Czech Economic Quarterly

December 17, 2021

On a rocky road

- In 3Q21, real GDP added (SA) 1.5% qoq, slowing the yoy dynamic to 3.1%. Private consumption continued to grow strongly (4.3% qoq, 6.4% yoy), while government consumption rebounded again (2.6% qoq, 5.0% yoy). However, fixed capital formation was barely growing (0.7% yoy). Inventory accummulation was extreme, adding 6.0 pp to GDP, which was counter-balanced by net exports subtracting 7.1 pp from GDP.

- The October breakdown of output in Skoda Auto and the autumn covid-19 wave appear to have a limited impact on the overall activity in 4Q21. The new Omicron variant is believed to be no game changer either. Inflation is expected to post 6.7% yoy in December but may start dragging consumption only with a delay. Overall, we estimate 4Q21 GDP at -0.8% qoq and 1.6% yoy.

- The inflation wave is set to drive private consumption initially upwards (as households try to speed up their purchases) but falling purchasing power could dent consumer spending in 2022. With consumers' capability to drive economic growth reduced, fixed capital formation should take over as the main engine. Full-2022 GDP expansion is projected at 3.0%, one percentage point lower than assumed three months ago.

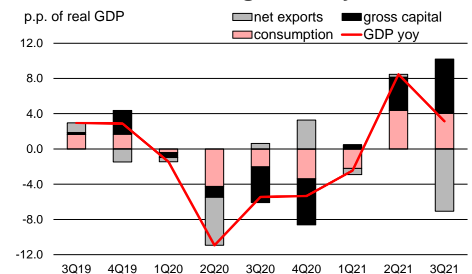
- Following the December repo rate hike, which we expect to bring the repo rate to 3.50%, interest rates are believed to be close to a peak in the cycle. The ČNB's autumn forecast assumed a final 25bp repo rate hike in 1Q22, followed by roughly 50bp of cuts in the remainder of the year. While we see the repo rate hike to 3.75% in February as conceivable, we are much less confident that policy easing will start indeed as soon as 2022.

REAL GDP (CONSTANT PRICES OF 2010, ADJUSTED)

	3Q21		2Q21 revised	
	YoY change	% of change in GDP*	YoY change	% of change in GDP*
GDP total	**3.1**	**3.1**	**8.5**	**8.5**
Household consumption (%)	6.4	2.9	8.1	3.7
Government consumption (%)	5.0	1.1	2.7	0.6
Fixed capital formation (%)	0.7	0.2	1.6	0.4
Change in inventories	-	6.0	-	3.4
Net exports	-	-7.1	-	0.3

Source: Czech Statistical Office. Calculations: UCB CZ.
**/ Real GDP in the same period of previous year*
Remark: The national accounts are based on chain-linked data, which introduces a discrepancy between GDP and real demand components.

Breakdown of GDP growth by demand*



*/ Contributions to real GDP growth in percentage points
Sources: CZSO, UniCredit Research.

Net exports stood fully behind a deterioration in the GDP yoy dynamic from 2Q21 to 3Q21. Its negative contribution, at 7.1pp of GDP, was largely compensated by a rise in gross capital, worth 6.2pp of GDP. (However, an overwhelming share of gross capital formation was due to an inventory accumulation.) Consumption was the only demand-side component with stable growth.

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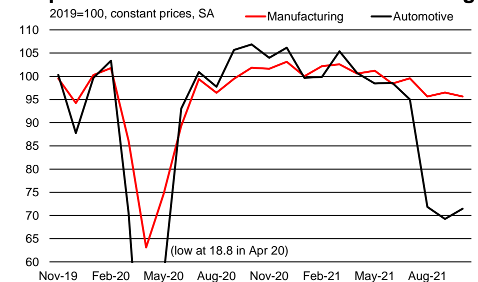
3Q21: AN EXTREME INVENTORY ACCUMMULATION

In 3Q21, real GDP added (SA) 1.5% qoq, slowing the yoy dynamic to 3.1%. Private consumption continued to grow strongly (4.3% qoq, 6.4% yoy), while government consumption rebounded again (2.6% qoq, 5.0% yoy). However, fixed capital formation was barely growing (0.7% yoy), as investments in machinery and in infrastructure contracted. Inventory accummulation was extreme, adding 6.0 pp to GDP, which was counter-balanced by net exports subtracting 7.1 pp from GDP. Real exports dipped by 2.3% yoy (of which exports of goods falling by as much as 4.5% yoy), while imports rose 8.3% yoy. Nominal GDP expanded by 7.8% yoy on GDP deflator adding 4.6% yoy (unlike in previous periods, driven by rising domestic prices and not by improving terms of foreign trade). From the production side, the key areas of growth included transport and trade; and financial activities, whereas manufacturing; and real estate activities posted stagnation. The employment accelerated to 0.6% yoy with hours worked ticking up by 0.5% yoy. This implies real productivity growth of 2.5% yoy per worker and 2.6% yoy per hour. Wages and salaries were higher by 7.4% yoy with average wages up 5.7% yoy.

The inventory accummulation recorded an all-time high not only for 3Q21 as an individual quarter but also for three quarters since the start of 2021. In a typical year, economic subjects accumulate CZK 20bn of inventories over 1Q-3Q. This year, the amount topped 165bn. We identified three major causes of the development. CZK 20bn was due to energies and commodities becoming more expensive in yoy terms. Up to CZK 50bn could be booked as unfinished passenger cars waiting for a delivery of chips. The remining share (still more than half of total) is attributable to structural changes in the output process, in which businesses must rely more than previously on their own inventory stock, in order to mitigate frequent disruptions of deliveries from their suppliers.

Output in automotive and total manufacturing



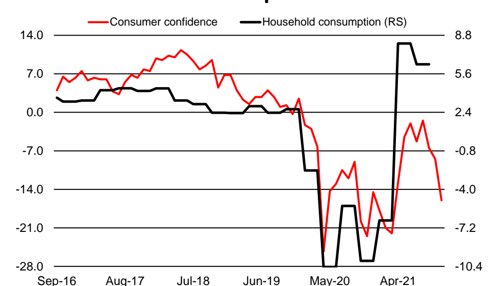
Sources: CZSO, UniCredit Research.

The automotive sector appears to be the only part of manufacturing in deep trouble since mid-2021. The situation contrasts with early 2020 when most sectors were facing a sharp, though short-term contraction of output.

4Q21: THE END BETTER THAN THE BEGINNING

Two major headwinds – the October breakdown of output in Skoda Auto and the autumn covid-19 wave – appear to have a limited impact on the overall activity. October industrial output came in at (SA) -4.9% yoy with only the automotive and related sectors contracting. Global demand remains firm, with bottlenecks concentrating on the supply side. There are no reports of businesses discontinuing their production because of high prices of raw materials or energies. Slightly more positive outcomes are thus expected for industrial output in November and December. Construction output added (SA) 3.9% yoy in October and we expect a similar result for the whole quarter. Calendar-adjusted retail sales expanded by 7.2% yoy in October, with only moderately lower readings projected for November and December. Private consumption may be hit by a ban on providing services to unvaccinated people, but macroeconomic restrictions look less severe compared to 4Q20. The new Omicron variant is believed to be no game changer in the economy. Inflation is expected to post 6.7% yoy in December but may start dragging consumption only with a delay. Overall, we estimate GDP at -0.8% qoq and 1.6% yoy in 4Q21.

Consumer confidence and private consumption



Sources: CZSO, UniCredit Research.

Consumer confidence continues to lead the dynamic of household consumption. However, since 2Q21, pent-up demand has emerged as a new factor bolstering consumption. We expect the same factor to be at play in 4Q21. Household consumption will show respectable yoy growth.

2022: TOUGH TIMES FOR CONSUMERS

Our fear that global supply-side constraints would offset optimistic household spending proved unfounded. On the one hand, **global demand** is forecast to remain solid, which facilitates an easier pass-through of higher input prices to the prices of final output.

However, **headline inflation** wave is set to peak higher than previously thought (we pencil in 8.3% yoy in January 2022), with domestic factors responsible for at least half of the price increase. This has driven **private consumption** initially upwards (as households try to speed up their purchases) but falling purchasing power could dent consumer spending in 2022. **Average wages** are not projected to exceed their pace of growth from 2021 (estimated at 6.7%), while **average inflation** may hit 6.9%. Income tax cuts are not under consideration, while the **minimum wage** will be increased by 6.6%, much less than in past years. As a result, households will have to work more hours or tap their extra savings from 2020-21 to boost their spending in 2022. Only part of them will do. Thus, **real private consumption** is seen expanding by a modest 2.0%.

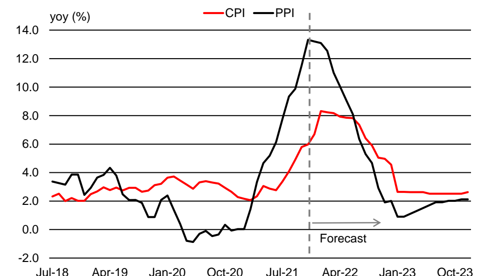
With consumers contributing less to economic growth, **fixed capital formation** should take over as the main engine, pushing **GDP growth** to 3.0% in 2022 and 4.2% in 2023. First, companies are expected to boost **productivity** by investing more in machinery and equipment. After two years of capex decline, the low base will enhance the growth rate. Second, the expansion of **investment into dwellings** is set to continue for a while, as housing starts are still increasing. Third, the stock of unfinished **infrastructure projects** remains high. Infrastructure investment declined by almost 5% yoy in 1Q21-3Q21, which we attribute to insufficient construction capacities and, possibly, negotiations on price adjustments for projects signed before a sharp increase in input prices. Fourth, funding from the Next Generation EU has started and may speed up **green investment**, which have been rather small in Czechia. Altogether, we expect fixed capital formation to expand by 9.5% in 2022 and 6.3% in 2023.

The pre-pandemic GDP level could be reached in 4Q22. The recovery is expected to accelerate from 2H22 onwards, but the overall 2022 growth may still be 1pp lower than projected three months ago.

MONETARY POLICY: NEARING THE PEAK

Following the December repo rate hike, which we expect to bring the repo rate to 3.50%, interest rates are believed to be close to a peak in the cycle. The ČNB's autumn forecast assumes a final 25bp repo rate hike in 1Q22, followed by roughly 50bp of cuts in the remainder of the year. We expect the key assumptions from last autumn to stay intact in the CNB's February forecast. The short-term inflation outlook could be pushed somewhat higher, but that may not necessarily affect the interest rate path if additional inflation arrives from regulated prices, rather than core items. We are nevertheless much less confident that policy easing will start in 2022. For rate cuts to be justified in the environment of GDP growth and full employment, either the fiscal impulse would have to turn negative,

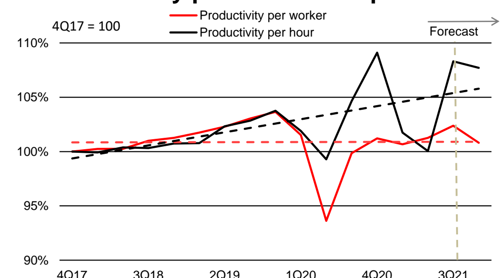
Consumer and producer prices



Sources: CZSO, UniCredit Research.

With oil prices lately shifting slightly lower, PPI could be peaking at the end of 2021. The consumer price inflation will in contrast see its peak only in first months of 2022. Our baseline scenario counts on the inflation wave subsiding without large second-round effects extending through 2023. Admittedly, such an outlook is not without a risk.

Productivity per worker and per hour



Sources: CZSO, UniCredit Research.

Slow productivity growth was characteristic already for the pre-pandemic period. Since 2020, per-hour productivity has maintained its unimpressive pace of growth while per-worker productivity has ceased to expand entirely. We suspect that not only the pandemic but also the tight labor market is to blame.

or the koruna would have to appreciate meaningfully. The former condition may hopefully be achieved in 2023, but this may be cleared in a year from now. Meeting the latter condition would probably be contingent to the Czech economy growing faster than the rest of Europe, which we are not expecting for 2022. The rising CZK-EUR interest rate differential alone may not be a sufficient driver for a CZK appreciation when global flows remain negative for EUR-USD. Our target year-end EUR-CZK rate at 24.60 would be viewed as disappointing by the ČNB, which projects 24.20.

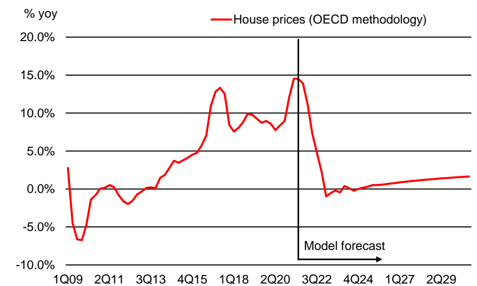
FOCUS: ARE HOUSE PRICES GOING TO FALL?

In the spring of 2021, we started to publish the *House-market-pressure indicator*, which captures the attractiveness of investment into residential real estate from the point of view of two types of investors: "home seekers" and "savers". When adjusted rental yield exceeds mortgage fixed rate, home seekers will tend to prefer buying their own house, while lower bond yields relative to rental yield motivate savers to invest into houses. Differences between rental yields and bond yields are historically correlated with house price dynamics. In recent months, bond yield jumped quickly above the adjusted rental yield, making investment into houses unattractive in the view of our indicator. This should lead to decelerating or even declining house prices, but the timing of that process is a big question. The demand for houses could still be heavily stimulated by the trust in continuous prices growth, outweighing the "rational" calculations.

To investigate potential dynamics of house prices, we constructed a simple model based on the following logic: First, in the long run, the rental yield should adjust to the path of long-term bond yields due to an arbitrage behavior of the players mentioned above. Second, the path of rents should not diverge from the path of inflation or nominal wages, which determine the ability of households to pay rents. House prices are then assumed to be a residual outcome of both processes. As Czech data series are not long enough, we used panel data for 32 countries, with some countries being covered since 1972 in the OECD database. Panel tests verified our assumptions (i.e. long-term equilibrium relationships between rental and bond yields, as well as between rents and inflation or wages). The estimated general empirical relationships (VAR models) were then filled with Czech data and our baseline assumptions: 10Y government bond yield and headline inflation converging to 3.0% and 2.6% steady states, respectively. Wages were not included in the final model, as inflation performed well standing alone.

The outcome suggests that the dynamics of house prices should gradually decelerate, reaching zero in 1Q23, dropping slightly lower into a negative territory, and then moving slowly up, but remaining well below inflation until 2030. How realistic are these outcomes? Of course, many local specific factors will play a role. However, two aspects are believed to be in favor of the described trend. First, house prices in recent years were undoubtedly driven by unprecedented low interest rates which are now gone. Second, new restrictive measures of the CNB regarding availability of mortgages are to be imposed from April 2022.

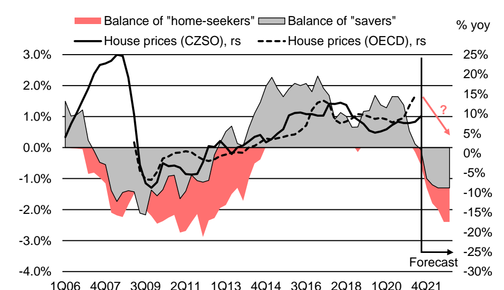
House prices in Czechia – history and model forecast



Sources: UniCredit Research, OECD

Sharply rising interest rates, represented by 10Y government bond yield, made investments into residential property market unattractive in the eyes of "savers". Capturing global long-term equilibrium relationships between interest rates, rents, house prices and inflation, our model suggests that house prices could decelerate sharply already in 2022. However, due to other factors at play, the uncertainty of such prediction is high, with a 95% confidence bound being as wide as +/-10pp.

House market in the viewpoint of "home-seekers" and "savers"



Sources: CZSO, OECD, UniCredit Research.

Over last six years, mortgage interest rates below adjusted rental yield were maintaining houses as an attractive investment in the eyes of "home-seekers", while low government bond yields were making houses profitable in the eyes of "savers". Low interest rates are gone by now, with rental yield remaining depressed. This suggests a potential drop in investment demand may follow, leading to a deceleration of house prices.

Czechia Macroeconomic Outlook

	2019	2020	2021 forecast	2022 forecast	2023 forecast
GDP growth (real yoy change, %)	3.0	-6.4	2.4	3.0	4.2
Household consumption (real yoy change, %)	2.6	-6.8	3.4	2.0	3.4
Gross fixed capital formation (real yoy change, %)	5.9	-7.2	1.5	9.5	6.3
Industrial output (real yoy change, %)	-0.2	-7.2	9.5	4.0	5.0
Unemployment rate (average, %)	2.8	3.6	3.8	3.6	3.4
Inflation rate (CPI yoy change, average, %)	2.8	3.2	3.8	6.9	2.6
Average wages (nominal yoy change, %)	7.9	3.1	6.6	6.4	6.0
Interest rates (3-M PRIBOR, end of period, %)	2.18	0.35	3.35	3.55	2.85
Interest rates (3-M PRIBOR, average, %)	2.12	0.86	1.15	3.55	3.15
EUR/CZK exchange rate (end of period)	25.41	26.25	25.20	24.60	24.40
EUR/CZK exchange rate (average)	25.67	26.44	25.65	24.90	24.50
Current account balance (% of GDP)	0.3	3.6	-0.3	0.2	0.8
FDI net inflow (% of GDP)	2.4	1.3	0.7	1.1	1.3
General government balance (% of GDP)*	0.3	-5.6	-7.3	-5.0	-4.0
Public debt (% of GDP)	30.0	37.7	42.6	44.4	45.4

Remarks:
**/ ESA 2010 definition.*
Sources: Czech National Bank, Czech Statistical Office.
Forecasts: UniCredit Bank CZ.

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