

Quarterly report |

# Czech Economic Outlook

## The Targetting Woes of the Central Banker



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- **Czech economy poised for mild recession.** We expect the fall in demand due to strong inflation to lead to a qoq decline in GDP in both 3Q and 4Q this year, with a return to pre-pandemic GDP levels only in 2Q23.
- **Inflation likely to reach 20%.** Significantly higher consumer energy prices are set to contribute to its further acceleration, and, in our view, inflation will remain in the double digits until mid-2023. We do not expect the 2% target to be met until 2024.
- **CNB to raise rates to 7.5% in November.** The CNB is likely to keep interest rates unchanged for some time, based on statements by bank's board members. However, we expect inflation developments and the pressure on the weakening koruna to force the CNB to raise its repo rate by 50bp to a peak of 7.5% in November.
- **Declining yields on the horizon.** The shorter end of the curve in particular may soon begin to gradually decline, given the prospect of CNB rates starting to return to neutral levels over the next year and of the slowdown in economic growth.
- **CZK under pressure.** Despite the CNB's presence on the foreign exchange market, we expect the koruna to weaken to EURCZK25.00 by the end of the year and to EURCZK25.25 on a 1y horizon due to deteriorated fundamentals.



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## Czechia, a country of extremes



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In the editorial to the April edition of our *Czech Economic Outlook* we warned of the spectre of stagflation sweeping across the country. **Three months later the situation has unchanged, as it is the difficulties caused by stagflation that have become more prominent.** The escalation of the gas crisis in Europe has added fuel to the fire by threatening the complete disruption of natural gas supply from Russia, which would of course impact market prices of energy commodities.

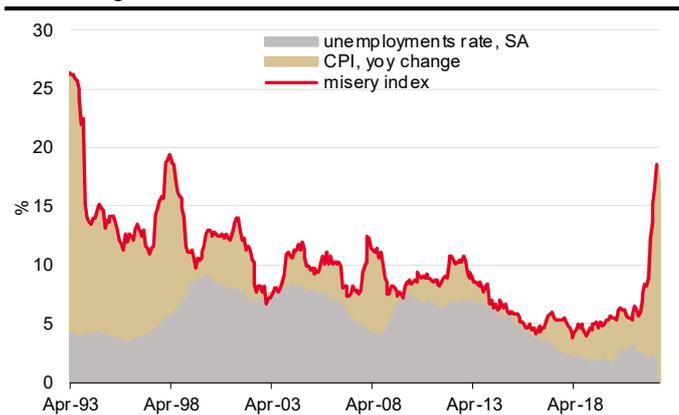
Czech inflation is breaking records and significantly eroding household purchasing power.

### The distinct stagflationary nature of the current developments clearly poses a dilemma for the country's monetary policy.

Month after month, soaring rates of inflation are catching central bankers by surprise, squashing Czech household confidence and slowly but surely causing headaches for companies. The inflation rate is already so high that it is significantly eroding household purchasing power. The

impact on consumption has been visible since the end of last year, and in the second half of this year it will be the main culprit behind the Czech economy's fall into recession.

### Households are struggling with inflation while the labour market remains tight

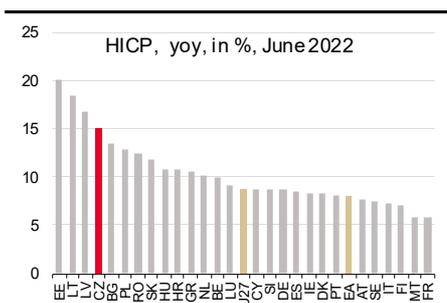


Sources: Economic and Strategic Research, Komerční banka  
Note: the misery index is constructed as the simple sum of both components (in %)

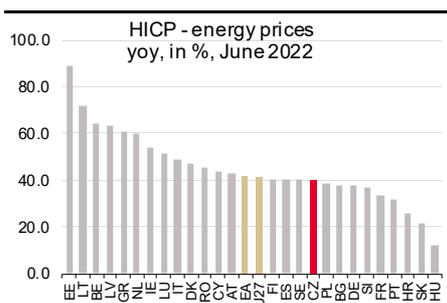
Inflation expectations are surging.

**So while consumer demand is already quite visibly weakening, companies' inflation expectations have gone rampant.** In the economy, we are seeing a very clear-cut change in household and company behaviour. Worried that inflation may be here to stay, they are looking for ways to counteract it. Anecdotal evidence suggests that inflation clauses are beginning to appear in long-term contracts, for example infrastructure contracts, while employees are demanding inflation compensation in their wages. More than a year ago, the previous CNB board began tightening monetary conditions with a view to keeping inflation expectations safely anchored. However, due to the transmission mechanism, this could take up to a year-and-a-half to have an impact, so it could still be some time before the full effect is felt. The first stage of rate hikes involved releasing the accelerator rather than stamping on the brakes. In addition, the war in Ukraine has been fuelling inflationary pressures by having a significant impact on energy commodity prices.

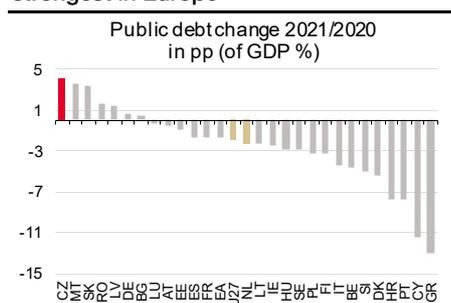
### CZ inflation among the highest in the EU



### Energy prices are not the only culprit



### Last year's fiscal stimulus was the strongest in Europe

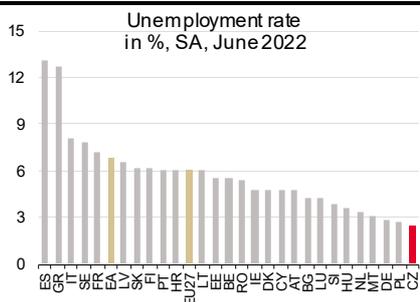


Sources: Eurostat, Macrobond, Economic and Strategic Research, Komerční banka

A significant portion of the inflationary pressure is of domestic origin.

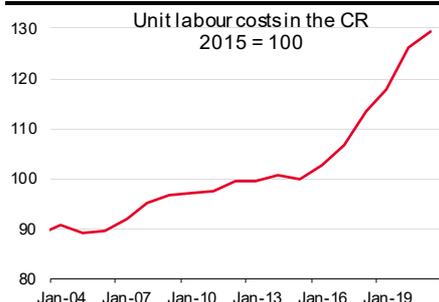
**It seems obvious to us that the current inflation and its development not only has a cost-push, or imported component, but also a domestic one.** In fact, we would argue that there is also a significant portion of demand-pull inflation (as modelled by Jaromír Gec in the special box). The Czech inflation rate is the third highest in the EU and actually the highest in terms of core inflation (without food and energy). By contrast, from the perspective of, for instance, fuel price hikes, the country is in the middle of the field. Why, then, does the country have one of the highest inflation rates in Europe? Because it has the lowest unemployment rate and unit payroll costs have surged in recent years. And it is clearly also true that the current inflation has a fiscal facet as well. The political cycle and the general elections in 2021 have had a negative effect on public finances. Last year the Czech Republic recorded the sharpest increase in public debt in Europe.

**Czechia has the lowest level of unemployment in the EU**



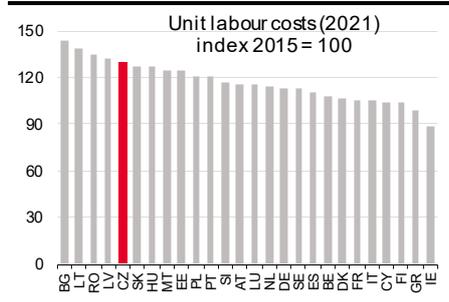
Sources: Eurostat, Macrobond, Economic and Strategic Research, Komerční banka

**Leading to strong wage growth**



Note: productivity calculated based on the number of hours worked, deflated

**And wages are also among the highest in the EU**



Note: productivity calculated based on the number of hours worked, deflated

The dovishness of the new CNB board has infused the market with uncertainty.

**Our new macroeconomic forecast indicates a need to tighten monetary conditions further by way of rate hikes,** albeit not very dramatic ones. However, inflation would still not come down to the target level by the end of 2023. We don't think this could be achieved until the second half of 2024. Nevertheless, Miloš Zeman, President of the Czech Republic, did not find the previous CBN board's policy to be successful in the fight against inflation. He therefore appointed Aleš Michl, who has up until now has opposed all rate hikes, as the new governor of the central bank. In addition, according to their initial statements, it appears that the other newly appointed CNB board members concur with his monetary policy stance. In his inauguration speech, the new governor stated that he would propose rate stability at the CNB board meeting in August.

Nobody really knows what the CNB is planning to do with rates.

**Thus, the central bank's reactive function will probably not be optimal. Indeed, it is not very clear what it actually will be.** In such a situation, it is very difficult to prepare a new forecast, as Martin Görtler discusses in the section on macroeconomic development and monetary policy. This is because what the CNB board does or doesn't do has far-reaching impacts. Economic logic calls for another rate hike to be announced at the next meeting, as this would also mitigate downward pressure on the currency that the central bank is trying to defend through its intervention. However, that is opposed to the attitude adopted by the president, the new governor and, or so it would seem, most of the new CNB board members. For our forecast, we have therefore assumed that the new governor will push through rate stability at the August and September meetings.

We are afraid that the CNB will fail to hike rates despite persistent strong inflationary pressures.

**If the CNB does not hike rates despite the situation, inflation will simply take longer to subside.** The central bankers' expectation of receiving help in the fight against inflation from the government or from wage negotiations may turn out to be groundless. A major consolidation of Czech public finances does not seem likely while war is being waged at the edge of Europe, and we don't see much belt-tightening in the government's medium-term

budget projections either. By the same token, we would not expect workers to show restraint in their wage demands given the context of negligible unemployment and the upcoming election campaign prior to the presidential elections, especially when one of the candidates is the leader of the largest trade union in the country.

**So, we may be in for a bumpy ride this autumn and the CNB board may yet be compelled to hike rates.** However, until then, enjoy the second half of the holidays. We hope you enjoy reading Komerční banka's *Czech Economic Outlook*.

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## External environment and assumptions



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### Central banks will continue to raise rates

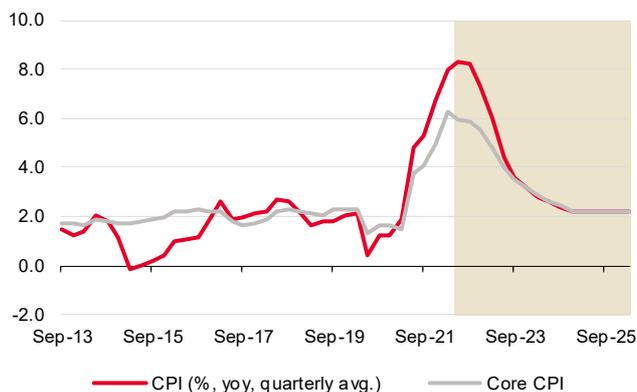
Inflation has not yet reached its peak for this year in either the US, the euro area or the Central European region. Moreover, it is likely to remain above the inflation targets next year as well. Central banks will thus have to continue to tighten monetary conditions. We forecast key rates to reach a peak of 3.25-3.50% in the US in 1Q23 and 2% in the euro area in 2024. For Poland, we project a peak of 9.5% next March and, for Hungary, 14.5% this December. So far we see no significant signs of recession in the US or the euro area. However, given the possible disruption of gas supplies to the eurozone, the risks to our GDP growth forecasts are concentrated to the downside, while the risks to inflation and monetary tightening are tilted to the upside.

### US: inflation could take several years to return to target

**Inflation in the US jumped to a new high of 9.1% in June.** The move was mainly driven by the core component, which rose by 0.7% month-on-month (5.9% yoy). With energy prices expected to stabilise, headline inflation should quickly move closer to the core component over the coming months. However, a return to the Fed's 2% inflation target may take longer, even several years, according to the US central bank itself. Everything will depend on the development of rents, which are the largest item in the US consumer basket (23.7%). Following the recent rise, inflation is likely to remain above 4% until the middle of next year, and above 3% until the end of 2023. The slowdown in rental price growth usually reflects a deteriorating situation in the labour market, but we are not yet seeing any such deterioration. On the contrary, we continue to forecast a further slight decline in unemployment (3.4% next year).

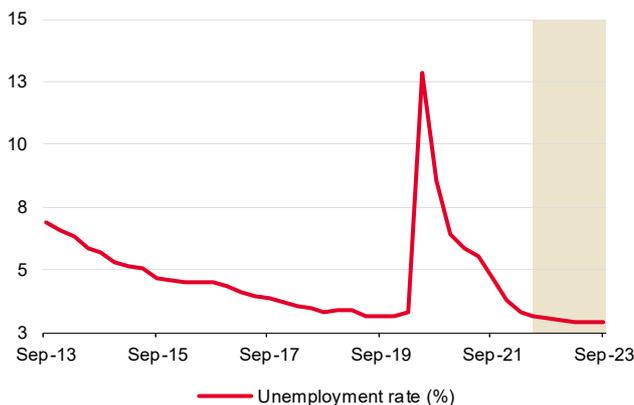
Rental prices represent a major uncertainty.

US: inflation close to its a peak (% , yoy, quarterly avg.)



Source: SG Cross Asset Research/Economics

Labour market remains tight

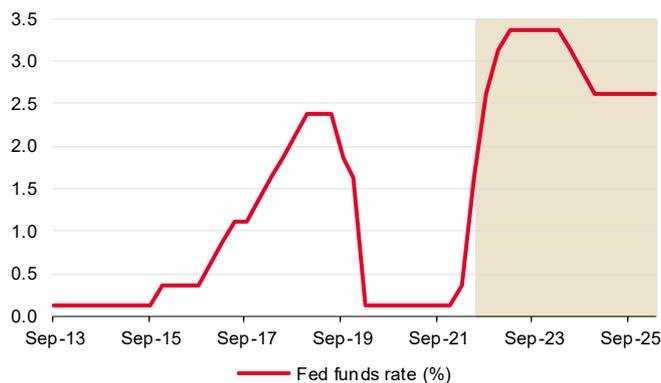


Source: SG Cross Asset Research/Economics

We see the peak of the monetary tightening cycle at 3.25-3.50%.

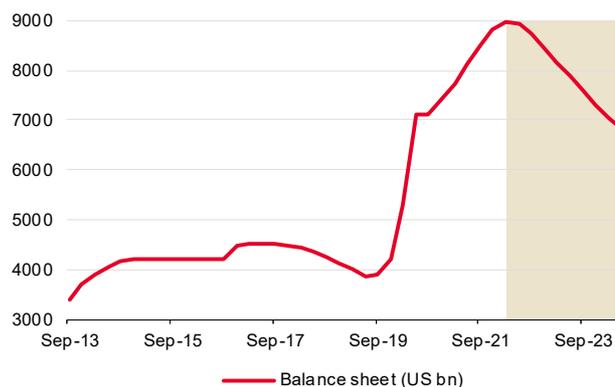
**The US economy is likely to grow by only 0.4% qoq in 2Q after a 1.5% qoq annualised decline in 1Q.** However, we expect GDP growth to accelerate again in the coming quarters. With inflation at 40-year highs, the Fed has no choice but to tighten monetary conditions sharply. Our expectation is that it will raise rates by 75bp to 2.25-2.50% at the end of July, close to the neutral level which it estimates at 2.5%. We still see rates peaking at 3.25-3.50% in 1Q23. We then expect the first rate cut in early 2024. At the same time, the rapid rise in rates increases the risk of a recession. The yield curve is significantly inverted between 2 and 10 years, indicating that the market increasingly believes a recession will begin in the middle of next year. Given the good situation in the labour market, we are not that pessimistic.

Fed will hike rates aggressively



Source: Bloomberg, SG Cross Asset Research/Economics

Balance sheet reduction will also tighten monetary conditions



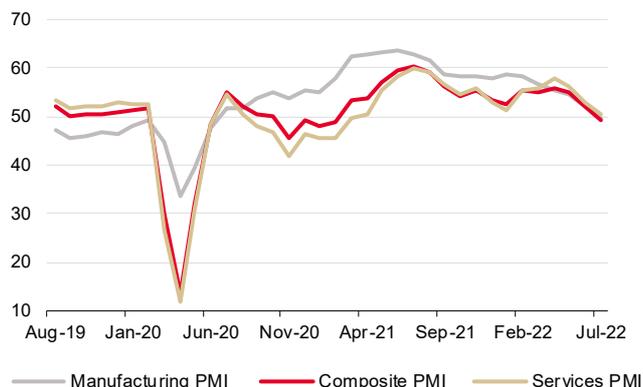
Source: SG Cross Asset Research/Economics

Eurozone: corporates and households in good shape

There is no significant indication of a recession yet.

**While the euro area economy grew by 0.6% qoq in 1Q, its performance is likely to be weaker in 2Q (0.2% qoq).** In the third quarter, we estimate that it will accelerate again to 0.5% thanks to easing supply chain difficulties. The relatively optimistic outlook is supported by the very good situation of corporates and also by the resilience of households to the current inflation shock. Households are benefiting from accumulated pandemic savings as well as historically low unemployment (6.6% in May). Employee compensation is also on an upward trend (we expect +4.5% for this year and 3.5% next year). Corporations are benefiting from a strong ability to pass on high input prices to end-customers, which is then reflected in historically high margins. In the past, it was corporations that triggered the recession in the euro area by limiting investment. Such signals were always evident around two years before the crisis broke. At present, we are not seeing any such signs. On the contrary, the willingness of companies to invest seems to be relatively high. We therefore expect the euro area economy to grow by 3% in FY22 and by 2% in FY23. However, the risks are skewed significantly to the downside in view of the war in Ukraine and the possible disruption of gas supplies.

PMI down recently



Source: SG Cross Asset Research/Economics

Eurozone GDP to grow by a solid 3.0% this year



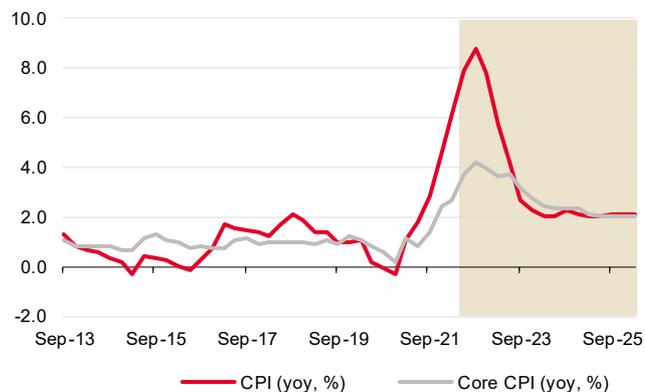
Source: SG Cross Asset Research/Economics

We expect a total increase of interest rates of 100bp over the remainder of this year.

**Euro area inflation reached a record 8.6% yoy in June.** It will peak at 9% in September this year, according to SG forecasts. After that, it should fall, but it is unlikely to reach the inflation target next year (it will average 3.7%). The ECB will therefore have to continue raising interest rates. We expect a total increase of 100bp over the remainder of this year and 75bp next year. At the same time, it will try to prevent the fragmentation of the European bond market by

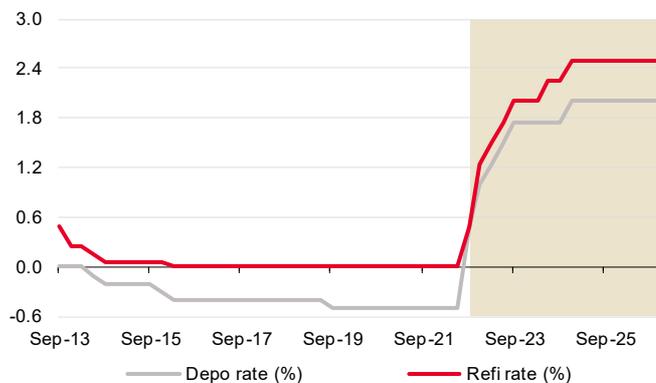
purchasing assets from heavily indebted countries. However, the question is how long can it (legally) support these countries, to what extent could this jeopardise the inflation outlook, and how could it ensure the sustainability of eurozone countries' debt at higher interest rates?

**Euro area: Inflation likely to peak in September (quarterly avg.)**



Source: SG Cross Asset Research/Economics

**ECB likely to continue hiking rates**



Source: SG Cross Asset Research/Economics

### CEE region: central banks will hike rates further

Inflation has still not peaked.

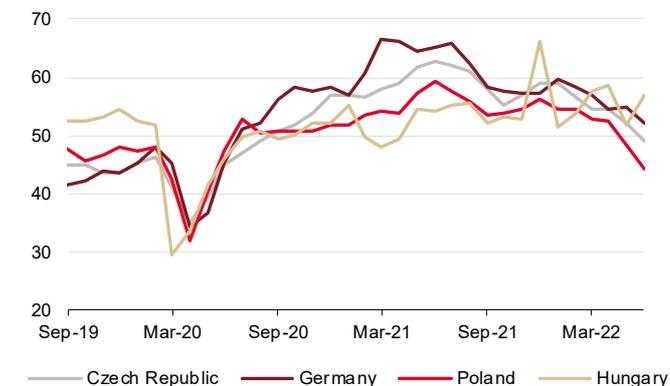
**Inflation in the region hit new highs in June**, of 11.7% yoy in Hungary and 15.5% yoy in Poland. However, these levels do not represent peaks. Consumer price inflation is expected to peak in Hungary in September (15% yoy) but remain in double digits throughout next year. The central bank will thus continue to raise interest rates until this December, when the three-month deposit rate will reach 14.5%, according to our forecast. Nevertheless, we expect the Hungarian forint to weaken further. Slowing economic growth, disputes with Brussels and rate hikes by the ECB and the Fed will be unresponsive. We therefore expect the forint to be at EURHUF435 by the middle of next year. Meanwhile, Polish inflation should slow slightly over the autumn months due to statistical base effects, but then pick up again as it moves towards a peak of 19% yoy in February next year. The Bank of Poland's key interest rate should thus peak at 9.5% in March next year on our estimates. According to our forecast, the Polish zloty should trade at EURPLN4.45 in mid-2023.

**Inflation in CEE at historical highs (HICP, %, yoy)**



Source: Macrobond, Economic & Strategy Research, Komerční banka

**CEE PMIs are worsening (points)**



Source: Macrobond, Economic & Strategy Research, Komerční banka

# Macroeconomic forecast and monetary policy



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## Major changes

### GDP:

We expect the economy to grow by 2.5% this year, compared with 1.8% in the previous forecast. This is due to higher GDP growth at the beginning of the year and the later recession, which will subsequently be reflected in lower GDP growth next year (from the previous 2.8% to the current 1.7%).

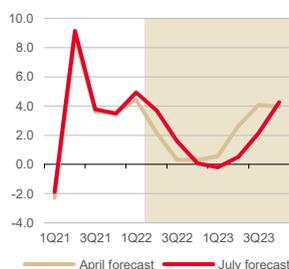
### Inflation:

We have raised our inflation forecast for this year from 12.6% to 16.8% and for next year from 7.2% to 11.2%. This is due to a significant increase in energy and agricultural commodity prices as a result of the war in Ukraine, as well as higher inflation recorded in the previous months.

## High inflation likely to continue despite the coming recession

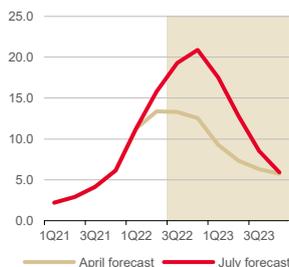
While the Czech economy grew relatively quickly in the first half of the year, it is likely to fall into a mild recession in the second half. The recession is set to be driven by decreasing demand, mainly on high inflation. However, consumer price inflation is unlikely to ease substantially, as we expect it to remain in double digits until the middle of next year. The economic downturn should lead to only a slight increase in unemployment and so the tightness in the labour market should persist. This is likely to boost nominal wage growth, although not enough to compensate for high inflation, in our view, and real wages will thus see a deep fall this year. The CNB is likely to stay on hold for the moment. In our view, however, the development of inflation together with the pressures on weakening the koruna will force the CNB to raise interest rates once more. We expect a 50bp hike in the repo rate to 7.5% in November, which should also mark the peak of the current monetary tightening cycle.

## Change in GDP forecast (% , yoy)



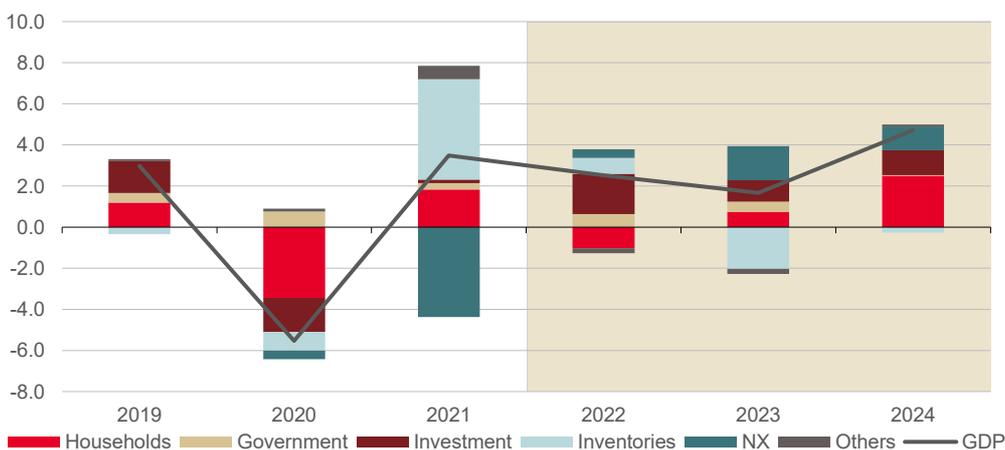
Source: CZSO, Economic & Strategy Research, Komerční banka

## Change in CPI forecast (% , yoy)



Source: CZSO, Economic & Strategy Research, Komerční banka

## Declining household consumption to weigh on economic growth this year (% , yoy)



Source: CZSO, Economic & Strategy Research, Komerční banka

## Czech economy to face a mild recession in the second half of the year

**Economic growth was decent at the start of the year, when industrial production recovered.** Czech GDP grew 0.9% qoq in 1Q, thanks to the easing problems in supply chains, which resulted in a partial recovery in car production, which had been the worst hit by the shortage of production inputs. Accordingly, qoq growth in the economy was driven by net exports and firms' fixed investment. By contrast, household consumption fell for the second quarter in a row, down by 1.2% qoq in 1Q22, following a drop of 2.4% qoq in 4Q21. The lower consumer spending in real terms has been due to high inflation, which is significantly reducing households' purchasing power.

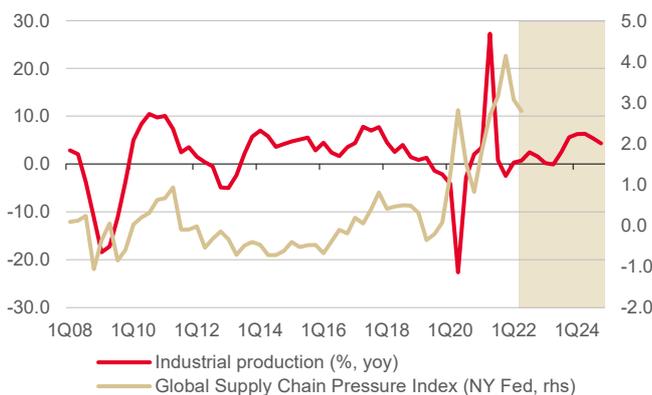
**The second quarter was marked by the growing economic impact of the war in Ukraine.** This brought increased uncertainty, among other things on gas supplies from Russia, but also led to a jump in energy and agricultural commodity prices. This has added to already strong upward pressures on inflation, virtually worldwide. The result has been a steep fall in consumer sentiment, which, in many countries, including the Czech Republic, is close to historical lows. The first signs of weakening demand as a result of high prices are already being observed in the manufacturing sector. The leading PMI indicator assessing the situation in Czech manufacturing fell below the 50pt mark in June for the first time in about two years, putting it in the contractionary zone. The lower volume of new orders was one of the reasons

for the worsened assessment. However, the volume of orders from the previous months, which producers did not manage to process due to a lack of inputs, should be relatively high. Processing these orders should now be helped by the ongoing improvement in the supply of production inputs. Although the easing of supply-side bottlenecks was interrupted in April by the war in Ukraine and another wave of COVID in China, the positive trend has resumed since May. High order backlogs and better functioning supply chains should counterbalance the negative trend in demand. Thus, we expect the economy to continue to grow in 2Q, with industry once again being the main source of the growth. On the other hand, given the further significant rise in inflation, we expect the decline in household consumption to deepen to -2.6% qoq. As a result, we estimate that economic growth slowed significantly to 0.2% qoq in 2Q.

The decline in domestic and global demand due to high inflation is likely to push the Czech economy into a mild recession in the second half of this year.

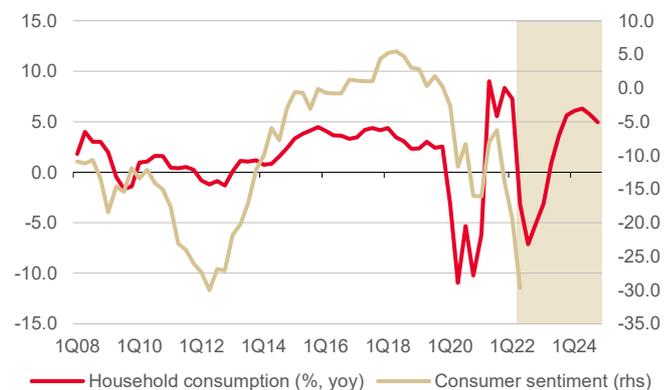
**Negative economic trends are likely to continue in the second half of the year, pushing the economy into a mild recession.** We are forecasting a qoq decline in GDP of 0.3% in 3Q and 0.7% in 4Q. In our view, household consumption will continue falling in the rest of the year, while industry is also likely to experience a decline. The main reason for the recession in the Czech economy in our forecast is the drop in domestic and global demand. The possible disruption in gas supplies from Russia is a significant risk to our forecast. If gas imports to the Czech Republic are significantly reduced or even fully stopped, with the corresponding hit to the functioning of industry, then the recession would be much deeper, due to the Czech Republic's near-total dependence on Russian gas.

Tensions in supply chains are easing



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

Consumer sentiment near historical lows



Source: CZSO, Economic & Strategy Research, Komerční banka

We do not expect the economy to reach the pre-pandemic levels of 2019 until the second quarter of next year.

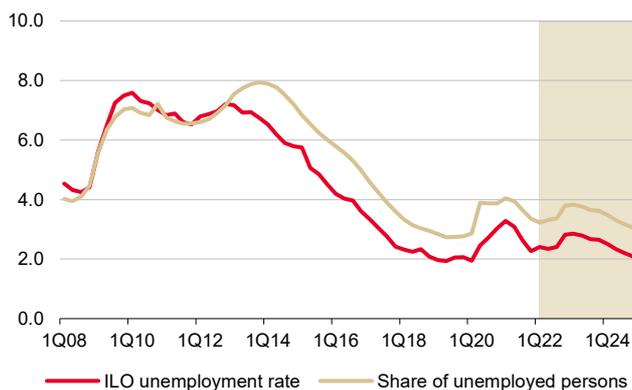
**We expect the economy to grow by 2.5% this year and to slow to 1.7% next year.** Although this year's growth does not look bad at first glance, this is largely due to the strong performance of the economy at the turn of the year. We do not expect economic activity to reach pre-crisis levels until 2Q23. According to our forecast, the higher growth rate should resume in 2H23, when inflation gradually weakens and higher nominal wage growth dampens the negative impact on household purchasing power. From a full-year perspective, fixed investment, supported by the drawdown of EU funds, and net exports should be the main drivers of economic growth in both 2022 and 2023. We expect net exports to be raised by lower imports associated with a sharp decline in household consumption.

**Nominal wage growth should be strong, but not enough to cover inflation**

**The unemployment rate remains low and labour market tensions persist.** Both the ILO unemployment rate and the share of unemployed persons (MLSA methodology) have returned to near pre-pandemic and so record low levels. The number of job vacancies still exceeds the number of unemployed registered at the labour offices by around 100k. Moreover, labour markets in neighbouring countries are also becoming tight. Leaving aside the June effect of

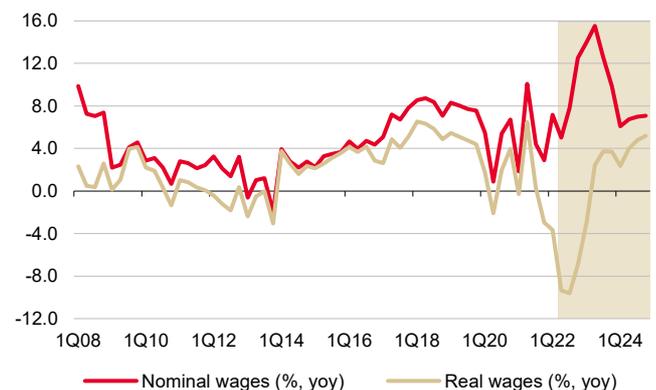
the inclusion of Ukrainian refugees, unemployment in Germany has also dropped to the record low pre pandemic level. In the euro area, unemployment is at its lowest in the entire history of the monetary union (of course, the level is significantly higher than in the Czech Republic and Germany). This may further strengthen the demand for domestic workers, especially in the case of more skilled professions. In our view, the mild recession will bring only a slight increase in Czech unemployment; in the case of ILO unemployment rate, we expect an increase to 3% from the current level of around 2.5%.

Labour market to remain tight despite slight rise in unemployment



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

Real wages to fall significantly this year due to high inflation



Source: CZSO, Economic & Strategy Research, Komerční banka

We expect the labour market to remain tight despite the recession. This would lead to higher nominal wage growth, but would not be enough to cover inflation this year.

**We expect average wage growth to reach 8.1% this year and accelerate to 13.0% next year.** However, despite the strong nominal dynamics, this would not be enough to compensate for high inflation this year, as we expect real wages to fall by a significant 7.4%. Wage negotiations for next year will then, in our view, take full account of the current inflationary environment, leading to double-digit nominal wage growth. However, inflation is also likely to remain in double digits, and wages should thus rise by only a modest 1.7% in real terms, even after the sharp contraction this year. In addition to the tight labour market, the fact that companies have so far been able to pass on higher costs to consumers (and bolster their financial situation in the process) should contribute to the higher wage dynamic next year.

**Inflation to rise to 20% and remain in double digits until mid-next year**

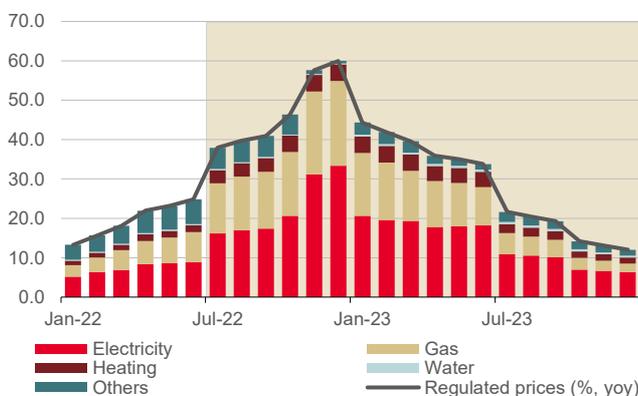
**Consumer price inflation accelerated further in the first half of this year and exceeded expectations.** While yoy inflation printed at 9.9% in January, it rose to 17.2% in June. Higher housing costs accounted for around a third of the June inflation. These reflected a rapid increase in the prices of real estate and building materials, as well as expensive energy. The price of electricity for households was around 30% higher yoy in June, while gas was almost 60% higher. Food price growth also accelerated significantly during 1H22, from 5.4% yoy in January to 18.0% yoy in June. Transport was the third-largest contributor to consumer price increases, mainly due to higher fuel prices. However, inflation remains spread across the entire consumer basket. It is also still the case that both domestic and external factors are contributing to price growth. This is illustrated by comparing developments in tradable (mainly goods) and non-tradable (mainly services) prices. Both showed identical growth of 14.6% yoy in June. The results of a more detailed analysis in the Box below are similar.

Household energy prices so far include only a fraction of the high wholesale prices. Projecting wholesale prices onto consumer prices leads to an increase in inflation to 20% yoy.

**Consumer prices so far include only a fraction of high wholesale energy prices, meaning that inflation is likely to accelerate further.** We expect another wave of significant price increases for electricity, gas and heat in July, as shown by the already published price lists of energy distributors. Electricity and gas prices should increase by around a fifth mom. As a result, inflation should trend towards 20% yoy. In our view, this increase in consumer energy

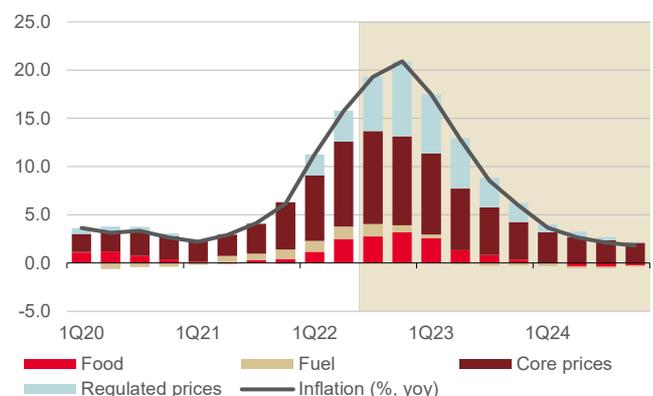
prices will not be the last. Electricity traded on wholesale markets at around EUR50/MWh at the beginning of 2021, but in July this year it already cost more than EUR300/MWh. The increase in gas is even higher in relative terms, from around EUR20/MWh at the beginning of 2021 to more than EUR150/MWh in July. The scope for further rises in consumer energy prices is therefore still large. We expect the next major wave of price increases in consumer energy prices in October, at the start of the heating season, and then at the beginning of next year. Our assumption is that the price of electricity for households should be 130% higher at the end of 2023 compared to the beginning of 2021, while the increase in the case of gas should be 180%. However, we consider our estimate to be rather conservative and see risks on the side of even higher increases. In our forecast, we assume that government measures such as the special energy tariff and the waiver of payments for renewable energy sources will dampen energy prices for households from autumn onwards. Both this year and next, our forecast assumes regulated prices will rise by around 30% yoy.

**More expensive energy to push regulated prices up**



Source: CZSO, Economic & Strategy Research, Komerční banka

**Further rises in inflation will largely be due to regulated prices**



Source: CZSO, Economic & Strategy Research, Komerční banka

**We expect inflation to average 16.8% this year and to decelerate to 11.2% next year.** Its dynamics should weaken only very gradually and annual inflation should be in the range of 19-21% for the full 2H22. We expect it to peak in 4Q22. However, it is likely to remain in double digits in 1H23. The CNB's 2% target is not expected to be reached until 2H24. We expect core inflation to average 13.5% this year and slow to 9.1% next year. The risk to even higher headline inflation is a more pronounced rise in energy prices, mainly due to a possible disruption in gas supplies from Russia. There is also a risk of higher energy prices spilling over into other price categories, such as food and core prices. On the other hand, a more pronounced fall in demand and a rise in unemployment could cause inflation to recede more quickly.

**CNB should continue to raise interest rates**

As a result of a further acceleration in inflation and continuing pressures on the weakening of the koruna, the new CNB board will have to raise interest rates once more, although, so far, it has been reluctant to do so.

**In June, the CNB board, for the last time in its old composition and headed by Governor Rusnok, raised the key repo rate by a significant 125bp to 7%.** The reason for the sharp reaction was inflation, which was well above the central bank's forecast and its 2% inflation target in recent months. While consumer price growth accelerated to 17.2% yoy in June, the central bank had expected 15.0% yoy in its last forecast from early May. Moreover, rapid price growth is increasingly feeding through into higher inflation expectations. According to the latest CNB survey in June, non-financial corporations expect inflation of 9.4% yoy in one year and 7.1% yoy in three years.

**In our view, the new CNB board led by Governor Michl will leave interest rates unchanged for some time but will have to raise them by 50bp in November due to inflation.** In our view, the optimal monetary policy response would be to raise interest rates

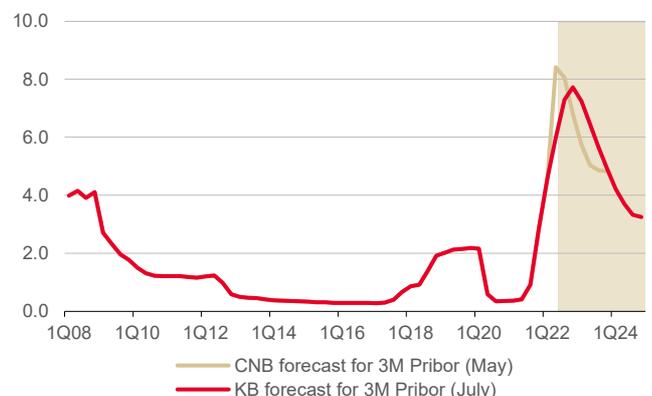
already at the August meeting. However, based on the recent statements of Governor Michl and Deputy Governor Zamrazilova, we see this as unlikely. However, we think that price and wage developments, combined with the pressures on weakening the koruna, will eventually force the board to make one more hike. In our view, the two-week repo rate should thus reach 7.5% in November, which should also be its peak. This development, and the previous significant interest rate hikes, together with expected fall in demand, should lead the dynamics of core inflation to decrease gradually. Further increases in inflation should be largely driven by increases in administered prices due to higher household energy prices. We think that the central bank is unlikely to respond to this. However, the risk is that higher energy prices will spill over into core inflation and inflation expectations, which would require a stronger monetary policy response. In line with the easing of core inflation, our forecast expects a gradual decline in interest rates back to a policy neutral 3% from the start of next year, but this should not be achieved until 3Q24. At the same time, we assume that the CNB will continue to intervene against the weakening koruna.

Inflation expectations of companies continue to rise sharply (%)



Source: CNB, Economic & Strategy Research, Komerční banka

We expect the two-week repo rate to peak at 7.5%



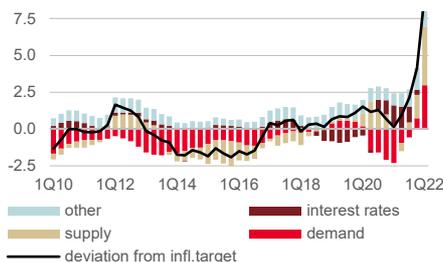
Source: CNB, Economic & Strategy Research, Komerční banka

**Box: Inflation – supply or demand?**

**Factors behind inflationary pressures significantly influence the optimal monetary policy response.** In the case of positive demand pressures, which are typically more persistent and prompt higher economic growth and inflation, an increase in interest rates is the appropriate response. This is because higher rates cool down an (overheated) economy and thus bring inflation back to target. In the case of a negative supply shock (which prompts higher prices and lower economic output), the central bank faces a much more unpleasant dilemma. It has two choices: as in a positive demand shock, it can raise rates, which reduces inflation but also exacerbates the negative impact on the real economy (including raising unemployment), or for supply shocks, they can use the so-called inflation target exemption, which means the central bank ignores them when setting monetary policy and temporarily tolerates the deviation of inflation from the target caused by them. At the same time, however, the central bank risks unanchoring inflation expectations and weakening the overall credibility of the inflation target, especially in situations where supply shocks operate over a prolonged period of time.

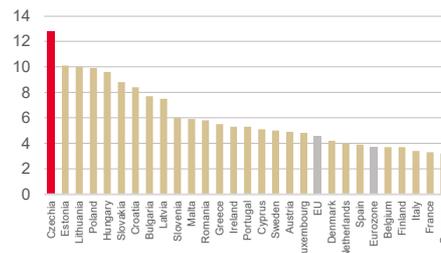
**Domestic inflation is driven by a combination of demand and supply factors. We estimate that 43% of the deviation from the inflation target in the first quarter of this year was due to supply pressures, while around one-third was attributable to demand.** We estimate that the effect of the monetary policy interest rate channel on deviation of year-on-year inflation from the target was roughly neutral at the start of the year, given the usual lag in the transmission of higher rates to inflation.

**Historical decomposition of the deviation of CZ inflation from the 2% target (pp, yoy)**



Source: Economic and Strategy Research, Komerční banka, CZSO, Macrobond  
 Estimation by BVAR model; identification of shocks based on sign restrictions

**HICP inflation, excluding energy and food in the EU - June 2022 (% , yoy)**



Source: Economic and Strategy Research, Komerční banka, Eurostat

**Supply-side factors mainly reflected the recent increase in energy commodity prices.**

The most energy-related items in the consumer basket, such as administered prices or fuel, contributed roughly 30% of the overall 17,2% yoy inflation in June. However, persistent problems in global supply chains continue to play a role on the supply side.

**Inflation has also accelerated significantly due to demand pressures.** These stem from the overheated labour market and previous relatively loose fiscal policy, as well as the substantial household savings accumulated during the pandemic. International comparisons suggest that a substantial part of domestic inflation is not imported, but is of domestic origin. According to Eurostat's harmonised methodology, June inflation in the Czech Republic was the highest after the Baltic countries. Its core component (after excluding energy and food prices) was even the highest in the EU in June. Moreover, one of the strongest dynamics in the Czech Republic is observed in the prices for services, which are not subject to international arbitrage and therefore reflect domestic factors to a greater extent.

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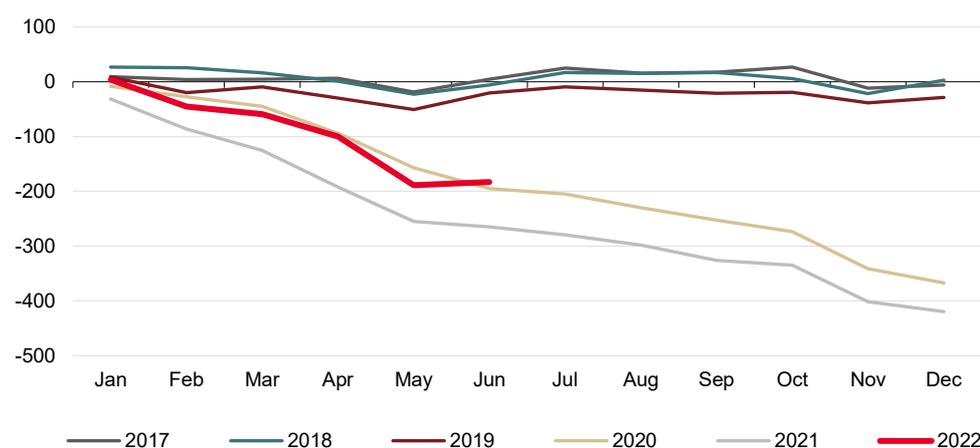
## Fiscal policy: consolidation is getting more complicated

High energy prices are likely to prompt new budgetary expenditure this year, which should outweigh higher tax collection. We estimate that this year's state budget deficit could reach around CZK320bn, compared to the originally planned CZK280bn. Against the backdrop of the negative effects of the economic recession, high energy prices and a deep structural deficit, we expect the reduction of the state budget deficit to continue at a gradual pace in the coming years. Thus, while overall public debt should continue to rise, we expect high inflation to cause it to roughly stabilise at close to 41.5% of nominal gross domestic product. The most significant risk of additional pressure on the state budget is a possible prolonged disruption of gas supply.

### This year's budget likely to see further changes, mainly due to high energy prices

By the end of June, the state was running a deficit of CZK183.0bn. Compared to end-June last year, the deficit is lower by CZK82.1bn, mainly reflecting higher tax revenues thanks to the improved economic situation, but also higher inflation. To a lesser extent, the year-on-year reduction in the deficit was also due to lower expenditure, which this year no longer includes pandemic compensation.

The state budget (CZKbn)



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

The reduction in expenditure so far this year (by CZK7.9bn) is mainly linked to the end of pandemic compensation payments. Last year, by the end of June, more than CZK85bn had been paid out in non-investment transfers to businesses (of which almost CZK49bn related to COVID programmes), while this year the figure was CZK34.1bn. On the other hand, an increase in expenditure is visible in the social benefits component, mainly due to the indexation of old-age pensions (+CZK18.3bn). Transfers to health insurance funds also increased due to a temporary increase in payments for the so-called 'state insured'. However, this will be largely offset in the second half of the year by a renewed reduction in these payments, so that they remain on average at the 2021 level. Expenditure on servicing the national debt was also higher by CZK4.4bn year-on-year, and CZK23bn had already been spent by the end of June. This is the result of rising government bond yields on the back of high inflationary pressures, to which the central bank is responding by raising interest rates. There was also a year-on-year increase in capital expenditure (+CZK8.3bn), including on transport infrastructure.

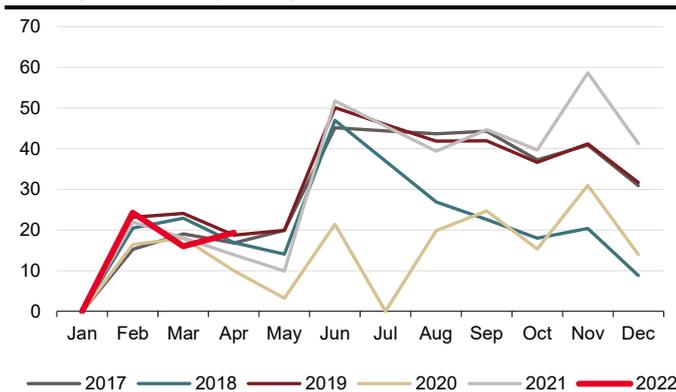
**Wage and employment growth, as well as higher inflation are raising tax revenues, and thus helping the budget.** The CZK74.2bn year-on-year revenue increase was mainly due to higher collection of VAT, personal income tax, excise duties and social security contributions. The absorption of EU funds seems to be lagging behind schedule, with slightly over 32% of the full-year plan spent by the end of June (compared to 48% at this time last year).

**The state budget deficit could end the year at around CZK320bn.** The government has already announced that it is likely to present an amendment to the current budget in July, which has so far envisaged a deficit of CZK280bn this year. Given the significant impact of the government’s new discretionary measures on the expenditure side, especially in the context of cushioning the impact of high energy prices on households and firms, the parameters of which have not yet been finally approved, there is still significant uncertainty about this year’s deficit. Apart from the energy package, the budget does not yet take into account these new measures, which include abolition of road tax, a temporary reduction in excise duties, a second indexation of pensions and a one-off payment to families of CZK5,000 per child. We estimate the total impact of these additional expenditures on this year’s budget at around CZK40bn. Moreover, on the revenue side, the absorption of EU funds is likely to be behind schedule so far this year. In our view, any further changes that could impact the deficit over the remainder of the year will also be strongly conditioned by economic developments, in respect of which we identify significant risks in the context of the war in Ukraine, including the threat of a halt in Russian gas supplies to Europe, which would not only lead to shutdowns in some key sectors of the economy but also put considerable pressure on the state budget.

**Municipalities remain in surplus**

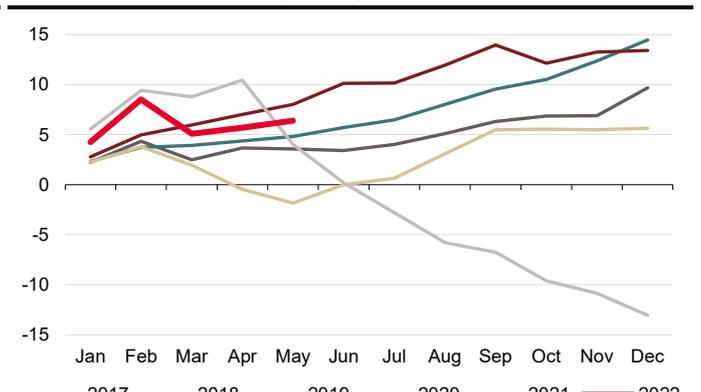
**Local government budgets ended April with a surplus of CZK19.3bn YTD.** The year on year improvement in the balance was mainly due to higher revenues, inter alia as a result of larger VAT collection due to high inflation. This revenue increase was partly offset by an increase in expenditure. For the full year, we still estimate a surplus of CZK30bn for the municipal budgets. We expect the health insurance companies to end the year in a only slight deficit as a result of payments for the state insured being kept at last year’s level on average.

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

**Public finance forecasts**

	2021	2022f	2023f	2024f	2025f	2026f
Balance (% GDP)	-5.9	-4.4	-3.4	-2.8	-2.5	-2.1
Fiscal effort (pp GDP)	-0.9	1.9	0.6	0.4	0.4	0.3
Public debt (CZKbn)	2,566.6	2,886.6	3,166.6	3,426.6	3,666.6	3,886.6
Debt ratio (% GDP)	42.0	41.7	41.3	41.1	41.6	42.1

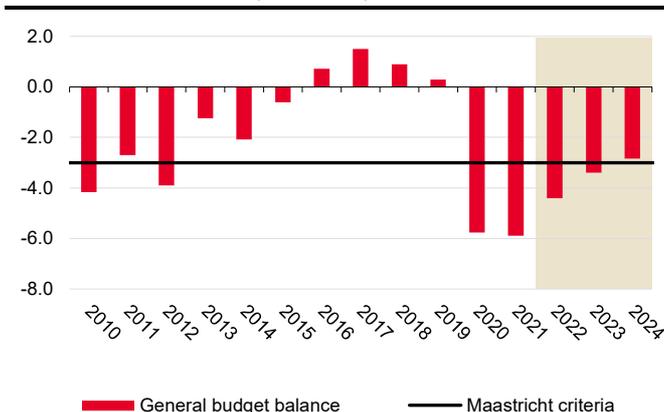
Source: CZSO, Macrobond, MinFin for published data, Economic & Strategy Research, Komerční banka  
 Note: Fiscal effort is measured as the year-on-year change in the cyclically adjusted general government balance on GDP in pp.

In our view, this year's public finances will end with a significantly smaller deficit than last year. However, the government's consolidation of the economy will continue at a noticeably slower pace in the years ahead. High inflation will put a brake on the growth of public debt relative to nominal GDP.

### Consolidation of public budgets should be gradual

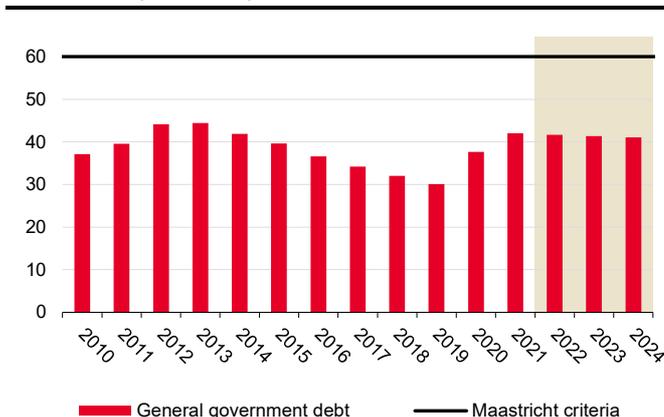
**We expect the overall general government deficit is expected to reach 4.4% of GDP this year**, 1.5pp lower than last year. In our view, both higher nominal GDP growth this year compared to last year and a much stronger fiscal effort will contribute to a narrowing of the deficit. The traditionally surplus performance of municipalities should continue to work in the direction of a lower general government deficit this year. We expect that consolidation of public finances to continue next year, but with a visibly lower contribution from fiscal efforts. The government's medium-term outlook, at least according to its communication and published documents to date (e.g. the April update of the Czech Republic's Financing and Debt Management Strategy), does not envisage significant savings or revenue increases. Thus, high inflation and, to a lesser extent, growth in real economic activity should contribute significantly more to the reduction of the balance relative to nominal GDP. Overall, we expect the general government deficit to narrow to 3.4% of GDP next year. Nominal public sector debt should continue to rise, but we expect high inflation to cause it to stabilise at around 41.5% of GDP. However, the outlook is associated with a number of risks, notably further developments in the energy-supply situation in Europe, possible new government discretionary measures and the source of their financing.

Public finance balance (% of GDP)



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

Public debt (% of GDP)



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

## Summary forecast table

	Q4 21	Q1 22	Q2 22	Q3 22	Q4 22	Q1 23	Q2 23	Q3 23	2021	2022	2023	2024	2025	2026
<b>GDP and its breakdown</b>														
<b>GDP (real, yoy, %)</b>	3.5	4.9	3.7	1.6	0.1	-0.2	0.5	2.1	3.5	2.5	1.7	4.7	3.4	2.9
<b>Household consumption (real, yoy, %)</b>	8.4	7.3	-3.2	-7.1	-5.1	-3.1	0.9	3.6	4.0	-2.2	1.7	5.7	3.4	2.3
<b>Government consumption (real, yoy, %)</b>	0.0	2.9	3.7	3.1	3.1	3.1	3.4	1.9	1.5	3.2	2.5	0.1	1.4	1.8
<b>Fixed investments (real, yoy, %)</b>	3.9	6.8	7.3	7.9	7.5	5.7	4.2	2.5	0.6	7.4	3.7	4.3	5.1	4.3
<b>Net exports (contribution to yoy)</b>	-8.1	-3.6	0.6	2.9	1.6	1.8	1.6	1.5	-4.3	0.4	1.7	1.2	0.8	0.8
<b>Inventories (contribution to yoy)</b>	5.9	2.5	1.9	0.1	-1.4	-2.3	-2.7	-2.1	4.9	0.8	-2.0	-0.3	-0.5	-0.4
<b>Monthly data from the real economy</b>														
<b>Foreign trade (CZK bn)</b>	-28.6	-9.8	-74.9	-102.9	-93.5	-18.6	-43.3	-54.8	-6.1	-281.1	-161.6	-33.4	40.1	96.0
<b>Exports (nominal, yoy, %)</b>	2.7	7.8	10.5	12.8	11.2	10.4	7.2	8.7	13.0	10.5	9.0	8.3	6.0	5.7
<b>Imports (nominal, yoy, %)</b>	14.6	16.2	19.5	17.2	17.0	11.1	4.1	3.6	19.3	17.5	5.9	5.5	4.6	4.7
<b>Industrial production (real, yoy, %)</b>	-1.0	0.4	1.7	2.5	0.8	0.9	-1.6	1.8	8.0	1.3	1.6	6.0	4.3	3.4
<b>Construction output (real, yoy, %)</b>	5.7	10.3	6.6	10.3	8.1	3.5	4.8	2.6	2.0	8.8	4.0	8.4	2.8	2.6
<b>Retail sales (real, yoy, %)</b>	6.7	6.8	-3.2	-6.0	-5.3	-3.2	0.7	3.4	4.2	-1.9	1.6	5.5	3.2	2.0
<b>Labour market</b>														
<b>Wages (nominal, yoy, %)</b>	2.9	7.2	5.0	7.8	12.5	14.0	15.5	12.6	4.8	8.1	13.0	6.7	5.6	3.8
<b>Wages (real, yoy, %)</b>	-3.0	-3.7	-9.3	-9.6	-6.9	-3.0	2.4	3.7	1.0	-7.4	1.7	4.1	3.4	1.5
<b>Unemployment rate (MLSA, %)</b>	3.5	3.4	3.1	3.3	3.9	4.0	3.6	3.5	3.7	3.4	3.7	3.3	3.3	3.4
<b>Unemployment rate (ILO 15+, %)</b>	2.2	2.5	2.3	2.5	2.8	2.9	2.7	2.7	2.8	2.5	2.7	2.3	2.3	2.4
<b>Employment (ILO 15+, yoy, %)</b>	0.7	-0.5	1.3	0.8	0.3	2.1	-0.3	-0.2	-0.4	0.5	0.5	0.5	0.0	-0.1
<b>Consumer and producer prices</b>														
<b>CPI Inflation (yoy, %)</b>	6.1	11.2	15.8	19.3	20.9	17.5	12.8	8.5	3.8	16.8	11.2	2.5	2.1	2.3
<b>Taxes (contribution to yoy inflation)</b>	-0.7	0.4	0.2	0.1	1.1	0.1	0.3	0.4	-0.1	0.5	0.3	0.2	0.2	0.2
<b>Core inflation (yoy, %) (*)</b>	7.7	10.5	13.8	15.1	14.5	13.2	9.9	7.5	4.8	13.5	9.1	3.9	2.2	1.8
<b>Food prices (yoy, %) (*)</b>	2.3	6.7	14.6	16.3	18.9	15.1	7.4	4.2	0.8	14.1	7.0	-1.7	3.6	5.7
<b>Fuel prices (yoy, %) (*)</b>	29.6	36.8	44.4	45.1	30.1	15.3	-4.0	-11.6	15.3	39.1	-2.9	-7.0	-3.0	-1.5
<b>Regulated prices (yoy, %)</b>	-0.9	15.7	23.3	40.7	56.3	44.0	36.9	21.2	-0.1	34.0	28.9	3.0	0.0	0.0
<b>Producer prices (yoy, %)</b>	12.8	21.8	27.5	24.9	22.4	13.0	5.2	2.0	7.1	24.2	5.3	1.5	1.7	1.9
<b>Financial variables</b>														
<b>2W Repo (% , average)</b>	2.3	4.2	5.6	7.0	7.3	6.9	6.1	5.4	0.9	6.0	5.7	3.3	3.0	3.0
<b>3M PRIBOR (% , average)</b>	2.8	4.6	6.0	7.3	7.7	7.2	6.5	5.7	1.1	6.4	6.1	3.6	3.3	3.3
<b>EUR/CZK (average)</b>	25.4	24.6	24.6	24.7	24.9	25.2	25.3	25.2	25.6	24.7	25.2	24.5	24.2	24.2
<b>External environment</b>														
<b>GDP in EMU (real, yoy, %)</b>	4.7	5.4	3.5	1.6	1.8	1.6	2.0	2.1	5.6	3.1	2.0	1.9	1.6	1.5
<b>GDP in Germany (real, yoy, %)</b>	1.8	3.8	1.8	0.6	1.2	1.4	1.7	1.7	3.1	1.8	1.7	1.7	1.5	1.4
<b>CPI in EMU (real, yoy, %)</b>	4.7	6.2	7.9	8.8	7.9	5.7	4.2	2.6	2.6	7.7	3.7	2.1	2.1	2.0
<b>Brent oil price (USD/brl, average)</b>	78.2	96.1	113.2	130.0	120.0	105.0	90.0	87.0	70.2	114.8	91.5	80.9	77.1	77.0
<b>EURIBOR 1Y (% , average)</b>	-0.5	-0.4	0.1	0.7	1.1	1.4	1.6	1.8	-0.5	0.4	1.8	2.7	2.8	3.0
<b>EUR/USD (quarter eop, year average)</b>	1.14	1.12	1.06	1.06	1.10	1.15	1.20	1.21	1.18	1.09	1.20	1.24	1.27	1.31

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

## Czech IRS market and government bonds



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### Declining yields on the horizon

**Market interest rates have experienced a further rise across maturities since the beginning of the second quarter following surprisingly strong inflationary pressures at home and abroad. As a result, the entire market interest rate curve has remained significantly inverted. However, as the peak in domestic monetary policy rates approaches and elevated inflation expectations begin to recede, the potential for further upside in market rates should soon be exhausted. In our view, these are close to their peak and the shorter end of the curve in particular may soon start to gradually decline, with the prospect of the CNB starting to bring rates back to neutral levels over the next year and the pace of economic growth slowing. Conditions for interest rate hedging have deteriorated significantly as rates have risen. Opportunity still exists to invert the entire curve or take advantage of lower rates in the euro market. Government bonds have become slightly cheaper against the IRS in an environment of heightened uncertainty. Stronger-than-expected supply in primary auctions could dampen the 'traditional' appreciation of sovereign bonds against the IRS curve, which has been observed in the second half of previous years, in the remainder of this year. However, demand for bonds remains solid, which will ultimately keep yields below the IRS.**

Strong inflationary pressures at home and abroad have pushed the domestic IRS curve back up. We expect that rates are already near their peak. The curve will maintain its markedly inverted shape for the rest of this year and most of next. It will not straighten out until early 2024, mainly due to the decline in short rates.

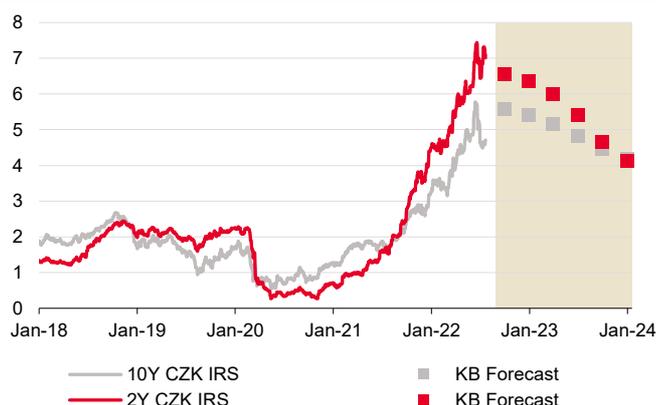
### Czech IRS market: rates are rising, despite the war in Ukraine

**Market interest rates saw another significant rise in the second quarter of this year.** This was mainly due to surprisingly strong inflationary pressures, which raised the stakes for rate rises at home and abroad. In total, the yield curve has thus shifted by another 60-160bp since the beginning of April, with a more pronounced rise at the shorter end of the curve. The general tendency to tighten monetary policy was not disturbed by the war in Ukraine. Its immediate effects, in the form of rising energy and other commodity prices, have acted on the direction of lower economic growth, but at the same time accelerating inflation. This puts the central bank in an awkward position and generally makes the desired 'smooth landing' more difficult. In our view, the CNB will be forced to raise interest rates even further due to persistent strong upward price pressures, heightened inflation expectations, a solid domestic labour market, although it will probably do so with some delay, in line with the cautious statements of most of its board members.

**Financial markets expect the CNB's two-week repo rate to peak at 7.5%.** This is in line with our forecast, which expects first stability and then a further 50bp rise in the base rate at the November meeting to 7.5%. Further rate hikes are likely to be less urgent in an environment of receding inflationary pressures and a recessionary economy caused also by high energy prices. However, demand will also weaken, reflecting, among other things, the lagged effect of the previous monetary tightening. This macroeconomic climate will, in our view, subsequently result in a reversal and a brisk reduction in domestic monetary policy rates throughout next year and most of 2024. The base rate could reach a neutral 3% in the third quarter of 2024. We therefore see a faster pace of decline in the repo rate than the financial market does.

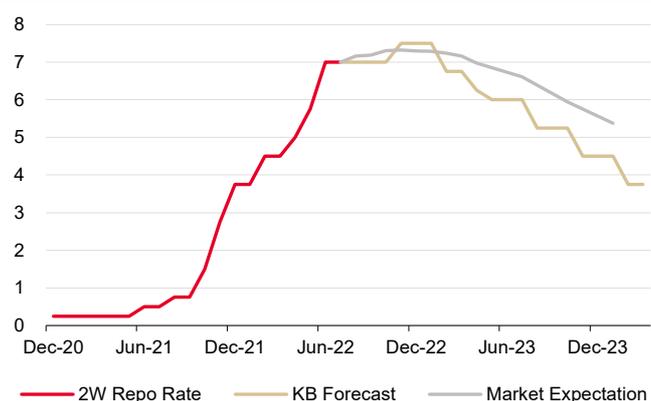
**Market interest rates are likely to start falling soon.** Given our assumption of a delayed restrictive response by the CNB and the need for relatively brisk rate cuts next year, shorter rates should already be close to the peak and only the last rate hike of this cycle, which we expect in the fourth quarter of this year, could temporarily slow their decline. In contrast, the longer end of the yield curve, which is more strongly influenced by long-term inflation expectations, may still correct the recent decline in the short term due to the lack of monetary tightening during August-September. However, the downward trend towards long-term equilibrium levels is also the main tendency in the entire outlook.

IRS forecast (%)



Source: Bloomberg, Economic and Strategy Research, Komerční banka

Expected CNB key interest rate path as of 22 July 2022 (%)



Source: Bloomberg, CNB, Economic and Strategy Research, Komerční banka

**The CNB's initiation of rate cuts next year will help to normalise the shape of the yield curve.** We expect the curve to maintain its significantly inverted shape for the rest of this year and most of next year. Its straightening will not occur until early 2024, mainly due to a decline in the short end.

CZK IRS outlook (end of period, %)

	3Q22f	4Q22f	1Q23f	2Q23f
2Y	7.10	6.75	6.25	5.55
5Y	5.80	5.75	5.45	4.95
10Y	4.95	4.95	4.75	4.35

Source: Economic & Strategy Research, Komerční banka

**Forwards and the euro market still offer an opportunity to hedge interest rate risk**

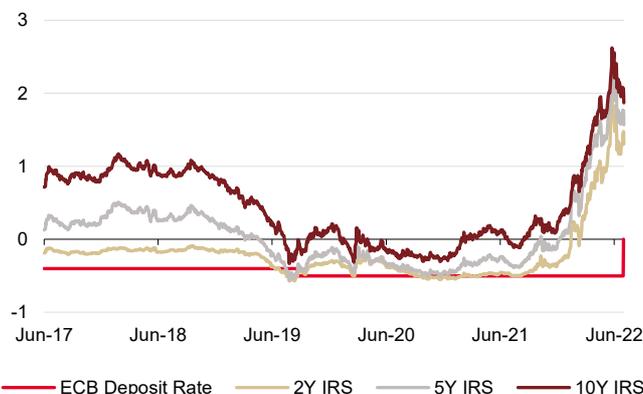
**Given the significant rise in the IRS curve over the past few months, conditions for hedging interest rate risk have deteriorated again.** The proximity of the peak in market rates also does not currently indicate the appropriate timing of domestic interest rate fixing. A certain opportunity can therefore currently be seen in the persistently high inversion of the entire IRS curve, which brings with it more favourable conditions in the forward market. It is also still possible to use hedging in the euro market, which offers significantly lower interest rates than the domestic market.

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

	Maturity						
	6M	1Y	18M	2Y	3Y	5Y	10Y
Spot	7.67	7.68	7.39	7.01	6.27	5.46	4.70
3M	8.00	7.70	7.31	6.94	6.21	5.36	4.55
6M	7.88	7.31	7.04	6.52	5.87	5.11	4.42
9M	7.11	6.92	6.49	6.10	5.54	4.86	4.30
1Y	6.49	6.60	5.98	5.71	5.23	4.63	4.18
18M	6.49	5.68	5.37	5.09	4.75	4.29	4.02
2Y	4.73	4.78	4.57	4.49	4.29	3.97	3.87
3Y	4.14	4.18	4.07	4.03	3.83	3.75	3.80

Source: Bloomberg, Economic & Strategy Research, Komerční banka, as of 22 July 2022

Euro rates continue to rise (%)



Source: Bloomberg, Economic & Strategy Research, Komerční banka

**Higher issuance activity may continue in the second half of the year.**

**Compared to the original assumptions, this year's CZGB supply will be mainly boosted by additional government expenses related to high energy prices.** We currently expect the state budget to end this year with a deficit of CZK320bn, which, combined with other financing needs (mainly repayments of previously issued bonds), would imply a total issuance of CZK432.6bn worth of koruna bonds, of which (including the last auction on 13 July) some CZK198.9bn has been issued in primary auctions so far. A further CZK35bn has been raised by the ministry through the sale of CZK-denominated bonds on the secondary market. The refinancing of the EUR2.75 billion of euro-denominated bonds from 2012 maturing in May has so far probably been mostly covered by a short-term loan from the Slovak Debt and Liquidity Management Agency (Ardal) for a total amount of EUR2.5bn. An additional EUR1bn of own euro-denominated bonds have been issued to the market (a combination of primary and secondary market). The funding needs in the single European currency could therefore, in our estimation, already be close to meeting the plan for the whole of this year.

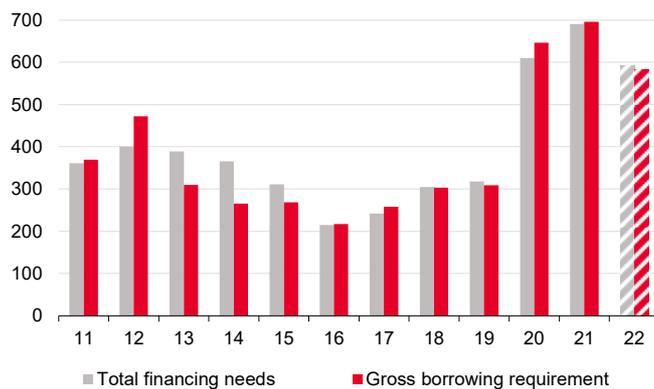
**We expect the total financing needs for this year to reach CZK592.1bn (8.5% of GDP), which would be a visible decline from last year's CZK690.4bn (11.3% of GDP).** In our view, the higher state budget balance has not yet been pre-financed. Overall, we estimate that about 62.4% of the full-year financing needs were covered after the July 13 auction. We therefore believe that stronger supply in the primary auctions could persist for the rest of the year, thereby dampening the appreciation of government bonds relative to the IRS curve (visible in the second half of last year). However, the question remains as to whether the financing of the increased expenditure will be at least partly covered by EU resources (earmarked loans or additional direct subsidies).

**Funding programme and issuance activity (CZKbn)**

	2022	
	MinFin	KB
State budget deficit	280.0	320.0
Transfers and other operations of state financial assets	0.0	0.0
T-Bonds denominated in local currency redemptions	145.4	145.4
T-Bonds denominated in foreign currency redemptions	74.3	74.3
Redemptions and early redemptions on savings bonds	0.2	0.2
Money market instruments redemptions	49.0	49.0
Redemption of T-bills		33.3
Redemption of other money market instruments		15.7
Repayments on credits and loans	3.2	3.2
<b>Total financing needs</b>	<b>552.1</b>	<b>592.1</b>
Money market instruments		20.0
T-bills		20.0
Other money market instruments		0.0
Gross issuance of CZK T-bonds on domestic market	Min. 350-400	432.6
Gross issuance of EUR T-bonds on domestic market		28.8
Gross issuance of T-bonds on foreign market		0.0
Gross issuance of savings government bonds		41.1
Received credits and loans		61.3
Financial asset and liquidity management		8.4
<b>Total financing sources</b>		<b>592.1</b>
<b>Gross borrowing requirement</b>		<b>583.7</b>
<b>Net CZGB issuance</b>		<b>287.2</b>

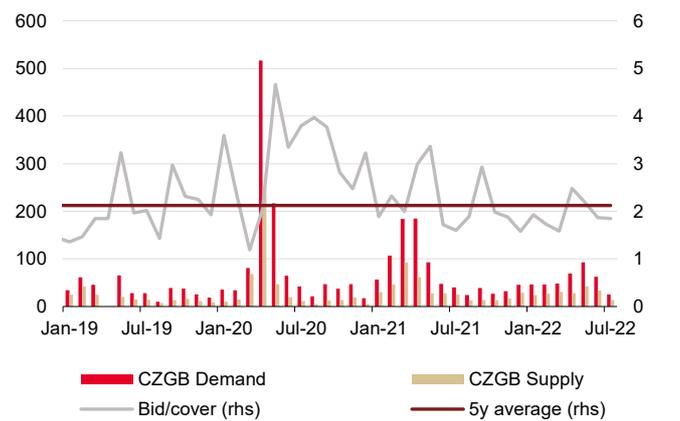
Source: Economic and Strategy Research, Komerční banka, MinFin

Financing needs (CZKbn)



Source: Economic and Strategy Research, Komerční banka, MFCR

CZGB primary market (CZKbn)



Source: Economic and Strategy Research, Komerční banka, MFCR, CNB

CZGB yield forecast (end of period)

	3Q22f	4Q22f	1Q23f	2Q23f
2y CZGB yield (%)	6.60	6.30	5.80	5.15
5y CZGB yield (%)	5.60	5.50	5.20	4.70
10y CZGB yield (%)	4.85	4.80	4.60	4.25
10y CZGB ASW (bp)	-10	-15	-15	-10

Source: Economic & Strategy Research, Komerční banka

### Declining trend of CZGB yields may start

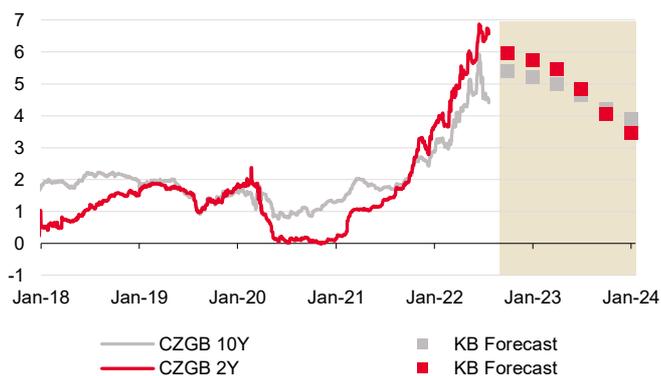
**Similar to the IRS, government bond yields have continued to rise steeply since April this year.** Overall in the 60-180bp range with a more pronounced increase at the shorter end of the yield curve. Despite still relatively solid demand for CZGBs, the rise in CZGB yields has been slightly more pronounced than in the case of the IRS curve, and CZGBs have thus become slightly cheaper in ASW terms (by around 6-20 points). Although we see room for further cheapening if the increased government spending needs to be covered by domestic resources, we believe CZGB yields will remain lower compared to the IRS curve. In our view, Czech government bond yields should reach their peak in the next few months and then, like the IRS, begin to decline to near long-term equilibrium levels. The upside risk to the risk premium is a possible downgrade, which Fitch justified in its last rating review in May, when it downgraded the outlook to negative on concerns about lower economic growth, strong inflationary pressures and a heavy reliance on energy from Russia. We believe that a downgrade may occur in the face of a prolonged disruption in gas supplies from Russia.

### Sovereign rating overview

	Local currency	Outlook	Foreign currency	Outlook	Next rating review
S&P	AA	STABLE	AA-	STABLE	14-Oct
Moody's	Aa3	STABLE	Aa3	STABLE	5-Aug
Fitch	AA-	NEGATIVE	AA-	NEGATIVE	21-Oct

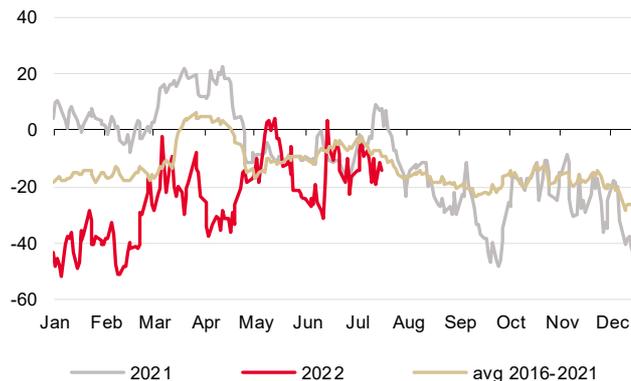
Source: Economic and Strategy Research, Komerční banka, Bloomberg

CZGB yield forecast (%)



Source: Economic and Strategy Research, Komerční banka, Bloomberg

10y CZGB ASW (bp)



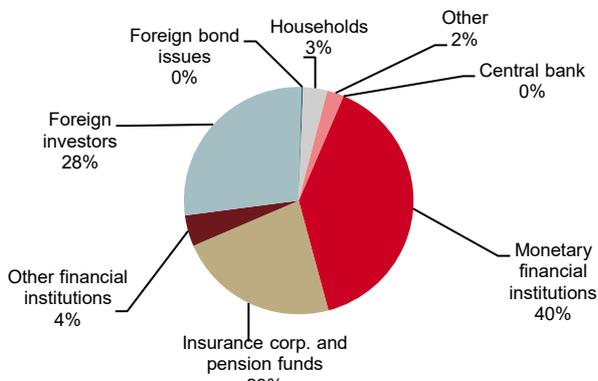
Source: Economic and Strategy Research, Komerční banka, Bloomberg

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
0.45 Oct-23	1.2	0.0	80%	7.17	-5	28	1.18	-14	18	18	-84		-9	2.3	1	-27.2	1	-29.1	16
5.70 May-24	1.7	0.0	100%	6.32	-23	-13	0.92	-72	13	-4	-97		-32	-0.5	10	19.3	19	-37.7	19
0.00 Dec-24	2.2	0.0	34%	6.08	-13	-27	1.22	-45	9	-9	-70		4	-0.2	6	11.3	17	-32.2	18
1.25 Feb-25	2.4	0.0	100%	6.17	-13	-14	1.42	-35	11	6	-72		11	0.2	2	-6.6	5	-29.7	17
2.40 Sep-25	2.8	0.0	85%	5.77	-7	-24	1.43	-32	5	9	-66		-1	0.0	5	3.2	14	-28.8	15
6.00 Feb-26	3.1	0.0	61%	5.58	-13	-37	1.55	-42	3	5	-76		-8	-0.3	7	1.4	9	-27.7	14
1.00 Jun-26	3.7	0.0	100%	5.44	-15	-44	1.56	-34	1	3	-61		3	-0.4	8	2.1	10	-25.3	13
0.25 Feb-27	4.3	0.0	83%	5.08	-15	-65	1.54	-41	-7	-9	-60		7	-1.1	13	14.1	18	-23.6	12
2.50 Aug-28	5.3	0.0	94%	4.81	-12	-76	1.75	-37	-11	-14	-59		5	-0.8	12	-3.2	7	-18.9	11
2.75 Jul-29	6.1	0.0	100%	4.58	-13	-89	1.75	-46	-9	-19	-50		-3	-1.7	18	2.4	11	-16.5	10
0.05 Nov-29	7.0	0.0	57%	4.59	-11	-85	1.85	-25	-9	-12	-41		1	-0.7	11	-4.1	6	-14.3	9
0.95 May-30	7.2	0.0	100%	4.57	-10	-83	1.91	-23	-9	-12	-40		1	-0.5	9	-8.2	3	-13.5	8
1.20 Mar-31	7.8	0.0	100%	4.57	-4	-78	2.05	-15	-10	-13	-35		3	0.0	4	-16.9	2	-11.6	7
1.75 Jun-32	8.7	0.0	100%	4.31	-16	-96	2.03	-33	-8	-12	-30		4	-2.1	19	2.8	13	-10.0	6
2.00 Oct-33	9.4	0.0	100%	4.33	-15	-94	2.19	-23	-10	-14	-26		14	-1.7	17	0.1	8	-8.2	5
3.50 May-35	9.9	0.0	34%	4.34	-14	-91	2.34	-24	-5	-8	-29		9	-1.4	16	2.5	12	-7.1	4
4.20 Dec-36	10.3	0.0	100%	4.37	-15	-92	2.42	-22	-6	-7	-31		10	-1.3	15	5.0	15	-6.8	3
1.95 Jul-37	12.2	0.0	10%	4.35	-17	-88	2.38	-17	-6	-1	-30		10	-1.3	14	8.8	16	-5.7	1
1.50 Apr-40	14.3	0.0	40%	4.50	-12	-79	2.43	0	-4	6	-38		19	0.1	3	-6.8	4	-6.2	2

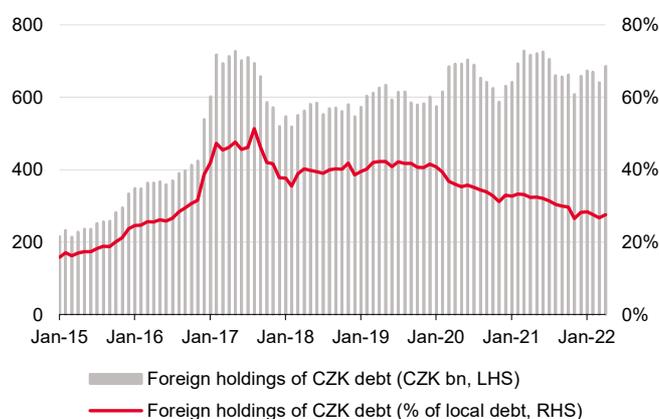
Source: Economic & Strategy Research, Komerční banka  
Note: More details in CZGB Auction Alerts

Holdings of CZK government debt (May 2022)



Source: MinFin, Economic & Strategy Research, Komerční banka

The share of non-resident bondholders declines



Source: MinFin, Economic & Strategy Research, Komerční banka

## Czech FX market



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### Domestic currency under pressure

Aversion towards the currencies of the Central European region has intensified since the beginning of June. Although the koruna has been the best performer in the region so far, it has been significantly supported by the CNB. As a result of deteriorated fundamentals and risks skewed towards even stronger depreciation pressure, we expect the koruna to weaken to EURCZK25 by the end of the year and to EURCZK25.25 within one year, despite the CNB's interventions on the market. The conditions for hedging against koruna appreciation have improved compared to the beginning of this year despite the strengthening of the spot exchange rate due to foreign exchange interventions. The advisability of hedging against appreciation will depend mainly on the CNB's next steps. The main risks for the koruna include the possible prolonged disruption of gas supplies to Europe as well as further monetary policy steps by the renewed CNB Board.

### The CNB is preventing the koruna from depreciating

Aversion towards the currencies of the Central European region has intensified in the weeks since the beginning of June. This reflects both the growing risk of a European recession, which is further supported by high dependence on Russian gas supplies and a deteriorating foreign trade balance. While the koruna has been the best performer of the region so far, it has been significantly helped by the CNB, which has prevented the domestic currency from weakening above the EURCZK24.75 level since the appointment of a new governor, when it re-entered the market. Compared to the foreign exchange interventions in March after the outbreak of war in Ukraine, larger volumes have been spent on defending the koruna since May, against the backdrop of a dovish shift in the board and pressure on emerging market currencies. On our estimate, from May to 20 July, the CNB was thus able to spend over EUR15bn on spot operations, roughly 10% of total foreign exchange reserves. Moreover, even during this period, the need to defend the koruna tended to increase in terms of magnitude of reserves spent. Intervention in May amounted to EUR3.5bn, while in June, based on the CNB's balance sheet, we estimate it could have amounted to over EUR5bn and in the first 20 days of July to around EUR7bn (most of which was spent between 1-10 July).

CZK exchange rates



Source: Bloomberg, Economic and Strategy Research, Komerční banka

Performance of CE currencies (1. 1. 2022 = 100)



Source: Bloomberg, Economic and Strategy Research, Komerční banka  
A value above 100 indicates an appreciation of the CZK, PLN or HUF against the EUR, or an appreciation of the EUR against the USD from 1 January 2022.

We have revised our forecast for the koruna exchange rate to significantly weaker levels due to deteriorating fundamentals. We expect the koruna to reach EURCZK25 at the end of the year and to weaken to EURCZK25.25 over 2022. A more pronounced depreciation could be prevented by the CNB.

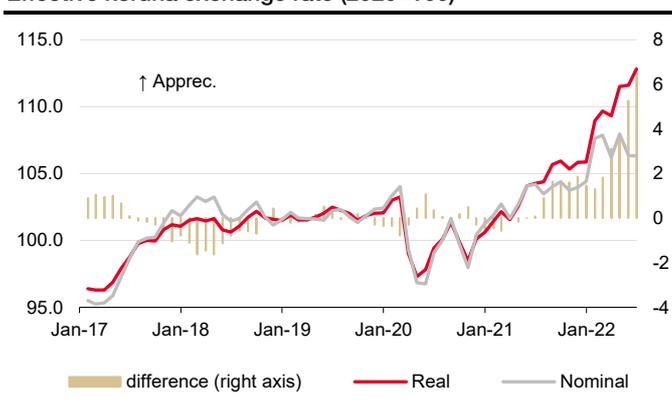
**Pressures to weaken the domestic currency will likely persist.** While the domestic currency will likely continue to be supported by a significant interest rate differential in the near term, the new Bank Board's so far lukewarm stance on further domestic interest rate hikes indicates an early peak. Depreciation pressure could be dampened if there is a rate hike as we expect; however, this is unlikely to be enough to outpace other factors. In fact, the koruna may start to lose ground even compared to the rest of the region, where interest rates are likely to rise further amid strong inflationary pressure. The koruna's gains also would likely be offset by a strong US dollar, whose recent appreciation has seen regional currencies (with the exception of the koruna, which was defended by the CNB) visibly weaken. At the same time, real appreciation of the exchange rate, supported by higher price growth in the Czech Republic compared to abroad, would also reduce the scope for nominal appreciation of the koruna. Foreign trade is also unlikely to help the koruna this year. Firstly, the real appreciation of the exchange rate reduces the competitiveness of domestic exports, while, at the same time, domestic exports will likely face declining demand and a shortage of components in production for most of this year, although the functioning of supply chains should continue to improve. Moreover, the import side of the nominal foreign trade balance is inflated by imports of expensive energy.

EURCZK and interest rate differential



Source: Bloomberg, Economic and Strategy Research, Komerční banka

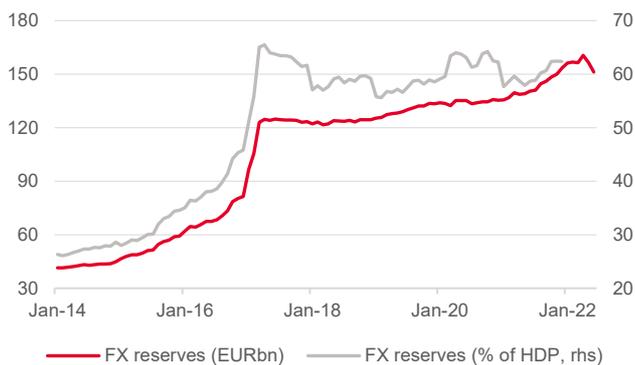
Effective koruna exchange rate (2020=100)



Source: CNB, Economic and Strategy Research, Komerční banka, Note: trade-weighted effective koruna exchange rate in 2020, real effective exchange rate deflated by PPI

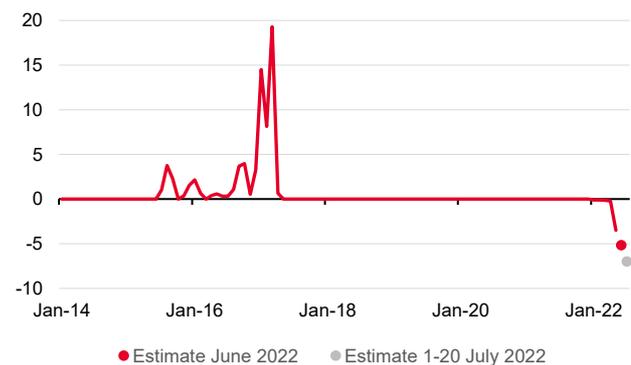
**We assume the CNB will maintain its presence on the foreign exchange market and thus prevent the koruna from depreciating significantly.** Although intervention volumes have been increasing recently, and are unlikely to decline without a further rise in interest rates, for now they are sustainable, at least in the short term, considering the overall "firepower" of the domestic central bank. Given that the economic fundamentals do not favour the appreciation of the Czech koruna this year, we do not expect the CNB to continue to defend a specific level of the exchange rate from Q4 onwards, instead switching to a mode where it will only try to avoid a sharp depreciation that would add fuel to the fire of increased domestic inflationary pressures through more expensive imports. In other words, the central bank will, in our view, only partially combat the gradual depreciation that will result from deteriorating fundamentals. Thus, we think the koruna could weaken towards EURCZK25 at the end of the year, despite continued support from the central bank. Further weakening could follow at the beginning of 2023, towards the level of EURCZK25.25, where we think it would then remain until around mid-2023.

CNB FX reserves



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

CNB spot operations (EURbn)



Source: CNB, Macrobond, Economic and Strategy Research, Komerční banka  
 Note: a positive value means interventions against koruna appreciation and a negative value against depreciation.

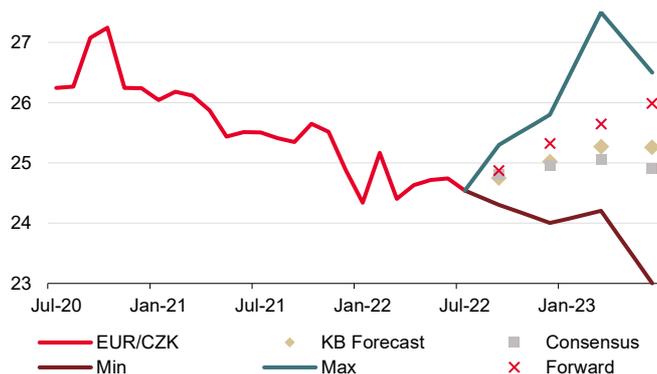
**In our view, a gradual appreciation of the koruna could resume in the second half of 2023.** On our forecasts, this mainly should result from the weakening of the US dollar in connection with fading negative sentiment towards European economies, which will also work towards a stronger koruna. The recovery in foreign trade following the easing of tensions in supply chains and the dampening of the impact of high inflation on demand should also act in the same direction. Overall, we expect the koruna (after weakening in 2H22 and 1H23) to strengthen back towards EURCZK25 by the end of 2023.

Koruna exchange rate forecast (end of period)

	3Q22f	4Q22f	1Q23f	2Q23f
EURCZK	24.75	25.00	25.25	25.25
USDCZK	23.35	22.75	21.95	21.05
EURUSD	1.06	1.10	1.15	1.20

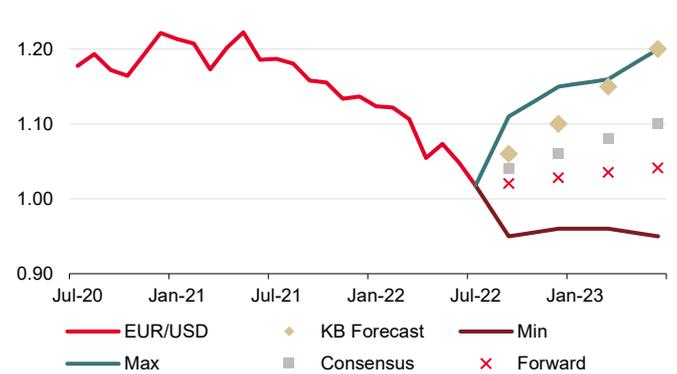
Source: Economic and Strategy Research, Komerční banka, SG Cross Asset Research

Expected EURCZK path, market consensus by Bloomberg (as of 22 July 2022)



Source: Bloomberg, Economic and Strategy Research, Komerční banka

Expected EURUSD path, market consensus by Bloomberg (as of 22 July 2022)



Source: Bloomberg, Economic and Strategy Research, Komerční banka, SG Cross Asset Research

**Risks to the outlook for the koruna are considerable**

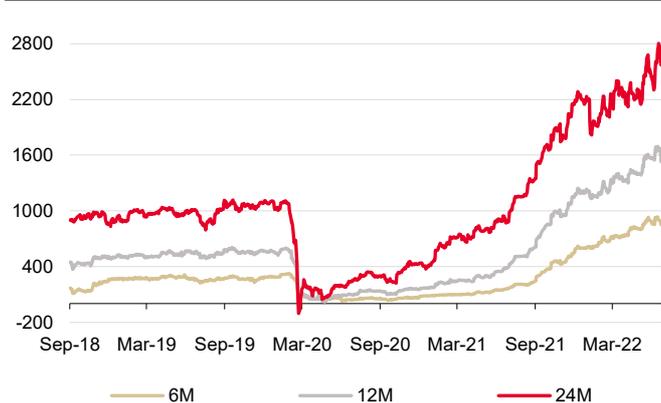
**Our forecast assumes a weaker koruna relative to the market in the range of EURCZK0-20 over a one-year horizon.** A significant risk this year in particular is associated with a possible prolonged outage of Russian gas supplies, which would plunge the European economy, and especially industrial countries highly dependent on Russian supplies, such as the Czech Republic, into recession. We think this would also be associated with increasing pressure on the depreciation of the koruna. And we identify a risk in relation to the new Bank Board and its further monetary policy actions, in the event

it decides either to end FX interventions in favour of the koruna on a one-off basis and/or not to raise interest rates further, given the current rise in interest rates in the region and globally. The koruna could also have to contend with greater depreciation if selling pressure intensifies significantly and the erosion of the CNB's foreign exchange reserves becomes unsustainable. The development of the US dollar, or the speed of monetary policy tightening in the US, also remains a risk.

**Record interest rate differential pushes forward points to new highs**

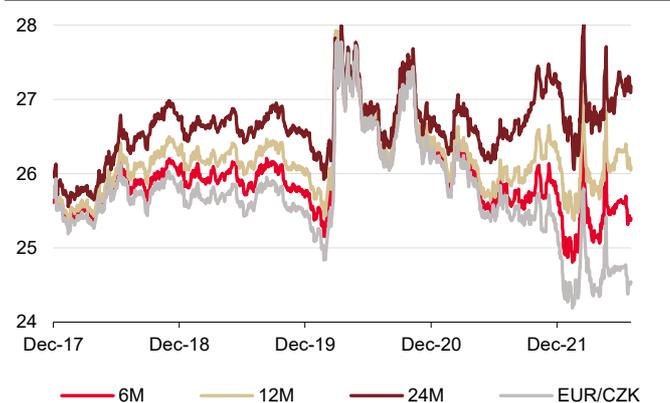
**The interest rate differential against euro rates continues to surpass its previous highs.** This is reflected in forward points. Despite the strengthening of the spot exchange rate due to foreign exchange interventions, the conditions for hedging it against the appreciation of the koruna have improved compared to the beginning of this year. Thus, it is currently possible to get close to EURCZK26.10 on a one-year horizon and EURCZK27.10 in two years. The potential for further depreciation of the forward exchange rate will depend mainly on the CNB's next steps. Given the expected early peak in the interest rate differential and its subsequent gradual closing in combination with a weakening spot rate, in our view, how much depreciation the CNB allows and whether (as we assume) external conditions force it to proceed with further interest rate hikes will be crucial.

Forward points surpass pre-COVID highs



Source: Bloomberg, Economic and Strategy Research, Komerční banka

Forward vs spot exchange rate EURCZK



Source: Bloomberg, Economic and Strategy Research, Komerční banka

## Banking sector



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### Modest cooling of lending activity

The deteriorating economic outlook and higher interest rates should lead to a significant cooling of lending activity across segments in the second half of the year. The swift rise in mortgage loans in the first half of the year due to lower interest rates and expectations of stricter LTV and DSTI requirements should slow down considerably. We have yet to see the rapid rise of residential property prices come to a halt; however, more expensive financing may contribute to the price growth decelerating. Similar to loans, the expansion of deposits should also slow. The adverse economic developments ought to result in a slight increase in the risk as non-performing loans (NPL) rise.

Worsening economic outlook, more expensive financing and deteriorating housing affordability might cool down mortgage loan market.

### Mortgage and real estate markets are expected to slow down.

The price growth of residential property did not slow down in the second quarter. House prices rose by almost 25% year on year as the quarter-on-quarter dynamics accelerated. Affordability, defined as house prices over household income, climbed to one of the highest levels in the EU. Worse affordability, a deteriorating economic outlook, more expensive financing, and stricter mortgage limits should lead to a significant slowdown in mortgage loans. The mortgage segment growth is expected to slow to 8.5% yoy in Q2. The frontloading from earlier in the year will still be reflected in figures for Q2. Stronger demand and frontloading at the beginning of the year should offset the weaker 2H22. Hence, we expect a slowdown to 7.2% yoy following last year's 10% growth.

Given the usually delayed response of the credit cycle and house prices to the real economy, the economy's fall into recession, expected by the end of this year, will most likely be reflected in the credit and house markets in the next two years. Mortgage loans should grow significantly more slowly in 2023 at 2.3%. Meanwhile, following the exorbitant price growth of the last few years, residential property prices are likely to stagnate, leading to improved affordability in real terms.

### Bank loans and deposits (% yoy)

	Q4 21	Q1 22	Q2 22	Q3 22	Q4 22	Q1 23	Q2 23	Q3 23	2021	2022	2023	2024	2025	2026
<b>Bank loans</b>														
<b>Total</b>	7.0	4.4	5.6	7.0	6.1	5.1	6.7	5.2	4.9	5.8	5.4	6.0	6.0	6.0
Households - real estate loans	11.1	11.1	8.5	5.8	3.4	1.2	1.7	2.7	9.9	7.2	2.3	5.8	6.0	5.7
Households - consumer loans	6.5	8.9	6.6	5.6	4.4	1.6	2.5	3.0	3.3	6.4	2.7	6.4	5.9	5.6
Corporate loans	5.8	7.6	6.4	5.2	4.1	2.9	5.2	4.0	0.9	5.8	4.0	5.4	5.6	5.7
<b>Deposits</b>														
<b>Total</b>	6.6	4.7	2.4	4.6	7.3	4.7	7.7	4.9	8.3	4.7	5.7	5.1	4.7	5.0
Households	7.0	4.1	3.1	3.0	3.0	3.6	4.0	3.8	10.2	3.3	4.1	5.5	4.9	5.1
Non-financial corporations	7.5	8.1	5.1	4.5	8.7	4.2	6.4	7.7	8.3	6.6	5.9	5.5	4.9	5.2
Others	4.6	3.4	-0.9	7.4	16.8	7.1	15.9	4.7	4.9	6.7	8.4	4.2	4.2	4.7
<b>Ratios</b>														
<b>Loans/GDP</b>	63.0	62.6	60.3	60.5	58.9	57.8	57.1	56.9	63.5	60.6	56.9	55.1	54.6	55.2
<b>Deposits/GDP</b>	90.1	98.4	92.5	93.1	85.2	90.6	88.4	87.3	97.7	92.3	86.9	83.4	81.8	81.8
<b>Loans/deposits</b>	69.9	63.6	65.2	65.0	69.2	63.8	64.6	65.2	65.1	65.7	65.5	66.1	66.9	67.5
<b>Interest rates</b>														
<b>Real estate loans</b>	2.9	3.8	4.7	5.0	5.1	4.9	4.6	4.3	2.4	4.7	4.4	3.6	3.4	3.4
<b>Consumer loans</b>	7.9	8.2	8.8	9.8	11.0	11.6	11.9	11.7	7.4	9.4	11.6	10.0	9.1	9.3
<b>Corporate loans</b>	4.4	6.2	8.4	8.7	9.2	8.8	8.1	7.3	2.4	8.1	7.7	5.0	4.4	4.3
<b>Share of NPL</b>														
<b>Real estate loans</b>	0.9	0.8	0.8	0.9	0.9	1.2	1.3	1.5	1.0	0.9	1.4	1.7	1.8	1.8
<b>Consumer loans</b>	4.7	4.3	4.1	4.6	4.9	5.3	6.1	6.7	5.2	4.5	6.3	8.2	7.9	7.9
<b>Corporate loans</b>	3.8	3.7	3.7	3.8	4.1	4.7	5.3	5.6	4.1	3.8	5.3	5.5	4.9	4.2

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

Eroding consumer sentiment signals slowdown of consumer financing.

### Consumer financing will take a turn for the worse

**The deteriorating economic outlook, eroding consumer sentiment and signs of weakening household consumption signal a slowdown in the pace of consumer credit growth.** On the other hand, a tight labour market should continue to exert upward pressure on wages. In nominal terms, higher personal costs due to the higher inflation will also be reflected. In view of the negative economic developments expected for the rest of the year and the persistence of higher interest rates, we expect weakening quarter-on-quarter dynamics for this year and, overall, significantly lower growth of 2.7% for 2023.

Companies will re-evaluate medium- and long-term investments, cooling down loan activity in the meantime.

### Non-financial firms to reconsider long-term financing

**We estimate that credit growth to non-financial corporations for this year will be 5.8%, markedly lower than our previous estimate of 8.6%.** Despite relatively strong demand for financing in Q1, we expect corporate investment activity to moderate for the rest of the year given the worse economic outlook. Supply chain problems and high increase in input prices will result in more operational financing. However, this will be counterbalanced by weaker demand for medium- and long-term investment loans. Assuming the above-mentioned factors and interest rates remain at higher levels for longer, we are lowering our forecast for this year and expect only 4% average growth for next year.

In line with loans, deposit expansion is likely to wind down.

### Deposits growth, in line with loan activity, is expected to slow down

While better appreciation of deposits, higher nominal wages and a delayed drawdown of frontloaded mortgages should contribute to the expansion of deposits, deteriorating financials of households ravaged by high inflation should partially counterbalance the effects. Moreover, weaker loan activity across segments should also hamper deposit growth. We expect deposits to grow by 4.7% this year, while for next year we estimate 5.7%, which is more or less consistent with the loan growth.

In the near term, a slight increase in risk is expected.

### Economic slowdown signals modest increase in risk

**Following the downward trajectory of non-performing loans (NPL) since last year, we see upside risks for further development.** After the pandemic-induced spike in NPLs, the ratio arrived in May at a record-low level of 2.2%, and to less than 1% in the mortgage segment. Nonetheless, higher interest costs and the economic slowdown should push default rates a little higher, primarily in the coming year. However, the levels to which NPLs should rise would not pose a significant risk to the financial sector, especially considering the current low levels of NPLs and the resilience of the domestic banking sector.

## Key economic indicators

### Macroeconomic indicators – long-term outlook

		2019	2020	2021	2022	2023	2024	2025	2026
GDP	real, %	3.0	-5.5	3.5	2.5	1.7	4.7	3.4	2.9
Inflation	average, %	2.8	3.2	3.8	16.8	11.2	2.5	2.1	2.3
Current account	% of GDP	0.3	2.0	-0.8	-4.3	-2.5	-1.2	-0.6	-0.2
3M PRIBOR	average, %	2.1	0.9	1.1	6.4	6.1	3.6	3.3	3.3
EUR/CZK	average	25.7	26.5	25.6	24.7	25.2	24.5	24.2	24.2
USD/CZK	average	22.9	23.2	21.7	22.9	21.3	19.8	19.2	18.5

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

Note: KB forecasts are in red

### FX & interest-rate outlook

		26-07-2022	Sep.22	Dec.22	Mar.23	Jun.23	Sep.23
EUR/CZK	end of period	24.6	24.75	25.00	25.25	25.25	25.15
USD/EUR	end of period	1.02	1.06	1.10	1.15	1.20	1.21
CZK/USD	end of period	24.1	23.35	22.75	21.95	21.05	20.80
3M PRIBOR	end of period, %	7.32	7.20	7.70	6.80	6.15	5.40
10Y IRS	end of period, %	4.68	4.95	4.95	4.75	4.35	4.05

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

Note: KB forecasts are in red

### Monthly macroeconomic data

		X-21	XI-21	XII-21	I-22	II-22	III-22	IV-22	V-22	VI-22
Inflation (CPI)	%, mom	1.0	0.2	0.4	4.4	1.3	1.7	1.8	1.8	1.6
Inflation (CPI)	%, yoy	5.8	6.0	6.6	9.9	11.1	12.7	14.2	16.0	17.2
Producer prices (PPI)	%, mom	1.9	1.2	-0.1	6.9	2.2	4.2	2.3	1.9	1.4
Producer prices (PPI)	%, yoy	11.6	13.5	13.2	19.4	21.3	24.7	26.6	27.9	28.5
Unemployment rate	% (MLSA)	3.4	3.3	3.5	3.6	3.5	3.4	3.3	3.2	3.1
Industrial sales	%, yoy, c.p.	-7.8	4.2	0.9	3.9	-1.0	-1.4	-6.4	6.3	n.a.
Industrial production	%, yoy, c.p.	-6.1	11.0	8.3	15.8	8.8	7.2	1.9	19.4	n.a.
Construction output	%, yoy, c.p.	1.1	5.5	11.3	5.4	16.7	8.8	2.6	4.6	n.a.
External trade	CZKbn (national met.)	-16.5	4.2	-16.3	7.6	-5.3	-12.1	-27.0	-23.3	n.a.
Current account	CZKbn	-14.5	-12.0	-27.3	10.0	-7.8	-10.0	-10.2	-22.8	n.a.
Financial account	CZKbn	-11.3	-39.3	20.1	-12.4	-30.3	22.4	-32.5	10.4	n.a.
M2 growth	%, yoy	8.2	8.0	7.3	6.9	6.1	5.9	5.6	6.2	n.a.
State budget	CZKbn (YTD cum.)	-335.0	-401.5	-419.7	3.9	-45.3	-59.1	-100.1	-189.3	-183.0
PRIBOR 3M	%, average	2.02	2.97	3.50	4.21	4.69	4.86	5.36	5.97	6.64
EUR/CZK	average	25.5	25.4	25.2	24.5	24.5	25.0	24.4	24.8	24.7
USD/CZK	average	22.0	22.3	22.3	21.6	21.6	22.7	22.6	23.4	23.4

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

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