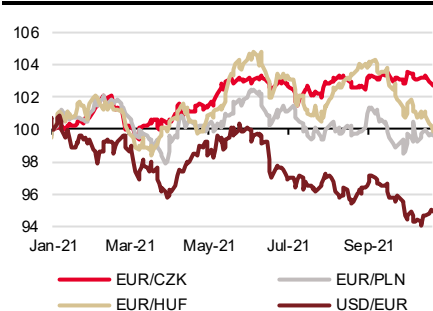
Koruna defies stronger dollar thanks to record interest-rate differential

The third quarter was marked by unexpectedly fast inflation, a surprise increase in central banks interest rates and a strengthening in the US dollar vs the euro in the regional FX market. The latter factor has become one of the main reasons why the Polish zloty and Hungarian forint have been losing ground in recent months. The Czech koruna has not escaped the effects of the stronger dollar and capital outflows from emerging countries. However, the IR differential in the Czech Republic has remained roughly stable, at an all-time high. Aggressive financial market expectations of further interest-rate hikes by the CNB have driven koruna market rates well above the pre-covid levels, which we believe will support the domestic currency in the months ahead.

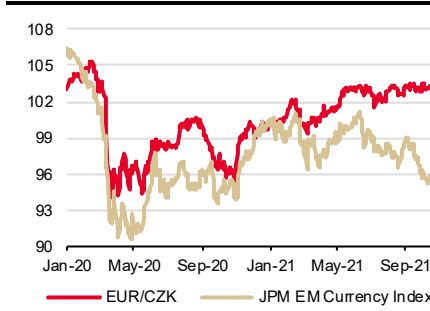
CZK exchange rates



Performance of CE currencies



The koruna resists global developments



Source: Bloomberg, Economic and Strategy Research, KB

1.1.2021 = 100

Our forecast remains unchanged. We expect the koruna to appreciate to 25.10 to the euro by end-2021 and to 24.80 by end-2022. We see the strength in the US dollar as the main driver along with fulfilment of aggressive market expectations of CNB monetary policy.

The same factors are set to play a key role in the coming months. We have kept our forecasts for the koruna unchanged since July. We expect the currency to dip below 25.30 per euro again in the coming weeks. However, we expect further appreciation to be slower than in the first half of the year. The interest-rate differential is already well above pre-COVID levels, by around 100bp, and the potential for further increases in market rates is limited, given the already aggressive expectations of further CNB monetary tightening. Talks of or the possible launch of the CNB's FX reserve yield divestment programme would also work in the direction of a stronger koruna. Although we think that the psychological factor of the central bank's presence on the market will be the main stimulus rather than the sales themselves, the effect should be positive for the koruna (more in Box 3). A strengthening US dollar will continue to weigh on the koruna's appreciation. The EUR/USD has already outperformed our forecast to the downside, and we expect this trend to continue as the

Fed's interest-rate hike approaches. Thus, in our view, it is only a matter of weeks before it breaks through the key EUR/USD1.15 level. For the end of the year, we expect the koruna to reach 25.10 per euro and to surpass its pre-COVID levels by the middle of next year.

EUR/CZK and interest-rate differential



Source: Bloomberg, Economic and Strategy Research, Komerční banka

The main risk is a stronger US dollar

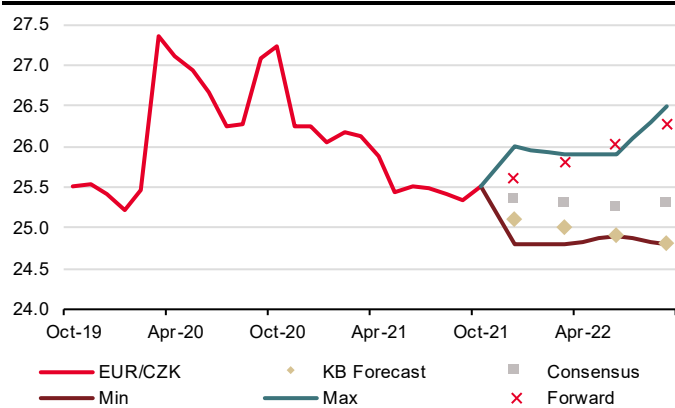
Hence our forecast remains unchanged and we continue to assume a stronger rate of appreciation than the market, in the range of EUR/CZK0.20-0.40 over the one-year horizon. The list of risks also remains the same; only their weights have changed. **The main risk in our view, is the trend in the US dollar, specifically the pace of monetary policy tightening in the US.** US market rates still have a lot of room to normalise from their post-COVID levels, which may lead to a faster strengthening in the dollar with the associated effect of a weakening in EM currencies. In that event, the koruna should be supported by the already record-high IR differential, but in an extreme scenario, a weakening of the koruna cannot be ruled out. High market expectations of rate hikes by the CNB are also a risk. If problems in industry or a surprising slowdown in inflation were to led to a more cautious increase in interest rates, the financial markets would have to reassess their expectations, which would undermine the main driver of the koruna, i.e. the aforementioned interest-rate differential. The development of the coronavirus pandemic remains a persistent risk. However, we see COVID-19 as less strong a risk than previously in terms of potential impact on the FX market. In our view, any further COVID waves will have a significantly lower and shorter impact on financial markets in general. We estimate that this year's March wave has weighed on the koruna exchange rate, depreciating it by an additional EUR/CZK0.35-0.40. Any further waves should be of a lower magnitude, which would serve as a good opportunity to rebuild speculative positions or hedges.

Koruna exchange rate forecast (end of period)

| | 4Q21f | 1Q22f | 2Q22f | 3Q22f | 4Q22f |
|---------|-------|-------|-------|-------|-------|
| EUR/CZK | 25.10 | 25.00 | 24.90 | 24.80 | 24.80 |
| USD/CZK | 21.25 | 21.55 | 21.85 | 22.15 | 21.75 |
| EUR/USD | 1.18 | 1.16 | 1.14 | 1.12 | 1.14 |

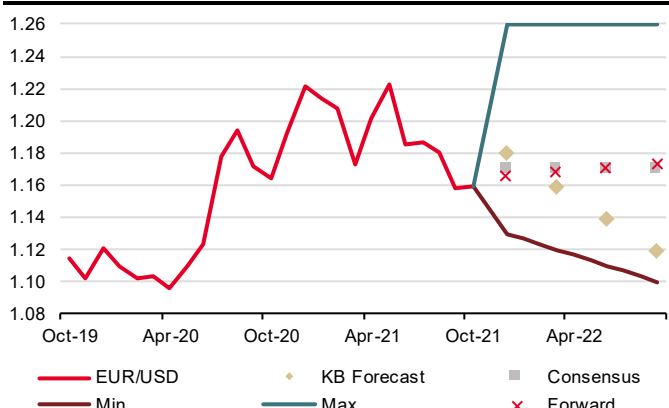
Source: Economic and Strategic Research, Komerční banka

Expected EUR/CZK path, market consensus by Bloomberg (as of 25 October 2021)



Source: Bloomberg, Economic and Strategy Research, Komerční banka

Expected EUR/USD path, market consensus by Bloomberg (as of 25 October 2021)

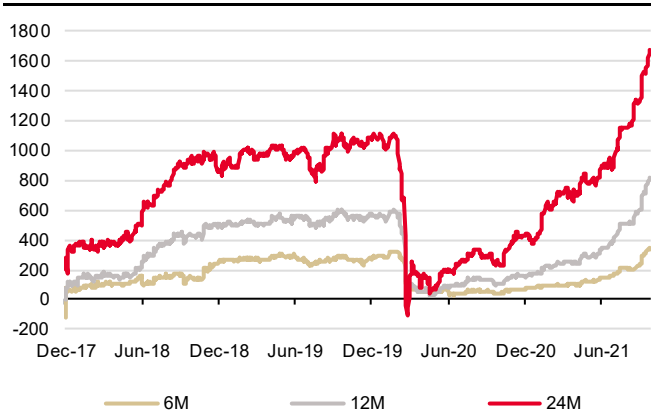


Source: Bloomberg, Economic and Strategy Research, Komerční banka

Record interest-rate differential pushes forward points to new highs

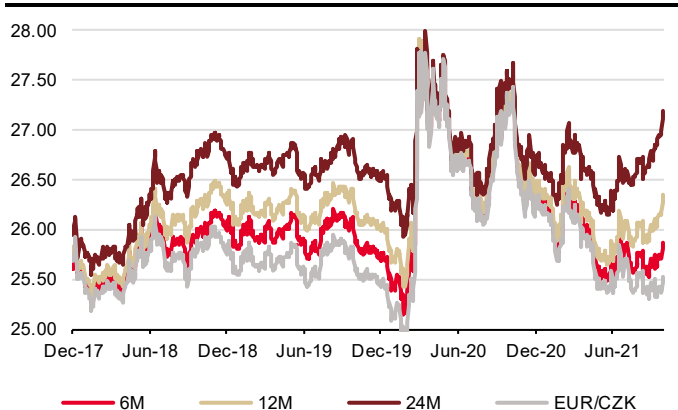
Over the one-year horizon, we expect the koruna to strengthen to EUR/CZK24.80, which would mark a return to the strongest levels seen before the pandemic. In contrast, however, the IR differential against euro rates has surpassed its previous highs by around 100bp. This is reflected in forward points, especially at longer maturities. **Thus, over a one-year horizon, one could comfortably get above the level of EUR/CZK26.00 and in two years one can reach even 27.00.** Although we anticipate a further rise in market rates and thus in forward points, the main potential has already been exhausted, in our view, especially for maturities up to one year. On the other hand, since about mid-year, the growth of forward points has in most cases been faster than the appreciation of the koruna itself on the spot market. Thus, hedging conditions for exporters have improved over the past few months. An additional improvement in levels can be expected due to the higher volatility of the spot exchange rate associated with the strengthening of the US dollar against the euro. More interesting levels could also be reached through structured solutions combining forwards and options, which benefit from the current conditions in the FX markets.

Forward points surpass pre-COVID highs



Source: Bloomberg, Economic and Strategy Research, Komerční banka

Forward vs spot exchange rate EUR/CZK



Source: Bloomberg, Economic and Strategy Research, Komerční banka

Banking Sector



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Rising interest rates, tightening mortgage rules and a worsening economic outlook point to a slowdown in real estate prices and mortgage lending.

The growth of loans is slowing after the spring acceleration

We further increase our estimate of economic growth, and see the outlook the banking sector as positive. Housing loans should continue to expand strongly, while real estate price growth will probably slow, albeit rather hesitantly. Loans to corporations expanded in the first half of 2021, and we expect this growth to accelerate significantly as the economy recovers. A similarly positive picture should be seen in consumer credit. Deposit growth is at a fast clip, but is already slowing and should continue to do so. The development of non-performing loans is relatively favourable, and we expect only a slight increase in their share.

Housing prices and loans are rising

Residential real estate prices continue to increase at an ever-faster pace. From a regional point of view, prices are rising at a faster pace outside Prague; however, for the Czech Republic as a whole, we have still observed an acceleration of the growth rate this year. In the third quarter, housing prices rose by more than 9% year-on-year. Regarding achieved price levels, given the increase in interest rates and now also the less bright outlook for the economy, we expect a gradual slowdown in real estate prices. We think it is likely that the CNB will tighten the rules on mortgage lending by the end of the year. This has been discussed at previous meetings, but so far the bank has taken no action on this sensitive topic. Given that the CNB perceives the real estate market as overvalued, and that COVID-related risks appear to have decreased, the central bank is unlikely to delay this step for long. For this year, we expect apartment prices to increase further by 8.5% and then to slow to a growth rate below 7% next year.

Bank loans and deposits (% yoy)

| | Q1 21 | Q2 21 | Q3 21 | Q4 21 | Q1 22 | Q2 22 | Q3 22 | Q4 22 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 |
|--------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|------|------|------|------|
| Bank loans | | | | | | | | | | | | | | |
| Total | 4.8 | 3.4 | 4.7 | 5.1 | 2.6 | 5.9 | 5.5 | 6.3 | 5.2 | 4.5 | 5.1 | 6.9 | 5.7 | 5.7 |
| Households - real estate loans | 8.6 | 9.5 | 8.7 | 7.7 | 6.6 | 5.1 | 5.3 | 5.8 | 7.4 | 8.6 | 5.7 | 6.5 | 5.0 | 5.1 |
| Households - consumer loans | 0.1 | 2.7 | 1.4 | 2.9 | 4.2 | 3.3 | 6.4 | 7.5 | 3.8 | 1.8 | 5.4 | 8.5 | 6.7 | 6.1 |
| Corporate loans | -2.4 | -1.9 | 0.9 | 2.9 | 3.8 | 6.1 | 5.4 | 6.7 | 3.5 | -0.1 | 5.5 | 7.2 | 5.5 | 5.4 |
| Deposits | | | | | | | | | | | | | | |
| Total | 11.3 | 8.2 | 12.3 | 11.6 | 5.4 | 9.5 | 1.7 | 5.3 | 9.9 | 10.8 | 5.5 | 5.7 | 5.4 | 5.4 |
| Households | 12.9 | 10.9 | 14.5 | 13.6 | 11.4 | 11.1 | 5.8 | 4.7 | 10.2 | 12.9 | 8.3 | 5.9 | 5.8 | 5.8 |
| Non-financial corporations | 8.8 | 10.5 | 7.4 | 9.8 | 7.7 | 6.2 | 5.4 | 6.0 | 11.7 | 9.1 | 6.3 | 6.1 | 4.9 | 4.7 |
| Others | 10.4 | 2.0 | 12.3 | 8.5 | -6.2 | 9.2 | -8.1 | 6.2 | 7.7 | 8.3 | 0.3 | 5.1 | 4.7 | 5.1 |
| Ratios | | | | | | | | | | | | | | |
| Loans/GDP | 65.8 | 62.9 | 63.3 | 62.0 | 61.8 | 61.4 | 61.3 | 60.4 | 62.7 | 63.5 | 61.2 | 60.8 | 61.0 | 61.5 |
| Deposits/GDP | 103.1 | 99.5 | 104.2 | 94.4 | 99.5 | 100.4 | 97.2 | 91.1 | 93.3 | 100.3 | 97.0 | 95.3 | 95.4 | 95.8 |
| Loans/deposits | 63.8 | 63.2 | 60.8 | 65.6 | 62.1 | 61.1 | 63.0 | 66.3 | 67.2 | 63.4 | 63.1 | 63.8 | 64.0 | 64.2 |
| Interest rates | | | | | | | | | | | | | | |
| Real estate loans | 2.1 | 2.2 | 2.4 | 2.7 | 2.9 | 3.0 | 3.0 | 3.0 | 2.3 | 2.3 | 3.0 | 3.1 | 3.2 | 3.4 |
| Consumer loans | 7.0 | 7.3 | 7.7 | 8.3 | 9.0 | 9.4 | 9.5 | 9.6 | 8.0 | 7.6 | 9.4 | 9.3 | 9.0 | 9.2 |
| Corporate loans | 2.0 | 1.3 | 2.2 | 3.4 | 4.2 | 4.4 | 4.4 | 4.4 | 2.2 | 2.2 | 4.3 | 3.9 | 3.7 | 3.7 |
| Share of NPL | | | | | | | | | | | | | | |
| Real estate loans | 1.1 | 1.1 | 1.1 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.1 | 1.1 | 1.2 | 1.2 | 1.1 | 1.2 |
| Consumer loans | 5.6 | 5.4 | 5.4 | 5.9 | 6.1 | 6.4 | 6.4 | 6.7 | 4.4 | 5.6 | 6.4 | 7.3 | 7.6 | 7.6 |
| Corporate loans | 4.4 | 4.3 | 4.3 | 4.5 | 4.5 | 4.5 | 4.4 | 4.3 | 3.4 | 4.4 | 4.4 | 3.9 | 3.9 | 3.8 |

Source: CNB, CZSO, Macrobond, Economic & Strategy Research, Komerční banka

According to monthly data, growth in the volume of mortgage loans slowed on a quarter-on-quarter basis in 3Q21. Whether this is a trend is not clear; the year-on-year growth in volume is still close to 9%. In light of the factors described above, we expect the

high growth rate in mortgage loans to moderate, forecasting growth of 8.6% this year and a slowdown to 5.7% next year.

Consumer credit is growing slowly

We do not expect growth in consumer credit to pick up until next year.

Consumer credit jumped 2.6% qoq (SA) and 2.7% yoy in the second quarter, as anti-epidemic measures ended. Already in the third quarter, according to our estimates, the growth rate fell again by 1.1% qoq. Given the favourable situation on the labour market and our assumption that no further lockdown will be introduced we expect the economy to be driven by household consumption, indicating growth in consumer credit. Nevertheless, due to the deteriorating outlook for the economy, we expect the rate of growth to slow in the coming quarters. We nudge down our full-year estimates for this year and next to 1.8% and 5.4%, respectively.

Business lending is again facing uncertainty

The growth rate of loans to companies has accelerated, but with a worse economic outlook, we expect it to slow down again, before picking up again next year.

According to the latest projections, loans to non-financial corporations increased by more than 2% qoq (SA) in the third quarter after the end of anti-pandemic measures, putting them in positive territory on a year-on-year basis. However, subcontracting problems, especially in industry, are set to limit credit expansion in the near term. A more significant acceleration in corporate credit, which we initially expected, is thus likely to be postponed until next year, together with the expected economic recovery. For the full-year 2021, we expect loans to non-financial corporations to stagnate, before growing by 5.5% next year. Increasingly frequent financing through the bond market is also contributing to lower estimated rates.

Deposits are still growing rapidly

The double-digit growth in the volume of deposits should slow.

The growth rate of retail deposits slowed in the second quarter, and then rose again rapidly in the third quarter. There was a certain slowdown in the growth in corporate deposits. On a year-on-year comparison, we estimate growth in total deposits in the third quarter to have been high, at 12.3%. The end of anti-pandemic measures and the outlook for a growing economy still speak in favour of a slowdown in deposit growth. For the full year, we expect deposit growth to increase by 10.5%, before slowing to 5.5% next year.

Non-performing loans are developing favourably

We still expect slower growth in the share of non-performing loans.

The share of non-performing loans (NPLs) still remains low. Given the termination of anti-pandemic measures and our assumption that there will be no further lockdowns, we do not anticipate any dramatic development. However, we expect that the share of non-performing loans will increase slightly, with the short-term deterioration in the outlook for economic development contributing to this increase.

Key Economic Indicators

Macroeconomic indicators – long-term outlook

| | | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 |
|-----------------|------------|------|------|------|------|------|------|------|------|
| GDP | real, % | 3.2 | 3.0 | -5.8 | 1.9 | 3.5 | 4.0 | 2.5 | 2.2 |
| Inflation | average, % | 2.1 | 2.8 | 3.2 | 3.6 | 4.8 | 2.8 | 1.7 | 2.0 |
| Current account | % of GDP | 0.4 | 0.3 | 3.6 | -1.1 | -1.8 | 0.9 | -0.2 | -0.9 |
| 3M PRIBOR | average, % | 1.3 | 2.1 | 0.9 | 1.0 | 3.0 | 2.7 | 2.7 | 2.7 |
| EUR/CZK | average | 25.6 | 25.7 | 26.5 | 25.6 | 24.9 | 24.4 | 24.0 | 23.6 |
| USD/CZK | average | 21.7 | 22.9 | 23.2 | 21.5 | 21.8 | 20.7 | 19.7 | 19.0 |

Source: CZSO, CNB, Macrobond, Economic & Strategy Research, Komerční banka

Note: KB forecasts are in red

FX & interest-rate outlook

| | | 25-10-2021 | Dec-21 | Mar-22 | Jun-22 | Sep-22 | Dec-22 |
|-----------|------------------|------------|--------|--------|--------|--------|--------|
| EUR/CZK | end of period | 25.7 | 25.10 | 25.00 | 24.90 | 24.80 | 24.80 |
| USD/EUR | end of period | 1.16 | 1.18 | 1.16 | 1.14 | 1.12 | 1.14 |
| CZK/USD | end of period | 22.1 | 21.25 | 21.55 | 21.85 | 22.15 | 21.75 |
| 3M PRIBOR | end of period, % | 2.13 | 2.45 | 3.20 | 3.20 | 3.20 | 3.20 |
| 10Y IRS | end of period, % | 2.77 | 2.90 | 3.05 | 3.15 | 3.20 | 3.25 |

Source: CNB, Macrobond, Economic & Strategy Research, Komerční banka, SG Economic Research

Note: KB forecasts are in red

Monthly macroeconomic data

| | | I-21 | II-21 | III-21 | IV-21 | V-21 | VI-21 | VII-21 | VIII-21 | IX-21 |
|-----------------------|-----------------------|-------|-------|--------|--------|--------|--------|--------|---------|--------|
| Inflation (CPI) | %, mom | 2.2 | 2.1 | 2.3 | 3.1 | 2.9 | 2.8 | 3.4 | 4.1 | 4.9 |
| Inflation (CPI) | %, yoy | 1.3 | 0.2 | 0.2 | 0.5 | 0.2 | 0.5 | 1.0 | 0.7 | 0.2 |
| Producer prices (PPI) | %, mom | 0.0 | 1.4 | 3.3 | 4.6 | 5.1 | 6.1 | 7.8 | 9.3 | 9.9 |
| Producer prices (PPI) | %, yoy | 1.3 | 0.7 | 1.4 | 0.8 | 0.9 | 0.8 | 1.6 | 1.2 | 0.7 |
| Unemployment rate | % (MLSA) | 4.3 | 4.3 | 4.2 | 4.1 | 3.9 | 3.7 | 3.7 | 3.6 | 3.5 |
| Industrial sales | %, yoy, c.p. | -5.2 | -2.3 | 17.4 | 54.2 | 32.2 | 11.1 | 1.1 | 1.4 | n.a. |
| Industrial production | %, yoy, c.p. | -4.9 | -0.7 | 20.3 | 63.3 | 37.2 | 15.0 | 6.0 | 8.5 | n.a. |
| Construction output | %, yoy, c.p. | -5.2 | -10.9 | -2.0 | -3.8 | 7.0 | 6.5 | -2.1 | 2.5 | n.a. |
| Retail sales | %, yoy, c.p. | -7.6 | -4.9 | 15.6 | 21.6 | 18.5 | 9.3 | 0.5 | 3.7 | n.a. |
| External trade | CZKbn (national met.) | 25.8 | 21.4 | 17.7 | 19.7 | 3.7 | -7.3 | -8.2 | -28.1 | n.a. |
| Current account | CZKbn | 26.5 | 13.2 | 31.5 | 33.6 | 4.0 | -10.1 | -19.5 | -37.8 | n.a. |
| Financial account | CZKbn | 46.1 | -3.1 | 62.9 | 26.5 | -13.8 | 12.4 | -43.5 | -37.7 | n.a. |
| M2 growth | %, yoy | 11.0 | 11.9 | 11.0 | 10.9 | 10.7 | 10.7 | 10.2 | 9.9 | n.a. |
| State budget | CZKbn (YTD cum.) | -31.5 | -86.1 | -125.2 | -192.0 | -255.0 | -265.1 | -279.4 | -298.1 | -326.3 |
| PRIBOR 3M | %, average | 0.36 | 0.36 | 0.36 | 0.36 | 0.37 | 0.48 | 0.69 | 0.94 | 1.11 |
| EUR/CZK | average | 26.1 | 25.9 | 26.2 | 25.9 | 25.5 | 25.5 | 25.6 | 25.5 | 25.4 |
| USD/CZK | average | 21.5 | 21.4 | 22.0 | 21.7 | 21.0 | 21.1 | 21.7 | 21.6 | 21.6 |

Source: CZSO, CNB, MF, MLSA, Macrobond, Economic & Strategy Research, Komerční banka

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