| Quarterly report |

Czech Economic Outlook

Investment strikes back

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- **Czech economy accelerates** The Czech economy has entered the late expansion phase and GDP growth is accelerating. We expect it to reach its second-fastest pace of the last ten years. Although we see a minor slowdown next year, the expected investment boom should ensure a still decent level of growth.
- **Wages are set to grow and propel price growth** The shortage of workers is even greater than before. This is feeding wage growth which is keeping pricing pressures strong. Headline inflation should remain close to 2% even in 2018.
- **CNB will hike once per quarter** The CNB is not set to follow its forecast blindly. We believe it will use the current economic expansion to proceed with rates normalisation. We expect it will hike once per quarter until the end of 2018.
- **The koruna will continue its long-term appreciation trend** The exchange rate should break the level of EUR/CZK25 by end 2018. We expect the ongoing normalisation in the forward market to continue.
- **Increase in government spending and investment** Next year, the economy is set to see further fiscal stimulus, as the central government budget deficit is targeted at CZK50bn, and an even deeper deficit is possible. Bond yields and CZK IRS are set to increase further in 2018.


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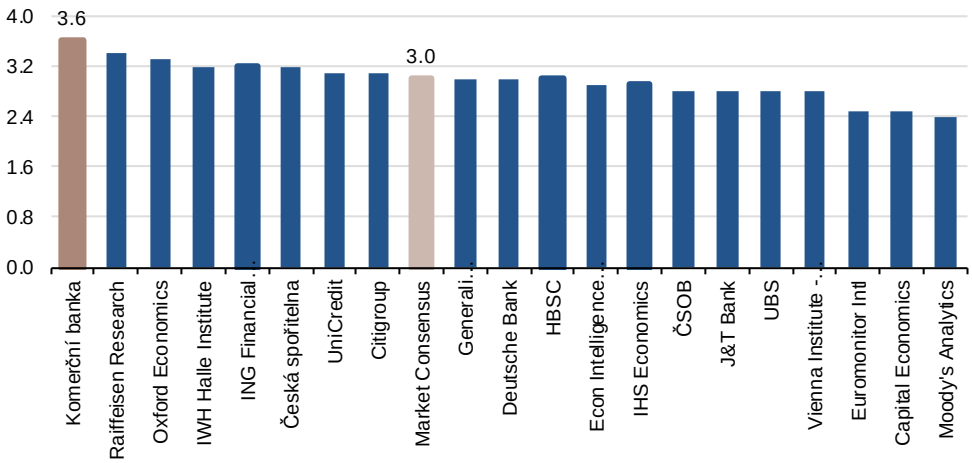
The height of the party is near

In the preceding issue of the *Czech Economic Outlook* we stuck our necks out. **Our growth forecast for this year was the most optimistic in the market.** We were one of the very few to expect this year's two rate hikes and, during the autumn, we hoped the koruna would strengthen to somewhere in the EUR/CZK25.50-25.70 territory.

And yes, in 2Q, we were compelled to make some revisions to our outlook for this year's growth – but for the better! Final data on the national accounts for the second quarter of this year clearly indicate that the Czech economy's qoq growth was the strongest ever in that period. And what we emphasised in the preceding *Czech Economic Outlook* issue is true, namely that growth is visible all around us. Employment is at a record high and wages have been rising at the fastest pace over the past decade, supporting consumer spending. Inflation is hovering around the upper limit of the CNB's tolerance zone. And while after the August rate hike only very few people, apart from us, believed in a further hike this year, at present almost no one has any doubt about a November tightening.

Our forecast for growth of the Czech economy in 2018 is the most optimistic in the market



Source: September issue of Consensus Forecast; most current forecast for KB

There is no question that this year will be very strong from a macroeconomic perspective. Disregarding 2015, which was special because all the funds from the preceding programming period had to be drawn down, this year the Czech economy is set to grow at the fastest pace for the past ten years. That said, what should we expect from 2018? Increasing wages eroding company profit margins indicate that the Czech economy has entered the maturity stage of the growth cycle. Indeed, the economy will grow at a somewhat slower pace in 2018. But the likelihood of a recession is minimal. In fact, 2018 will be a sort of a déjà-vu of 2015. As Viktor Zeisel analyses in his section of this *Czech Economic Outlook*, owing to the n+3 rule, an investment boom can be expected next year thanks to projects co-financed with EU money.

However, this time of plenty will not last forever; economic cycles are a fact of life. In her analysis of the external environment, Jana Steckerová demonstrates that the US in particular has already reached the advanced expansion stage. A number of signals point to the end of this stage: unemployment in the US is extremely low, company profit margins are declining, and the US household savings rate is dropping quickly. If Donald Trump fails to deliver the

promised fiscal stimulus in the form of lower taxes, a recession may arrive as early as 2018. And when the US sneezes, Europe quickly ends up feverish.

Thus, it is during this time of expansion in the Czech Republic that we must consider what will happen when the Czech economy slows down or even falls into a recession. Special boxes in this *Czech Economic Outlook* seek to provide answers to at least some of the questions surrounding the arrival of a recession. David Kocourek, who has shifted towards sector analysis in his line of activity, discusses the increasingly prominent role of the automotive industry in the Czech economy. Unfortunately, this industry is heavily cyclical. How, then, will economic policies tackle a potential recession? Viktor Zeisel clearly documents that the CNB has the instruments to fight recession and will not shy away from using them. We expect four rate hikes next year and one more in early 2019. So there will be a level from which to go down. Experience from the last recession shows that the CNB will not hesitate to weaken the koruna. But, it is more likely that a worried market, flooded by a large surplus of koruna-denominated liquidity, will do the work for the CNB.

Contents

External Environment and Assumptions

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Economic cycle entering mature phase

The US economy is already in the mature phase of the current cycle. The approval or not of the proposed tax reforms will determine how long this phase will last. Also, the euro area economy is doing well. As a result, the ECB will now be able to gradually reduce its quantitative easing program, which should help the euro strengthen against the dollar. Growth also spreads into the CEE region. The main driver of expansion remains household consumption, but investment is also seeing an upturn.

United States: Another rate hike in December

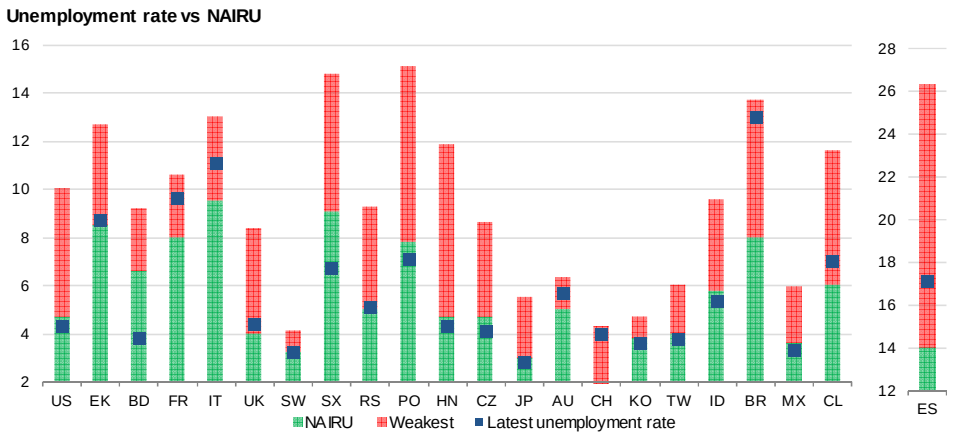
Domestic demand remains the key driver of US GDP growth.

In 2Q17, the US economy added 3.1% qoq, annualized. Household consumption, in particular, has contributed to this growth. The tight situation on the labour market, the falling saving rate and the relatively high demand on consumer loans suggest that consumption is likely to remain the driver of the US economy for the time being. In addition, household balance sheets will be boosted by planned tax cuts. Corporate investment is likely to contribute more to GDP growth this year, thanks primarily to revitalized investment activity in the energy sector. Net exports will represent a minor drag this year and next. According to SG economists, US GDP will grow by 2.1% this year, after last year's 1.5%. The GDP dynamic should be similar in 2018. Box 1 below discusses the current stage of the US economic cycle and the prospects from here.

BOX 1: US economic cycle is in the late phase

The current expansion in the United States began in June 2009 and is already the third-longest in US history. In February 2018, it would be the second-longest in terms of length and it would match the longest expansion in May 2019. Then recession would set in, according to SG economists. Unemployment rates are a good indicator of which stage the global economic cycle is currently experiencing. The unemployment rate is already below the NAIRU as shown in the chart below.

Unemployment rate vs NAIRU



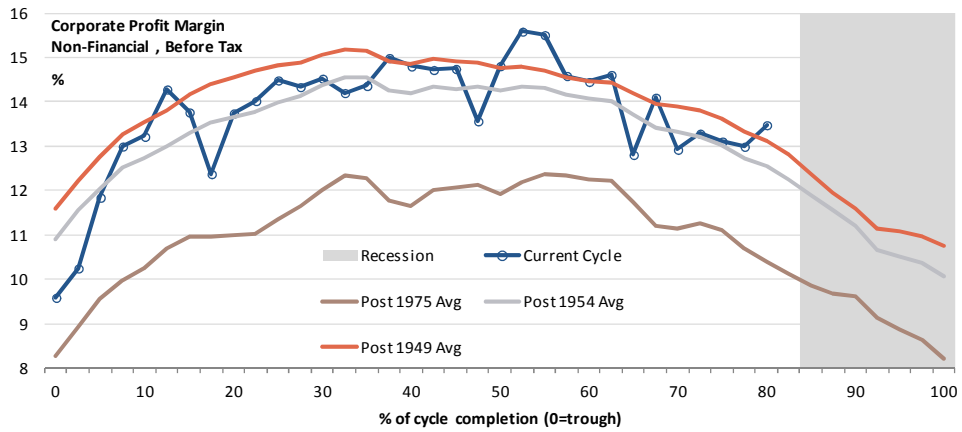
Source: Datastream, SG Cross Asset Research/Economics

This chart shows that many countries are already in the late stage of expansion, which is true also for the US. The unemployment rate falling below the NAIRU is usually associated with

marked wage growth, accelerating inflation and an increase in interest rates. This creates pressure on company margins, investment declines and economic growth decelerates.

Consequently, profit margins are another good indicator of which stage in the cycle the economy finds itself. In 2Q17, profit margins in the US surprised with an upturn, but this was caused by temporary increase in productivity. Over the coming quarters, unit labour costs will rise in our view, which will likely mean a further decline in profit margins.

United States: profit margins and economic cycle



Source: Datastream, Haver analytics, SG Cross Asset Research/Economics

The maturity in the US cycle can also be seen in the household saving rate, which has already declined substantially.

The US cycle is showing clear signs of maturity and the economy is set for a recession from 2H19, in our view. Recession in the US will gradually spill over into the euro area and the Czech Republic will not be immune to the effects. The biggest risk to our projections is that Donald Tramp will not be able to enforce any tax cuts. We assign a 30% probability to this scenario. This would mean recession beginning in the US as early as 2H18. Correspondingly, there would be with an earlier slowdown in the euro area and Czech Republic economies.

Another rate hike before the end of the year.

The US central bank (the Fed) kept interest rates unchanged in September (at 1.0-1.25%), but announced its plans for balance sheet normalisation. Taking effect from October, the Fed gradually reduces the amount of maturing bonds in its portfolio to be reinvested. From October, reinvestments will be USD10bn lower. At the same time, the Fed released its new outlook. Despite the recent hurricanes, this year's GDP growth forecast was revised upward from 2.2% to 2.4%. For 2018, expected growth remained unchanged at 2.1%. The inflationary outlook also sounded quite positive. The core PCE deflator, the Fed's preferred inflation indicator, was revised down only slightly for next year (from 2.0% to 1.9%). The median of interest rates remained unchanged. The Fed assumes one rate hike this year and three hikes next year. This is in line with our forecast of a rate hike at the end of this year (12-13 December) and three hikes in 2018.

Next year we expect EUR/USD to strengthen to 1.27.

The Fed's hawkish rhetoric, together with the hope that Donald Trump will be able to enforce tax cuts to some extent, has helped the dollar return below EUR/USD1.20. The exchange rate should be traded at EUR/USD1.18 at the end of this year, according to SG economists. Next year, however, we expect the euro to strengthen again given the reduction

in the quantitative easing programme in the euro area. We see the euro against the dollar at EUR/USD1.27 at the end of 2018.

Euro area: first rate hike in March 2019

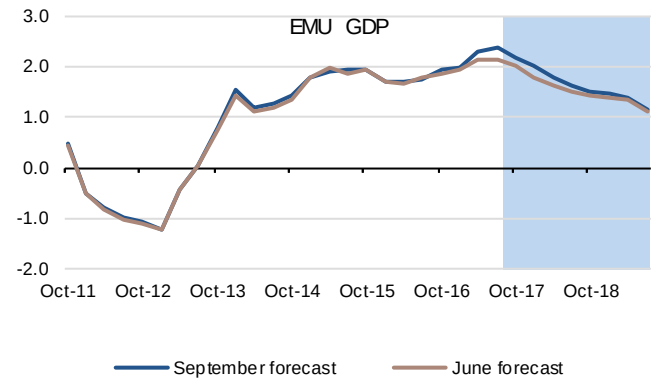
Economic activity is likely to decelerate in 2018-19.

We look for GDP growth of 2.2% in the euro area this year. Despite the recent euro appreciation, the euro area has been benefiting from a global trade recovery. This should prompt a positive contribution of net exports to GDP growth. The most important contributor is set to remain domestic demand; however, investments also likely will continue to make significant contributions (+0.5pp in 2017 and 2018). Economic activity is likely to decelerate in 2018-19 and move closer to potential as: 1) the ECB will reduce the QE programme, 2) the negative impacts of Brexit will be visible, and 3) the US is set for a recession from 2H19 (box 1). As a result, there likely will be greater pressure on euro area countries to make structural reforms when the ECB tapers.

First rate hike in March 2019.

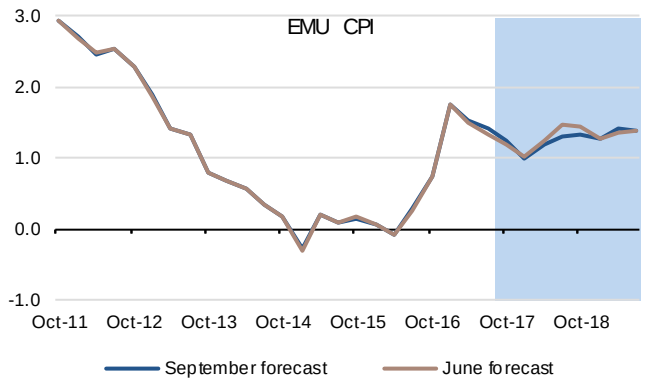
We have changed our call on the ECB. Our previous forecast was for the extension of the programme for six months based on a volume of EUR40bn followed by a EUR10bn reduction every quarter. **We now expect the ECB to extend the QE programme for nine months, reducing the volume of its purchases to EUR25bn per month from January 2018.** We then expect the programme to come to an end, although the ECB is unlikely to announce this at the October meeting. It is more likely to leave the door open for more QE thereafter if needed. The ECB seems convinced of the benefits of not depleting the limited bond universe, allowing it to remain in the market for longer, which is a key reason for our change. Stronger GDP growth in the euro area allows a recalibration of the QE programme. We still expect the first rate hike in March 2019 followed by another in June 2019.

Euro area: GDP growth revised up (%, yoy)



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

Euro area: Inflation (%, yoy)



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

Germany: the highest GDP growth since 2011

Leading indicators are consistent with solid GDP growth.

In September, German industrial production and factory orders substantially surpassed expectations, while PMI readings also beat market expectations. According to SG economists, the growth of leading indicators would be consistent with GDP growth of 0.5% qoq in 3Q17, and possibly even stronger growth in 4Q17. In 2017, we forecast GDP to add 2.1% y/y (after the seasonal adjustment), which would be the strongest pace since 2011.

Political scene will be more fragmented. Finding compromises will be a challenge.

In the German elections, the CDU won 33% of the vote, while the SPD took second place with 20%, and moved to the opposition. For the first time, right-wing, populist party AfD got into the Bundestag. The CDU will negotiate a potential coalition with the liberal FDP (10.4%) and

the Greens (9.5%). Nevertheless, finding compromises will not be easy. According to SG economists, one of the new government's priorities should be an effort to maintain the momentum of domestic demand and gradually reduce the reliance on exports. Greater investment in infrastructure and energy, structurally higher wage growth and the easing of regulations in the services sector could help to achieve this target. The European agenda is likely to be another priority.

CEE region: tight labour market pushes wages up

Solid GDP growth set to continue, investment to revive.

GDP growth in the CEE region surpassed expectations in 2Q17. The common denominator remained household consumption, which benefits from the exceptionally good situation on the labour market. The unemployment rate is historically low in the region, which pushes wages up. In addition, the rise in the minimum wage helped (it was raised by 15% for unskilled employees and 25% for skilled employees in Hungary this year; it will be raised by 11% in the Czech Republic in 2018, and is expected to be increased by 5% in Poland). Wage dynamics are also affected by wage hikes in the public sector, which then impact the private sector. Nevertheless, despite rising wages, finding a suitable labour force in the region is a problem. This can partially be resolved by the recruitment of foreign workers, which is particularly the case in Poland (more than 700,000 Ukrainians worked there in 2016). However, in other countries, especially the Czech Republic and Hungary, the tight labour market quickly boosts wages. In our view, room for further decline in unemployment in the region is limited. Therefore companies will have to start to invest more if they want to meet rising demand. And investment activity in the CEE region is likely to get a substantial boost from EU funds. We illustrate the progress of EU fund implementation in the following table:

EU funds: Progress in tapping (total costs, October 2017)

EURbn	Czech Republic	Poland	Hungary	Slovakia
Planned	32.4	104.9	29.7	20.1
Decided	9.9	35.8	19.9	5.9
Spent	1.4	6.8	2.1	1.1

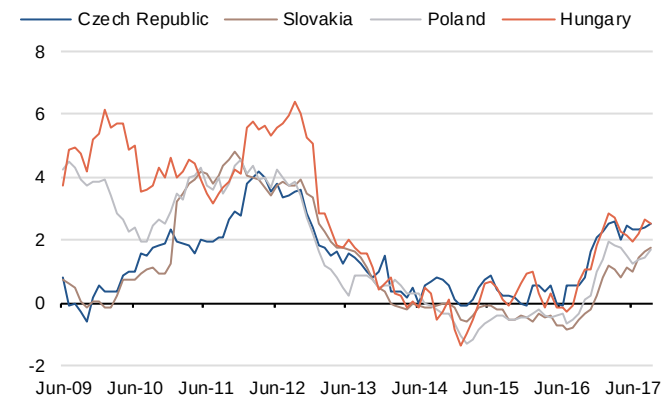
Source: Eurostat, Economic & Strategy Research, Komerční banka

Next year, inflation is set to accelerate in Poland.

Despite strong GDP growth and rising wages, inflationary pressure in the Polish economy remains subdued. Mainly core inflation persists at low levels (1.0% yoy in September). Nevertheless, the situation is likely to change next year, as the tightening labour market. Rising food and fuel prices are set to push headline inflation up, as well. In 2H18, inflation could even rise to 3%. Consequently, the National bank of Poland (NBP) will have to start to combat inflationary pressures by tightening monetary conditions. The first step, in our opinion, will happen in July 2018. Until then, rates will remain unchanged at 1.5%. Since May, the Polish zloty has suffered from controversies over constitutional law, dovish central bank rhetoric and rising yields in developed markets. Nevertheless, the good condition of the Polish economy, prospects of rate hikes, and less concern about Poland's disputes with the EU, point to a stronger zloty against the euro. SG economists have made recommendations for purchasing zloty with a target at EUR/PLN4.119.[1]

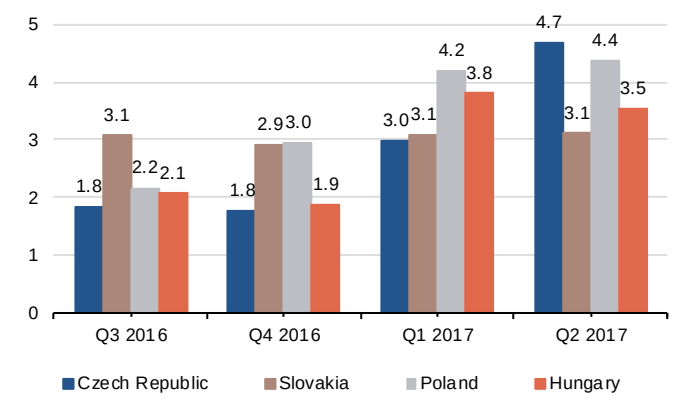
[1] SG Report: *EM Trade Idea - Poland: Short EUR-PLN as improving macro outlook outweighs political noise*

Inflation gradually accelerates (%, y/y)



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

GDP in the CEE region surpised on the upside (%, y/y)



Source: Eurostat, Macrobond, SG Cross Asset Research/Economics, Economic & Strategy Research, Komerční banka

Hungarian central bank likely to maintain loose monetary policy.

Hungarian central bank is still unable to meet inflation target. Inflation is currently hovering around 2.5% yoy. However, the central bank expects it to slow to 2% in the coming months. The 3% target is expected to be achieved in 2Q19. As a result, the central bank's monetary policy is likely to remain very loose. The central bank left the key interest rate unchanged at 0.9% in September, but cut its overnight lending rate from -0.05% to -0.15%. At the same time, it reduced the cap on the three-month deposit facility from the initial HUF300bn to HUF75bn to increase interbank liquidity. The central bank also stated its intention to further depress BUBOR interbank rates and yields along the entire yield curve (but especially at the long end). It plans to do so by expanding volumes and tenors of FX swaps through which commercial banks can convert foreign currency loans into domestic ones under favourable conditions. As a result, the Hungarian forint is likely to weaken slightly in the coming months.

Czech central bank to continue to hike rates.

The Czech Republic ranks first in terms of fulfilling the central bank's inflation target. Inflation is already safely over the 2% target, so the central bank has started to tighten monetary conditions (see CNB Focus section in this report). You can find more information about the Slovak economy in our report http://bit.ly/2ylebT6.

Macroeconomic Outlook

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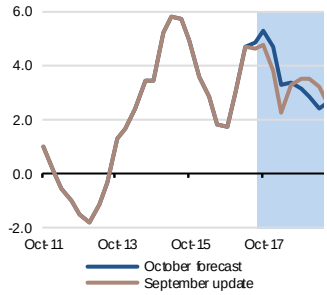
Main changes

GDP:
We raise our full-year GDP growth forecast for 2017 to 4.4% (previously 4.3% after September update) on the back of a very strong performance in the first half of the year. For 2018, we expect the expansion to continue, with growth set to print at 3.6% (previously 3.2%) on the back of increased public investment.

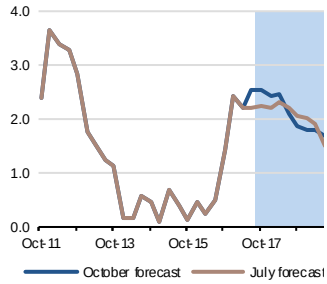
Inflation:
We have raised our 2017 inflation outlook by one tick to 2.4%. Our estimate for 2018 remains 2.2%.

Change in our GDP outlook (%)



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

Change in our inflation outlook (%)

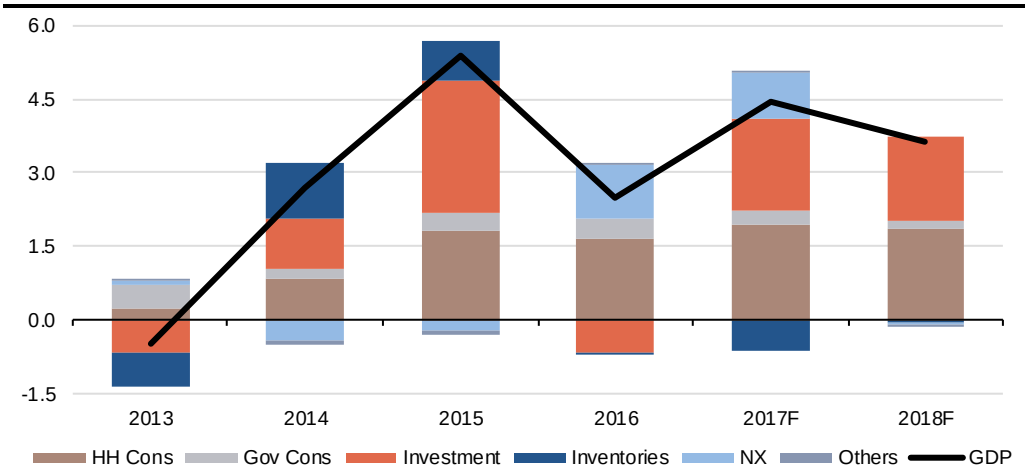


Source: CZSO, Macrobond, Economic & Strategy Research, Komerční banka

Czech economy enjoying full-scale late expansion

The Czech economy slowed significantly in the third quarter. In our view, this is only temporary owing to the effect of company-wide holidays. The boom is set to continue in the last quarter of 2017 and through 2018. External conditions will remain supportive, but domestic demand will be the main contributor. Private investment has already showed its strength in the first half of the year, while public investment will be reinforced by European funds as the programmes opened in 2015 must be tapped by the end of 2018, according to n+3 rule. Wages are set to continue growing, which will propel price growth. Inflation is thus set to remain high.

Both 2017 and 2018 will see strong growth (% yoy)



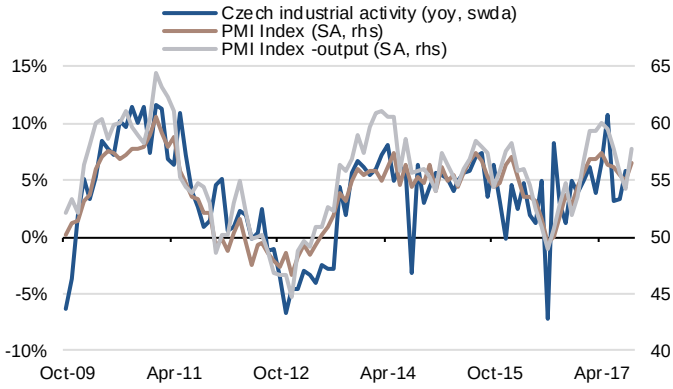
Source: CZSO, Macrobond, Economic & Strategy Research, Komerční banka

Czech economic growth in 2Q exceeded all expectations when it printed at 2.5% qoq. It was driven mainly by private investment activity, but consumption also saw a rapid acceleration thanks to massive wage growth in 2Q. Both industrial production and construction recorded very good results, and strong domestic demand was underscored by decent growth rates in retail sales. However, 3Q figures were very disappointing. Industrial production dropped beyond the usual seasonality, and the external trade surplus shrunk. The construction sector slowed, and the growth figures in retail sales were also not as impressive as in the second quarter. We believe that the phenomenon of company-wide holidays is to blame, and we have two arguments for this:

Car industry synchronises. Car producers shut down for two or three weeks during the summer holidays, and the whole supply chain has become much more coordinated in recent years. Before the crisis, car manufacturers were stocked with complete cars. After the crisis, the car sales process changed and manufacturer warehouses are now empty. To a great extent, this holds for parts as well. Car manufacturers do not pre-stock. Thus, the whole sector is becoming more synchronised and taking holidays at the same time. And most of the holidays are concentrated in the third quarter.

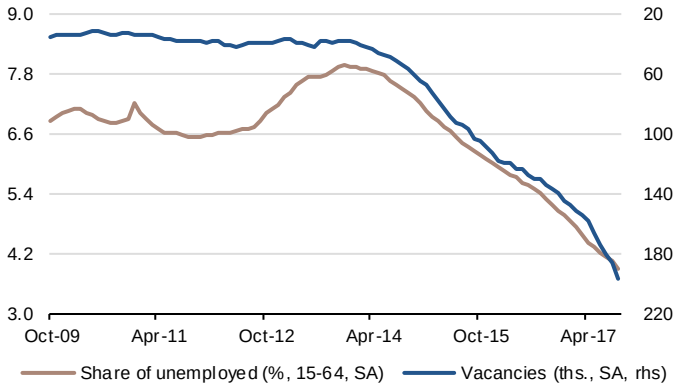
Automotive industry gaining share. The automotive industry is increasing its share of total industry production and of value added (see more in Box 2). Company-wide holidays concern mainly the car industry, and as this becomes more widespread, the drop in production in the summer months becomes more pronounced.

Industry slumped in 3Q; PMI points to recovery



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

Labour market tightens further despite activity slowdown



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

Inflation eased only temporarily in 3Q.

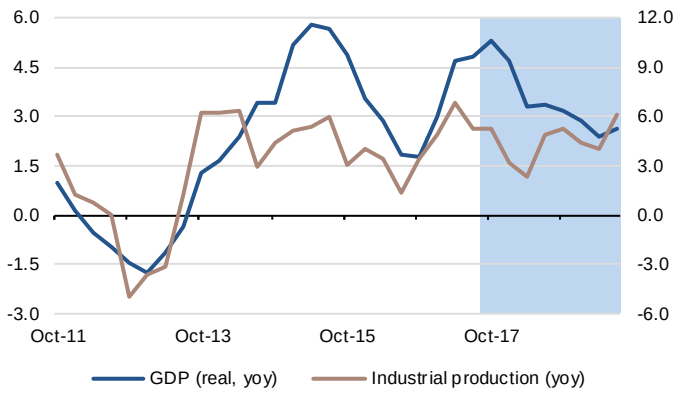
The calendar effect described above was not fully smoothed by the Czech statistical office's seasonal adjustment. This resulted in weaker figures for the third quarter. We saw a slowdown in 3Q last year, and we expect another next summer as well. However, this is mostly for seasonal reasons, and the economy retains its strong momentum. This view is corroborated by the unemployment figures. According to ILO methodology, the unemployment rate was a record low 2.9% in August, and the share of unemployed as measured by the Ministry of Labour and Social Affairs dropped to 3.8% in September from 4% in June despite slightly negative seasonality. In addition, the forward-looking indicators point to an acceleration after the holidays. **We estimate that the Czech economy grew by only 0.3% qoq in 3Q after massive growth of 2.5% in the second quarter.** In yoy terms, growth should accelerate to 4.8% from 4.7% in 2Q. However, as we've said, we believe that the weakness in the third quarter was only temporary and that the figures are set to accelerate in the last quarter of the year.

Industrial production to be supported by both external and domestic demand.

Industry to remain the growth driver; construction to surge

As described above, industrial production slumped in the summer months due to company-wide holidays in the automotive industry. The external environment remains supportive, as global trade has been strong and the German and euro area economies are set to see continued healthy expansion. We expect the external trade surplus to deteriorate in nominal terms this year due to a surge in commodity prices. Adjusted for

Industrial production growth will propel domestic GDP



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

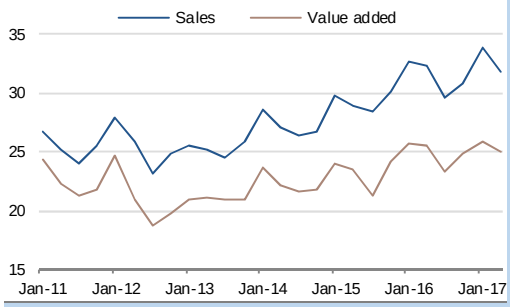
commodities, trade will likely see virtually the same surplus as in the record year of 2016, according to our estimates. In 2018, we expect some correction in commodity prices, so the commodity balance should improve. On the other hand, import activity will likely strengthen due to strong domestic consumption, and booming investment activity should curb growth of the ex-commodity balance despite the expected growth of exports. Overall, we think that the surplus is set to improve but to stay below the record figure of 2016. Also, domestic demand will propel industrial production, as we expect a surge in investment and further growth in consumption. The domestic forward-looking indicators corroborate our view that local industry is set to see decent growth in the coming months. **This year, we see industrial production increasing by 5.1%. Growth should continue next year, although at the slower pace of 3.9%, in our view.** We think the automotive industry poses a risk to our outlook. If the recent global slowdown in demand for cars spills over into the EU, the Czech automotive industry might face problems. For more on the consequences of a slump in demand for cars on the automotive industry, please see Box 2.

Box 2: Engine of economy sees capacity change

The automotive industry is becoming increasingly important to the Czech economy, and its high level of volatility will likely influence the overall development of the economy.

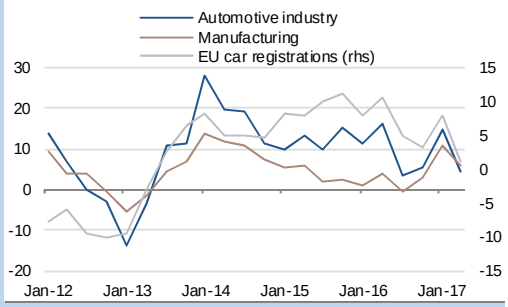
The automotive industry[2] is the engine of the economic cycle in the Czech Republic, and **this engine has recently seen its role increase. Its share of sales and value-added in the manufacturing sector has risen by more than five percentage points over the last six years.** In the second quarter of this year, it accounted for almost 32% of revenues and 25% of the value-added in the manufacturing sector, which itself accounts for one-third of GDP.

Automotive industry's growing share of sales and value-added in manufacturing sector (%)



Source: CZSO, Economic & Strategy Research, Komerční banka

Automotive industry growth compared to car registration growth in EU (% yoy)



Source: CZSO, Economic & Strategy Research, Komerční banka

The higher weight of the automotive industry is supporting increased volatility in the manufacturing sector as a whole. Due to the level of automotive exports to EU markets, the Czech economy has become even more exposed to any negative shocks in those markets.

This creates a challenge for economic policy, especially with regard to the speed of the reaction of fiscal and monetary authorities to changes in the business cycle. On the other hand, from the point of view of our analysis, there is an easily accessible indicator of the automotive industry – car registration in the EU. The above-right chart compares the growth of the Czech automotive industry with the growth of car registrations in the EU. It illustrates the

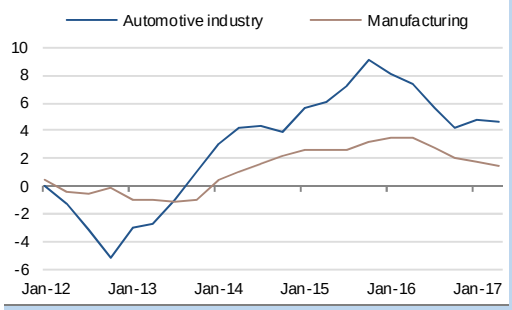
[2] Sector 29 "Manufacture of motor vehicles, trailers and semi-trailer" according to the NACE classification is referred in the text as the automotive industry.

correlation between those car registrations and automotive sales and manufacturing growth in the Czech Republic.

The volatility of the automotive industry is strongly reflected in the labour market in terms of the size of the labour force and wage dynamics. Significantly faster growth in automotive industry employment led to only a small increase in its share of manufacturing sector employment, from 12% at the end of 2014 to only 13.3% in the second quarter of this year, which does not indicate a major shift in the employment structure.

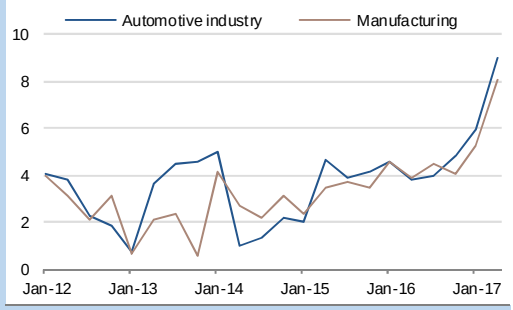
Wage dynamics in the automotive industry are a driver of wages in the entire manufacturing industry not only in the statistical sense but also from the point of view of competition with other industrial manufacturing sectors. For more information, see Box 2 in our previous *Czech Economic Outlook* (http://bit.ly/ENOutlQ317). Wage developments are not the only way the automotive industry affects the entire manufacturing industry: **another factor likely to contribute to higher volatility in the manufacturing industry as a result of developments in automotive production is its subcontracting chain.**

Number of employees (% yoy)



Source: CZSO, Economic & Strategy Research, Komerční banka

Wage dynamics (% yoy)



Source: CZSO, Economic & Strategy Research, Komerční banka

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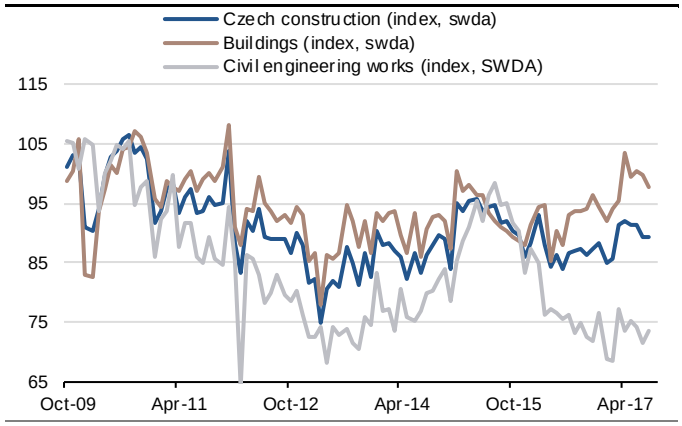
Civil engineering construction to grow on back of strong EU funds inflow.

The slump in economic activity during the summer also hit the construction sector, where growth shrunk to 1.6% yoy in the third quarter. We believe that the sector will be supported by the inflow of EU funds in the coming quarters. We expect the EU funds inflow to be particularly strong next year, when the programmes that opened in 2015 must be completed. We think the funds will go toward public infrastructure. We discuss this topic in depth in the following section on fiscal policy. We are already seeing a revival in construction. There is sound demand for housing in the main Czech cities, especially Prague, but developers still face administrative obstacles. A new construction law will come to force on 1 January next year that will make construction a bit

Civil engineering construction is weak but is set to take off on the back of EU funds inflow



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

simpler. However, we still await the new master zoning plan for Prague. Without it, a construction boom in Prague remains improbable. Overall, we expect construction to increase by 3% this year and to accelerate on the back of the EU funds inflow to 6.9% in 2018.

Fiscal policy: public investment and wages set to spike in 2018

Despite the increase in current spending, which is partly election-related, the 2017 central government cash budget is set to post a lower deficit than planned (CZK60bn) and what we previously expected (CZK45bn). **We now forecast only a CZK25bn shortfall, with the risk tilted towards an even narrower gap** if EU money inflow intensifies in the remainder of the year (the positive risk of higher EU inflows was indicated by the Finance Minister in early October). Government finances have been benefiting from accelerating economic growth, which has translated into higher tax and social security revenues. Moreover, new measures combating tax evasion have helped to raise VAT intakes, but this factor is dwarfed by the effects of the boom in consumption and wages on tax revenues. However, the inflow of EU money has been significantly lower (down by CZK85bn yoy in 9M17), as last year it was artificially boosted due to a previous investment boom.

On the expenditure side, there has been a 6% yoy rise in current outtakes, driven mostly by expenditures on wages, social benefits, and various transfers. On the other hand, capital (investment) expenditures have been lagging behind the plan, and even behind last year's performance.

It is the sluggish tapping of investment that has kept the overall expenditures and the budget balance in check. In 1Q-3Q17 period, there was a CZK17.4bn budget surplus. In the final months of 2017, we expect higher expenditures (public wages and transfers, investment) to drag the balance towards the CZK25bn gap.

In the ESA 2010 methodology, we expect the Czech Republic's public sector to post a surplus of 0.1% of GDP in 2017.

In the ESA 2010 methodology, we expect the Czech Republic's public sector to post a surplus of 0.1% of GDP. The central government shortfall looks likely to be offset by a positive balance from local governments, which have seen a significant increases in revenues and a drop in investment expenditures at the same time. Overall, we expect public finances to post a fiscal stance of -0.8pp of GDP, stimulating the economy, mainly via current expenditures boosting household consumption.

Public debt is set to drop from 36.8% in 2016 to as low as 33.7% this year, in our view. We expect central government debt to remain roughly flat in absolute terms, while municipal debt is likely to shrink due to the favourable financial performance of local governments. Of greater importance to the debt/GDP ratio, however, is massive GDP growth, which should reach 5.8% in nominal terms in 2017.

Public finance dynamics

	2017f	2018f	2019f	2020f	2021f	2022f
Balance (% GDP)	0.1	-0.6	-1.0	-0.9	-0.7	-0.5
Fiscal effort (pp GDP)	-0.8	-0.9	-	-	-	-
Public debt (CZKbn)	1,700	1,730	1,785	1,835	1,875	1,905
Debt ratio (% GDP)	33.7	32.3	32.0	32.2	32.2	31.3

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

Next year, the economy is set to see further fiscal stimulus, as the central government budget deficit is targeted at CZK50bn.

Next year, the economy is set to see further fiscal stimulus, as the central government budget deficit is targeted at CZK50bn. Ahead of the coming elections, the ruling government has incorporated several spending measures into the 2018 budget draft to further

support household and government consumption. Most importantly, teachers' wages are set to rise 15%, and other public wages by 10%. **As a result, the average wage in the public sector will surge 13.2%** (this change will take effect as soon as November 2017, but it will fully affect public wages only next year). Pension benefits will likely rise 4% next year, as the government has adjusted the formula for calculating them.

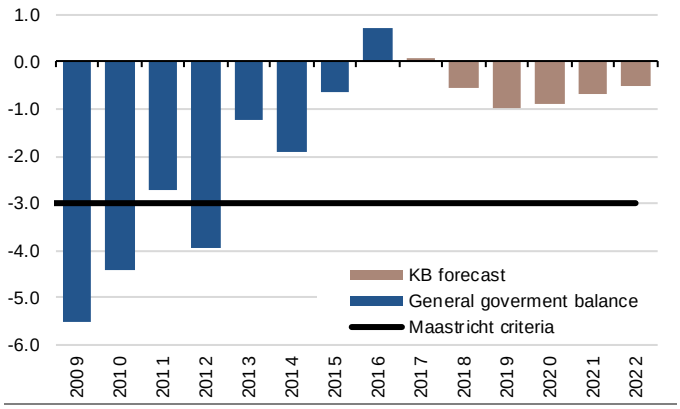
Importantly, we expect public investment to increase rapidly next year due to two factors:

- **First, a part of the EU funds allocated to the Czech Republic in the new programming period must be tapped by end-2018, or the country loses the money**. As of end-2Q17, there was some CZK70bn of EU money to be tapped by 2018, and we assume a bigger part will fall into next year. As a result, we expect a rise in public investment next year, despite the fact that the 2018 budget draft plans a lower number yoy. There is a risk that pent-up public sector investment will bring the 2018 budget into an even deeper deficit than the planned CZK50bn plan.
- **Second, the government has been under pressure to increase defence spending to comply with NATO requirements**. As a result, there are plans to raise defence spending and investment in the coming years (new helicopters, tanks, anti-aircraft systems, weaponry, etc.) worth tens of billions of koruna. We assume 2018 will see some CZK10-20bn of such investment (partly boosting imports as well). For instance, a contract on new helicopters is due to be finalised next year. While deliveries will span 2018-20, it is probable that the full value of the deal will only boost 2018 GDP.

The whole public sector is set to slide into a deficit of 0.6% of GDP next year.

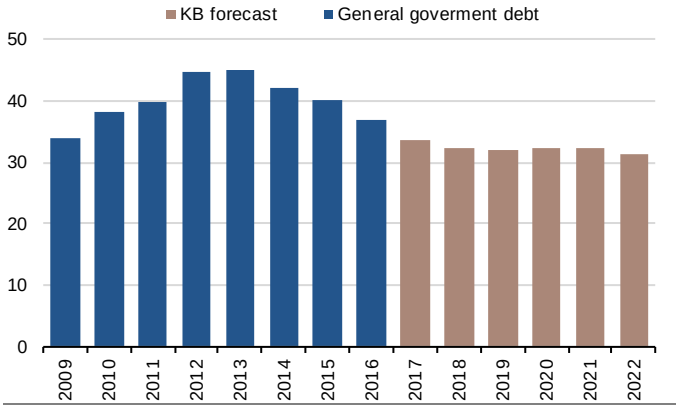
The whole public sector is set to slide into a deficit of 0.6% of GDP next year, in our forecast. We expect the central government budget to post a CZK50bn deficit, in line with the official plan (and we expect the same figure in the ESA2010 methodology). Local governments are likely to post another surplus next year, although a smaller one due to higher investment. In terms of effects on the economy, we expect the fiscal stance to reach -0.9pp of GDP in 2018.

Public finance balance (% of GDP)



Source: CZSO, Economic & Strategy Research, Komerční banka

Public debt (% of GDP)



Source: CZSO, Economic & Strategy Research, Komerční banka

Public debt is set to shrink further in 2018 to 32.3%, we estimate, due to expected fast growth in nominal GDP. The value of debt, however, is set to rise (by CZK30bn) for the first time in three years, we assume.

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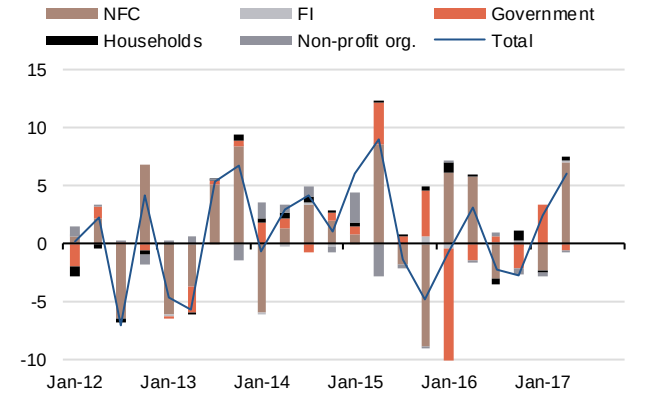
N+3 rule to propel investment

EU funds will boost investment activity in 2018.

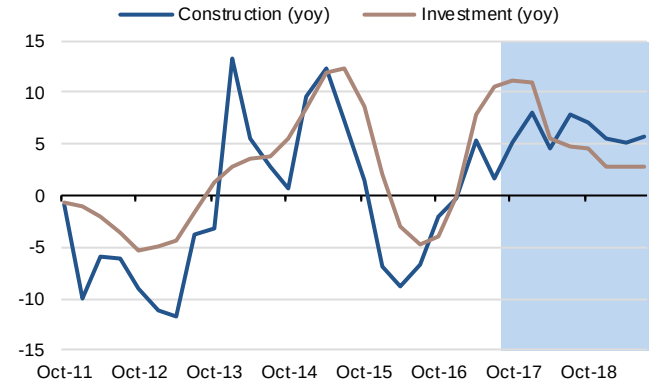
Public sector investment should surge in the coming months. Not only is there a desperate need for infrastructure construction but there are plans for massive investment in military equipment. However, public investment currently lags private investment. In the second quarter, we saw a surge in investment, driven by non-financial corporations (NFCs). The biggest outlays went into machinery. Businesses are reacting to growing demand, the positive economic outlook, labour shortages and growing labour costs. NFCs are having to invest in productivity given the labour force shortages. This is now the only way to increase output. Given our positive outlook for this year and 2018, we expect private investment to grow further. Moreover, NFCs might tap EU funding to increase productivity. **We see strong investment growth this year of 7.4%, while next year, the last-minute tapping of EU funds will support further solid growth of 6.4%.**

NFCs driving current surge in investment (% qoq)



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

EU funds inflow to propel investment in 2018 (% yoy)



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

Wage growth to support consumption growth

Tight labour market causing wage growth to accelerate.

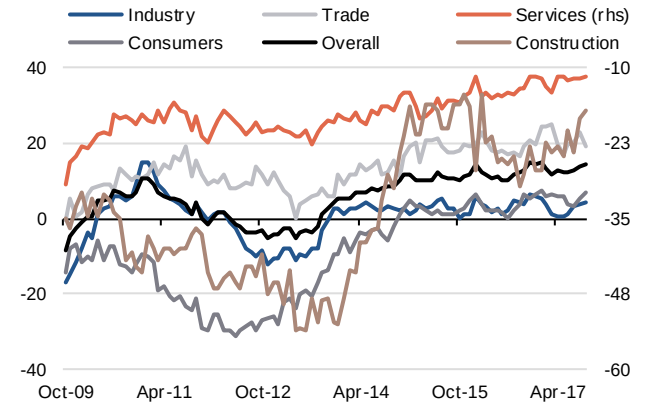
Conditions remain very favourable for households. The unemployment rate, calculated using the ILO methodology, dropped to a new low of 2.9% in August. The inflow of workers into the labour force seems to have halted in third quarter, further exacerbating the shortage of workers. The number of vacancies thus continues growing, making the labour market even tighter. This has become visible in the wage dynamics, with nominal wage growth rapidly accelerating to 7.6% yoy in 2Q. Although the monthly data suggest that it eased in the third quarter, a revival in 4Q will likely drive wages up again. We do not expect a repeat of the massive inflow into the labour force of the last two years. The unemployment rate has little room to decrease further and should only slowly approach 2.5%. That said, the labour market will remain overstretched, putting more upward pressure on wage growth. Moreover, public sector workers will be seeking massive salary increases (see section on fiscal policy) in the next two years, which will put pressure on the private sector to increase remuneration. On average, we think wages will increase by 6.7% in 2017 in nominal terms, which corresponds to solid growth of 4.2% in real terms. Wages should see a similar increase next year of +6.6% in nominal terms and 4.3% in the real terms.

Situation remains very favourable for households; this will be visible in consumption growth.

Consumer confidence remains strong, supported by a solid economic outlook, low unemployment and increasing wages. Although the savings rate saw a marginal increase in the second quarter, we believe that it will return to its downward trend. **Private expenditure should**

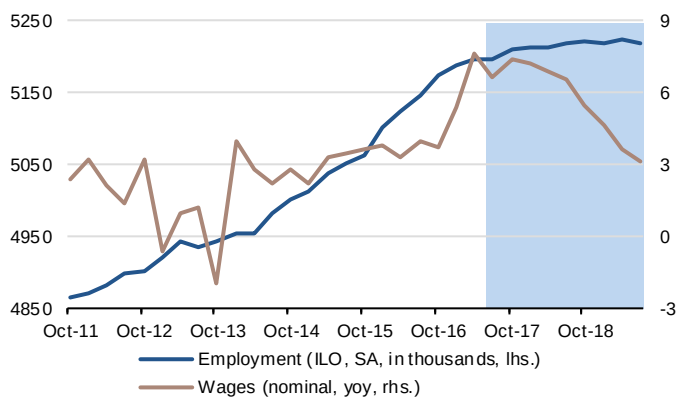
thus increase, and we see it growing by 4.1% this year. Consumption growth should remain strong next year, adding another 4%, according to our estimates.

Consumer confidence suggests further growth in consumption



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

Employment will not grow much; wages to keep strong dynamics

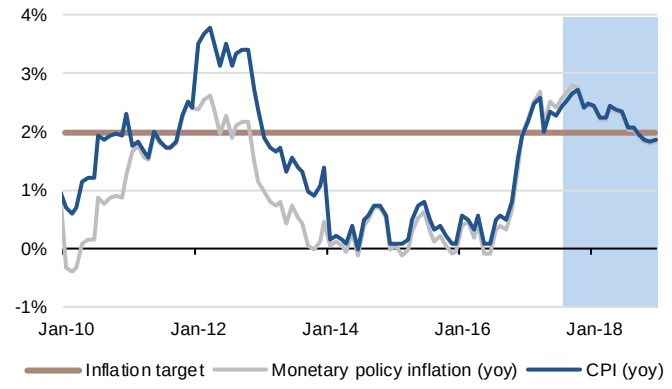


Source: CZSO, Macrobond, Economic & Strategy Research, Komerční banka

Inflation: Strong core rate despite koruna appreciation

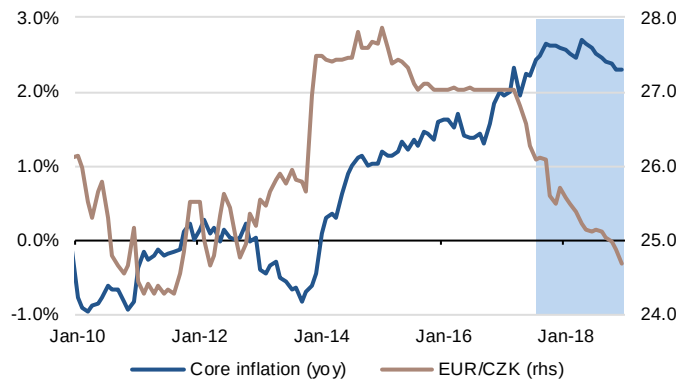
Despite the slowdown in real economic activity, headline inflation accelerated during the summer. In September, it printed at 2.7%, and we believe that it is peaking now. We think inflation will start easing but will remain around the 2.5% level until the end of the year. On average in 2017, it will print at 2.4%, in our view. We expect headline inflation to weaken further in 2018. By the end of next year, it should be close to 2%, with the full-year average at 2.2%.

Inflation to remain close to CNB target



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

Appreciating koruna unlikely drag on core inflation



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

Core inflation to remain high on the back of strong wage growth.

Core inflation has been persistently strong, and it climbed to 2.7% in September. We believe that wage pressures will keep core prices growing. Koruna appreciation will likely curb the acceleration in core inflation, but with the appreciation affecting retailers' margins, the FX pass through to inflation will be weaker. We expect core inflation to print at a strong 2.4% on average this year, while it should accelerate to 2.5% next year.

We do not expect a correction in food prices any time soon.

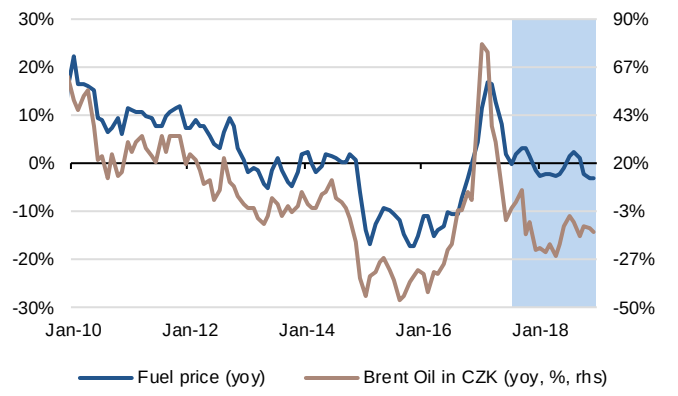
Food prices have been surprisingly strong since the beginning of the year. The upward trend is especially pronounced in dairy products and livestock. Butter prices have become a symbol of the price growth. At the moment, nothing suggests that prices will go back down. It will be

some time before the supply of milk and dairy products balances with the growing demand, and prices are unlikely to normalise before that happens. Moreover, this year's relatively poor harvest is driving agricultural prices up, which should pass into food prices in the next few months. **We see food prices increasing by 4.8% on average in 2017, while they should add another 2% next year.**

Fuel prices will not push headline inflation up.

Fuel prices bottomed in July and have since followed the global price of oil on its way up. However, this growth is being curbed by the koruna's appreciation against dollar. **We see oil prices stabilising at around USD50 per barrel, which should bring about a drop in fuel prices.** We only see continuous growth from the USD50 level from the beginning of 2019. Given high yoy growth at the beginning of the year, we see average fuel price growth amounting to 6.2% in 2017. In 2018, we expect fuel prices to record a marginal decrease of 1.4%.

Fuel price not to support inflation any more



Source: Bloomberg, CZSO, Macrobond SG Cross Asset Research/Economics, Economic & Strategy Research, Komerční banka

Administered prices to grow at beginning of 2018.

Administered prices have recorded virtually no growth so far in 2017, and we do not see this changing by the end of the year. Thus, we see regulated prices curbing headline inflation. In January, we expect a modest growth in electricity prices, and a couple of other less important regulated items should get slightly more expensive. Overall, we see growth printing at 1.9%.

Risks: Drop in demand for cars is a threat

Main risks stem from FX market and the country's increasing dependence on the automotive industry.

As we show in the Box 2, the car industry is increasing in importance in the Czech economy. In Box 2, we also describe the shock to the economy that would ensue should demand for cars in Europe drop significantly.

Koruna volatility is a risk for the Czech economy, as the financial system remains overliquid. The closing of positions by foreign investors might trigger sharp koruna depreciation and a surge in inflation. On the other hand, wide interest rate differentials might attract more investors and the koruna might appreciate sharply. That would curb the competitiveness of the country and impede the hiking cycle.

There is a risk that the government will not be able to tap EU funds, which must be drawn by the end of 2018 given the n+3 rule. In this event, investment growth would be weaker than we assume in our forecast.

Key economic indicators

	3Q17	4Q17	1Q18	2Q18	3Q18	4Q18	1Q19	2Q19	2016	2017	2018	2019	2020	2021
GDP and its breakdown														
GDP (real, yoy)	4.8	5.3	4.6	3.3	3.3	3.2	2.8	2.4	**2.5**	**4.4**	**3.6**	**2.6**	**1.9**	**2.1**
Household consumption (real, yoy)	4.4	4.5	4.6	3.8	3.9	3.7	2.9	2.3	**3.6**	**4.1**	**4.0**	**2.0**	**0.7**	**1.5**
Government consumption (real, yoy)	1.5	0.6	1.1	0.7	1.0	0.9	1.0	1.5	**2.0**	**1.5**	**0.9**	**1.4**	**1.6**	**2.4**
Fixed investments (real, yoy)	10.6	11.1	11.0	5.5	4.7	4.5	2.8	2.7	**-2.4**	**7.4**	**6.4**	**3.0**	**4.6**	**3.9**
Net exports (contribution to yoy)	0.1	0.2	-0.6	0.0	0.0	0.4	0.7	0.2	**1.1**	**0.9**	**0.0**	**0.8**	**1.2**	**0.4**
Inventories (contribution to yoy)	-0.4	-0.2	0.0	-0.1	0.0	-0.2	0.0	0.1	**0.0**	**-0.6**	**-0.1**	**0.0**	**-0.4**	**-0.4**
Monthly data from the real economy														
Foreign trade (CZK bn) (*) (***)	91.1	110.4	112.5	115.1	97.9	116.0	123.4	121.1	**479.4**	**434.6**	**442.0**	**487.2**	**530.4**	**541.3**
Exports (nominal, yoy) (*)	6.5	7.3	5.2	3.9	5.5	5.9	5.4	4.2	**2.4**	**6.4**	**5.1**	**5.0**	**4.4**	**5.6**
Imports (nominal, yoy) (*)	8.4	8.8	6.2	4.6	5.3	5.9	5.0	4.1	**0.5**	**8.6**	**5.5**	**4.5**	**3.9**	**6.0**
Industrial production (real, yoy)	4.5	5.2	3.2	2.5	4.9	5.1	4.4	4.0	**3.4**	**5.1**	**3.9**	**4.2**	**3.4**	**5.8**
Construction output (real, yoy)	1.6	5.2	8.0	4.5	7.9	7.1	5.5	5.2	**-6.1**	**3.0**	**6.9**	**4.8**	**2.3**	**2.3**
Retail sales (real, yoy)	5.0	6.1	5.8	6.1	7.2	6.5	5.2	3.9	**5.7**	**5.5**	**6.4**	**3.3**	**0.3**	**0.3**
Labour market														
Wages (nominal, yoy)	6.6	7.4	7.2	6.9	6.5	5.5	4.7	3.6	**3.7**	**6.7**	**6.5**	**3.5**	**1.1**	**1.6**
Wages (real, yoy)	4.0	4.7	4.7	4.3	4.4	3.6	2.9	1.8	**3.0**	**4.2**	**4.2**	**1.8**	**0.5**	**1.0**
Unemployment rate (MLSA)	3.8	4.0	3.9	3.4	3.5	3.8	3.9	3.4	**5.4**	**4.1**	**3.7**	**3.7**	**3.8**	**4.2**
Unemployment rate (ILO 15+)	2.9	2.7	2.8	2.6	2.6	2.5	2.6	2.3	**4.0**	**3.0**	**2.6**	**2.5**	**2.6**	**2.9**
Employment (ILO 15+, yoy)	1.0	0.7	0.5	0.3	0.4	0.2	0.1	0.2	**1.9**	**1.2**	**0.4**	**0.1**	**-0.2**	**-0.4**
Consumer and producer prices														
CPI Inflation (yoy)	2.5	2.5	2.4	2.5	2.1	1.9	1.8	1.8	**0.7**	**2.4**	**2.2**	**1.7**	**0.7**	**0.6**
Taxes (contribution to yoy inflation)	-0.2	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	**0.1**	**-0.1**	**0.0**	**0.0**	**0.7**	**0.6**
Core inflation (yoy) (**)	2.5	2.6	2.6	2.7	2.5	2.3	2.1	1.8	**1.6**	**2.4**	**2.5**	**1.5**	**0.2**	**0.1**
Food prices (yoy) (**)	5.6	5.0	3.1	2.8	0.8	0.9	1.0	1.6	**-0.9**	**4.8**	**1.9**	**1.9**	**1.5**	**0.9**
Fuel prices (yoy) (**)	1.7	1.0	-2.5	-1.9	1.4	-3.0	-4.5	-1.9	**-8.5**	**6.2**	**-1.5**	**-0.1**	**-2.2**	**0.1**
Regulated prices (yoy) (**)	0.3	0.4	1.7	1.8	2.0	2.1	2.5	2.8	**0.2**	**0.0**	**1.9**	**2.8**	**2.1**	**2.4**
Producer prices (yoy)	1.4	0.4	-0.3	0.0	0.9	1.1	0.9	1.5	**-3.2**	**1.7**	**0.4**	**1.8**	**0.6**	**0.6**
Financial variables														
2W Repo (%, average)	0.17	0.50	0.75	1.00	1.25	1.50	1.75	1.75	**0.05**	**0.19**	**1.13**	**1.42**	**0.5**	**1.5**
3M PRIBOR (%, average)	0.40	0.72	0.97	1.22	1.40	1.65	1.90	1.90	**0.29**	**0.42**	**1.31**	**1.54**	**0.6**	**1.6**
EUR/CZK (average)	26.09	25.70	25.46	25.14	25.06	24.81	24.17	24.41	**27.0**	**26.3**	**25.1**	**24.8**	**23.7**	**22.4**
USD/CZK (average)	22.21	21.78	21.04	20.44	20.05	19.54	18.88	18.78	**24.4**	**23.4**	**20.3**	**18.8**	**17.6**	**16.9**
External environment														
GDP in EMU (real, yoy)	2.4	2.2	2.0	1.8	1.6	1.5	1.5	1.4	**1.8**	**2.2**	**1.7**	**1.2**	**0.6**	**1.2**
GDP in Germany (real, yoy)	2.2	2.3	2.0	1.7	1.6	1.5	1.4	1.3	**1.9**	**2.1**	**1.7**	**1.2**	**0.7**	**1.5**
CPI in EMU (real, yoy)	1.4	1.3	1.0	1.2	1.3	1.3	1.3	1.4	**0.3**	**1.5**	**1.2**	**1.4**	**1.4**	**1.4**
Brent oil price (USD/brl, average)	50.9	50.0	51.5	48.5	51.5	48.5	51.1	53.7	**45.0**	**52.0**	**50.0**	**55.0**	**55.0**	**60.0**
EURIBOR 1Y (%, average)	-0.16	-0.15	-0.14	-0.11	-0.04	0.03	0.07	0.07	**-0.03**	**-0.14**	**-0.07**	**0.05**	**0.1**	**0.3**
EUR/USD (average)	1.18	1.18	1.21	1.23	1.25	1.27	1.28	1.30	**1.11**	**1.13**	**1.24**	**1.31**	**1.3**	**1.3**

Source: CZSO, MLSA, Bloomberg, Macrobond, Economic & Strategy Research, Komerční banka
Note: (*) foreign trade according to cross border statistics;
(**) these parts of inflation are adjusted for the primary effect of indirect tax changes;
(***) the quarterly data are seasonally adjusted.

CNB Focus

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CNB to deliver another hike this year and four next year

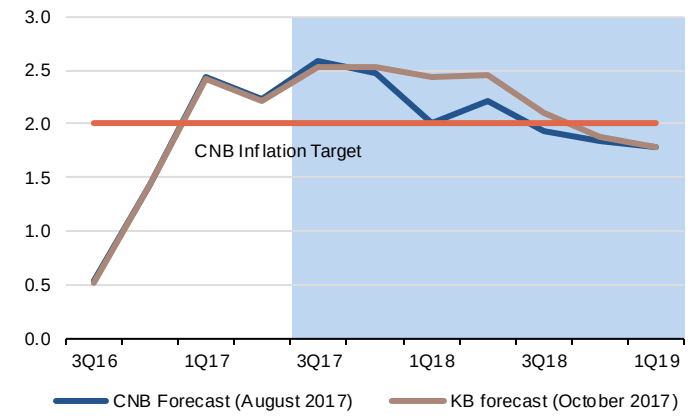
September's CNB meeting was surprisingly dramatic, with four board members voting to keep rates on hold and three voting for a hike. A November hike seems a deal done already and is widely expected by analysts and priced in by markets. The risk is that the CNB will hike by 50bp instead of the usual 25bp. However, we believe that the CNB will maintain a continuous rate trajectory, and for 2018, our forecast shows one 25bp hike in each quarter of the year. The biggest downside risk stems from the FX market. If the koruna appreciates rapidly, the rate trajectory might flatten.

CNB surprised by strength of economy

In August, the CNB's forecast for the real economy was bullish, though it expected inflation to ease below 2% in 2018. The forecast assumed no hike until 3Q18 on the basis of declining inflation. Why is the expected easing of inflation causing the flat interest rate path in the forecast? Everything suggests that the CNB sees the koruna appreciating rapidly over the forecast horizon. We see two main reasons for it appreciating by less than the CNB forecasts:

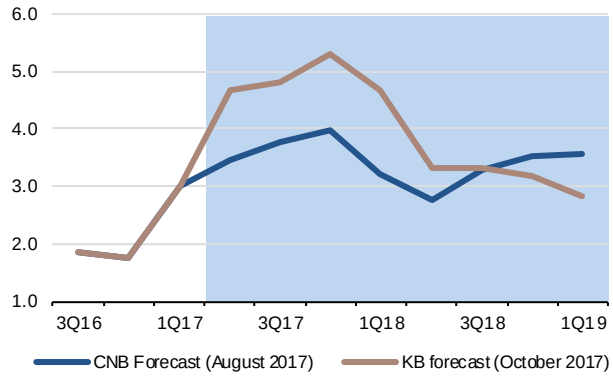
- **Shadow rates accounting.** One of the key inputs into the CNB forecasting model for the FX rate is EURIBOR. However, the CNB does not use the rate quoted on the market but rather adjusts that rate downward to capture the effects of quantitative easing. We do not understand the necessity of this adjustment, as the market rate already prices in increased liquidity in European financial markets. On the other hand, the CNB apparently does not adjust PRIBOR even though it deserves more attention, as it is formulated using bank estimates and there are virtually no trades for PRIBOR. We believe that banks do not have a chance to deposit their money at PRIBOR rates and that therefore the rate deserves downward adjustment. We think that the interest rate differential in the CNB model is thus inflated, as EURIBOR should be higher and PRIBOR lower, and that it shows more appreciation pressures on koruna than the real economy justifies.

Inflation to remain very close to 2% target (%)



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

CNB expected to revise GDP outlook strongly upwards (%)



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

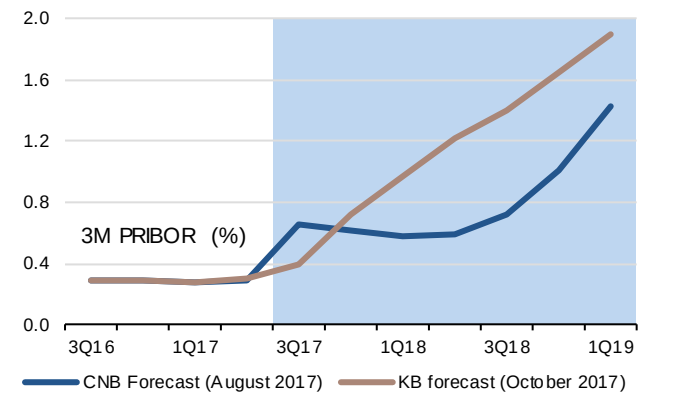
- **Large koruna positioning.** The CNB does not factor increased liquidity into its model. Central bankers are aware that the koruna positioning that built up during the FX commitment regime will impede the koruna's appreciation. The CNB staff forecast sees koruna strengthening impeded only in the very short term. In the long term, it sees only excess liquidity as a risk to its central scenario, though we consider this risk strong enough to qualify for the central scenario.

Although economic conditions should favour a steep hiking cycle, the next CNB forecast will likely show only a few hikes. In the CNB model, the rest of the necessary monetary tightening will be expected to come about via koruna appreciation. We do not expect the CNB forecast to be very bullish on the rates side. However, we are not worried about that, as we think that the CNB board will not necessarily follow the forecast.

Slower appreciation gives more room for hiking

The last CNB forecast did not foresee a rate hike until the 3Q18, but that did not prevent three board members voting for a hike just six weeks after the forecast was published. Moreover, a November hike seems a sure thing, as it has support throughout the board. Though the CNB forecast does not foresee a hike this year, it envisages steep rate growth at the turn of 2018 and into 2019. Thus, **we think that the CNB forecast needs to be taken with a pinch of salt.** We believe that the bank board wants rates much higher than they are now at the beginning of 2019, as suggested by the current forecast, but we think the hiking path will be much more continuous than the current CNB forecasts suggest. **We expect the bank board to increase rates by 0.25pp every quarter at its main monetary policy meetings until the first quarter of 2019, with the repo rate peaking at 1.75% in our view.**

CNB's PRIBOR forecast has reason to get steeper but will not get steep enough (%)



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

At the September meeting, three board members voted not only for increasing the repo rate by 0.25bp but also for increasing the Lombard rate to 1.0%. We believe that this motion will be discussed in November again and that the bank board will vote for it. We assume that some board members will also vote for a 50bp hike but that the majority will favour a cautious and continuous approach. However, the risks for the November meeting are tilted toward a bigger hike and a more hawkish outcome.

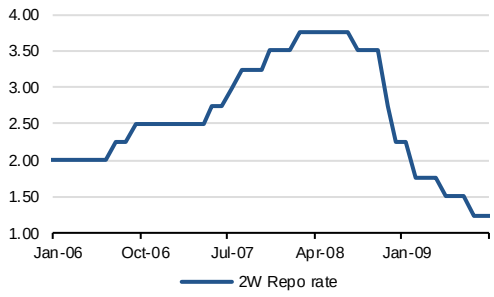
Box 3: CNB has means to fight recession and does not fear using them

The CNB was one of the first central banks in Europe to cut rates during the last economic crisis. Central bankers in Prague reacted to the worsening economic conditions in 2008 before bankers in Frankfurt, proving that the CNB is not a blind follower of the ECB. The cutting phase of the cycle is usually much quicker than the hiking phase. During the last crisis, the CNB cut rates by 0.75pp once, and cuts of 0.5pp were not an exception. Moreover, the CNB showed that it is ready to use extraordinary measures when it introduced the FX commitment and kept it for three and half years.

The CNB might use FX tools again if the economic slowdown proves worse than we currently expect. However, verbal communication alone might prove sufficient to deliver the desired easing of monetary policy conditions. Before the FX commitment was scrapped in April 2017, the CNB created the huge amount of CZK liquidity currently held by foreign investors. It seems now that what were originally hot speculative inflows have been turning into longer-term positions that benefit from the differential between Czech and European interest rates. But these positions might be closed very quickly should economic conditions deteriorate and the CNB cut rates back towards the zero lower bound. That would cause a rapid depreciation of the currency. The CNB might aim to expedite the closing of positions by threatening the reintroduction of the FX commitment. The threat would be credible, as the CNB followed through with it last time.

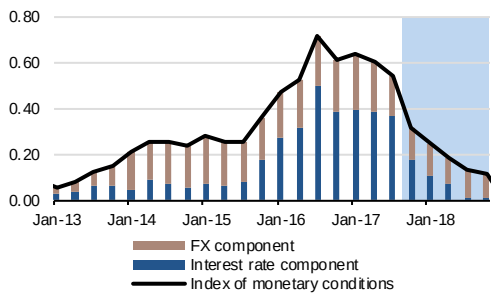
That said, we believe that the coming slowdown (no matter when it comes) will be accompanied by timely cuts of the CNB key rate and that this will be accompanied by sharp CZK depreciation.

Swift rate-cutting phase



Source: Bloomberg, Economic & Strategy Research, Komerční banka

EUR/CZK affects monetary conditions



Source: Bloomberg, Economic & Strategy Research, Komerční banka

Czech FX Market

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Since the end of the FX commitment the Czech koruna has appreciated by nearly 5%.

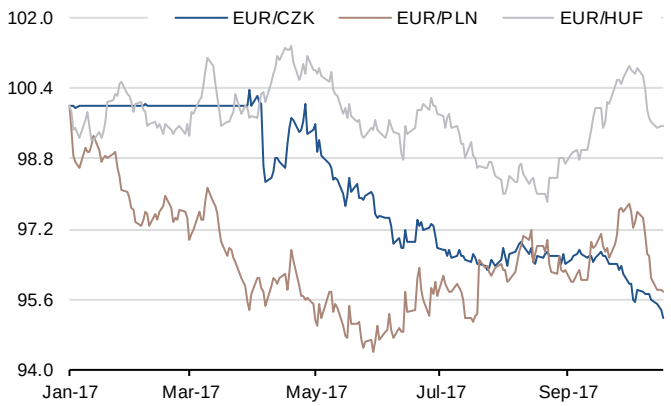
Stronger koruna will add to monetary policy tightening

The Czech koruna gained more against the euro and the dollar than any other currency this year, having risen 5.1% vs the euro (as at 18 October) and surpassed the gains of the Polish zloty (+4.3%). By contrast, the Hungarian forint has appreciated by negligible 0.4% this year. With the dollar now depreciating in the financial markets, the Czech koruna has been even more successful against the greenback and gained more than 18%.

EUR/CZK ytd trend

Source: Bloomberg, Economic & Strategy Research, Komerční banka

Relative development of CE currencies in 2017 (1.1.2017=100)



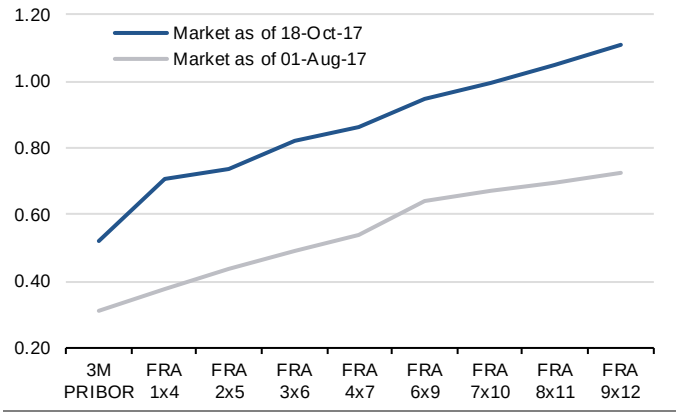
Source: Bloomberg, Economic & Strategy Research, Komerční banka

The koruna is benefiting mainly from increasing expectations of a further increase in the Czech interest rates.

The Czech currency appreciation can be explained by two factors: the end of the exchange rate commitment in the context of economic expansion and the increase in CNB interest rates. Czech economic momentum has exceeded all expectations, with the economy having grown twice as fast as the euro-area average this year. This growth has been driven by domestic demand, and mainly household consumption. Meanwhile, tight labour market conditions are fuelling strong wage dynamics which are in turn pushing up core and headline inflation. It was this combination of factors that led the CNB to increase its key monetary policy rate for the first time in almost 10 years this August, and to embark on a cycle of monetary policy normalisation.

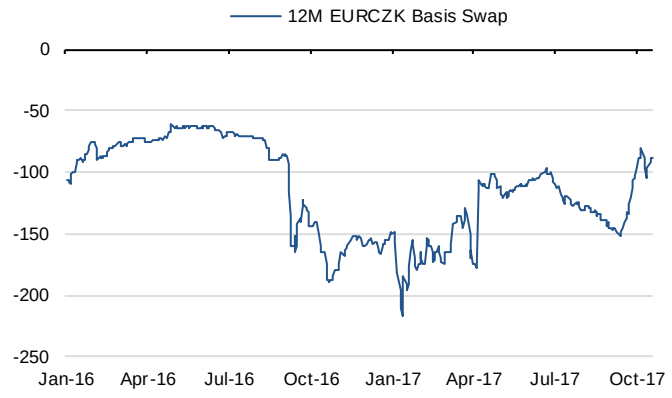
At the beginning of August the market was still unconvinced about the interest rate hikes and was not expecting CNB to increase rates more than once this year. This all changed dramatically in September and a November hike is already fully priced in.

Money market rates moved up significantly



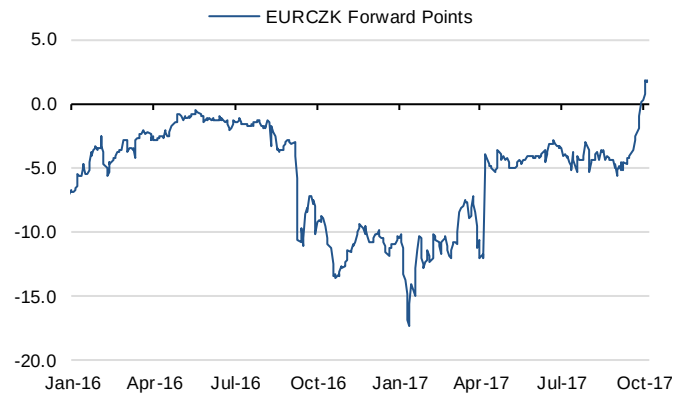
Source: Bloomberg, Economic & Strategy Research, Komerční banka

Development of the 1Y EURCZK Basis Swap since 2016



Source: Bloomberg, Economic & Strategy Research, Komerční banka

Development of the EURCZK Forward Points since 2016



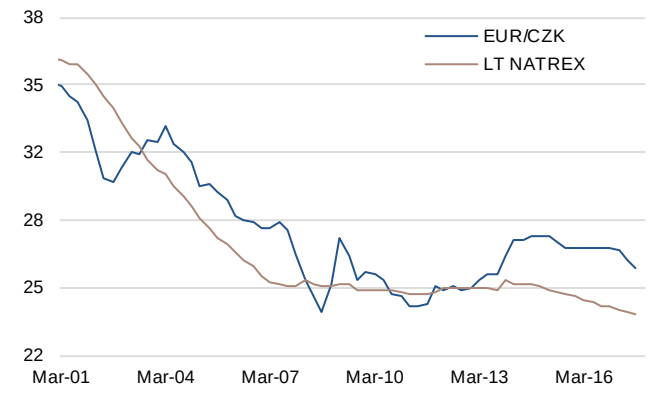
Source: Bloomberg, Economic & Strategy Research, Komerční banka

Situation on the forward markets begins to normalise.

The third quarter saw a key shift in the forward market. Significantly negative EUR/CZK basis swaps and implied forward yields led to costly speculation of further koruna appreciation and thus highlighted the effect of a missing counterparty. The Czech koruna struggled for nearly two months to strengthen below EUR/CZK26 but finally broke through this important threshold at the end of September. The lack of euro liquidity in the market related to speculation on CZK appreciation triggered significant distortions on the forward market which weakened after the holidays. The forward market has begun to normalise also because the market has started to believe in the possibility of further CNB interest rate hikes. In October, the annual forward premium on the Czech FX market moved back into positive territory.

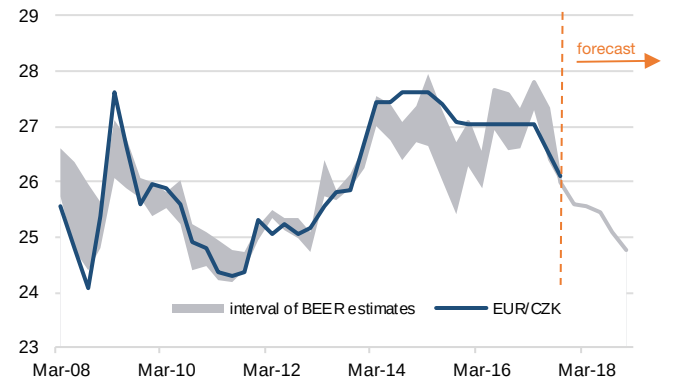
The Czech economy is now able to cope with further CZK appreciation

Long-term equilibrium EUR/CZK exchange rate, based on NATREX



Source: Bloomberg, Economic & Strategy Research, Komerční banka

Medium-term equilibrium EUR/CZK exchange rate, based on BEER

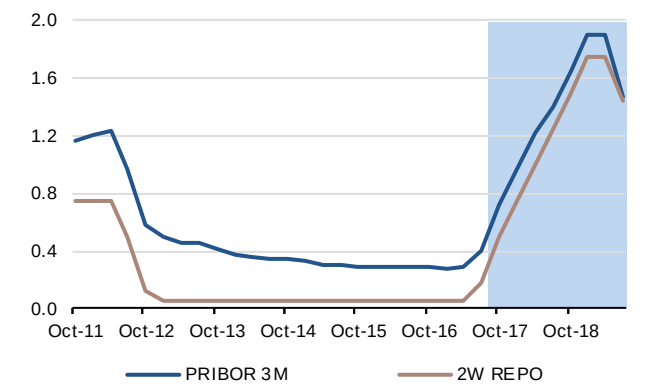


Source: Bloomberg, Economic & Strategy Research, Komerční banka

Strong economic growth is pushing the equilibrium exchange rate towards EUR/CZK24.

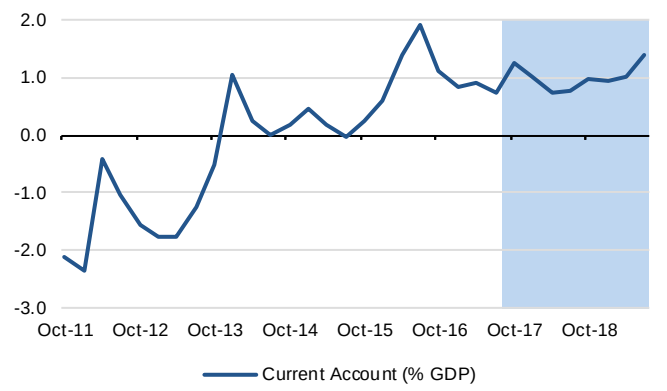
The gap between the long-run equilibrium exchange rate and the actual rate will continue to narrow. For the end of the year we estimate a long-run equilibrium exchange rate (according to NATREX) of around EUR/CZK24. We expect the exchange rate to be pushed to this level over the next two years mainly due to further current account surpluses on the balance of payments. This will primarily be caused by the surplus in the trade balance but also by inflows of financial assets in anticipation of a more attractive interest rate spread. In the medium run (according to BEER), the fundamentals point to an exchange rate of EUR/CZK25.60 in the last quarter of this year. At the end 2018, the value should be around EUR/CZK24.80.

Expected Czech interest rates (%)



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

Expected current account of the balance of payments



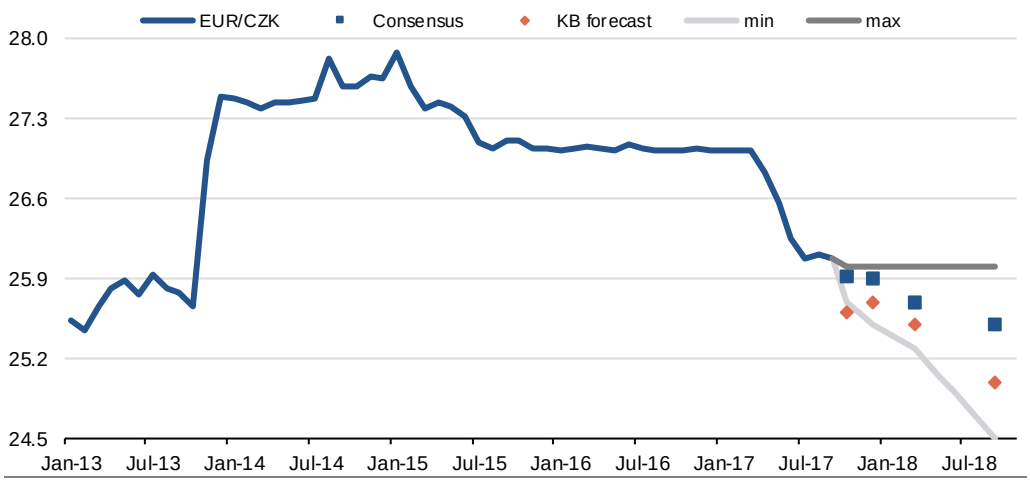
Source: CNB, Economic & Strategy Research, Komerční banka

We expect the Czech koruna to continue to appreciate over our forecast horizon.

In 12 months' time, we see the Czech koruna reaching EUR/CZK25.

In line with the market we expect the Czech koruna to appreciate during 2018. However, we are more optimistic than the consensus. We anticipate a higher pace of interest rate hikes and expect the Czech economy to grow faster than the consensus forecast for this year and next. The pace of CZK appreciation will be in line with the BEER model outcome. With regard to CZK basis swaps, we expect an ongoing trend of normalisation.

Expected EUR/CZK exchange rate – Market consensus, October 2017



Source: Reuters, Economic & Strategy Research, Komerční banka

Speculative positions signify future risk.

The "end-of-year" effect ought not be too significant. In our view, the normalisation of the forward market, ongoing macroeconomic prosperity and, in particular, higher interest rates should eliminate the risk of an "end-of-year" effect. This is related to the resolution fund, about which we warned in our previous issue of the *Czech Economic Outlook* (http://bit.ly/ENOutlQ317). Although we are still aware of the chance of higher volatility and the risk of CZK depreciation as the end of the year approaches, new investors should replace the old ones to some extent. It still holds that the koruna has been excessively overbought leaving it vulnerable to any shock or situation that pushes the Czech economy into recession. In Box 3, we discuss the tools CNB could use to expand monetary policy in the event of a recession.

EUR/CZK Technical Analysis

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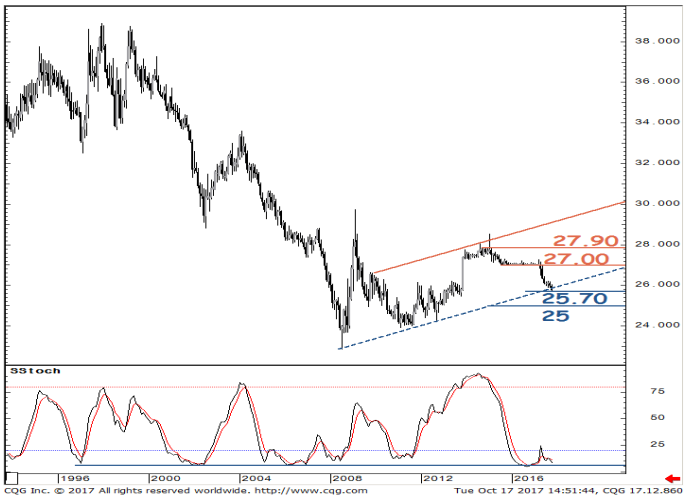
Watch out for the pivotal level at 25.70.

After a steady down move, EUR/CZK has come up against an interim support at 25.70 consisting of the 61.8% retracement from 2011 lows and a projection for the correction. The pair is tentatively piercing a multiyear upward channel, however with long dated indicators hovering near a multiyear floor the correction appears to be a bit overstretched. Only a decisive close below 25.70 will lead to an extended down move.

Shorter term holding above 25.70, EUR/CZK could show a corrective rebound. Steeper channel limit at 26 will most likely cap it. Recent highs of 26.22 will be an important hurdle; a move above this will be essential to denote a meaningful recovery. In case 25.70 breaks, EUR/CZK could drift lower towards 25.30, a multiyear trend support.

EUR/CZK, monthly chart.



EUR/CZK, weekly chart.

Source: SG Cross Asset Research/Technical Analysis

Czech Government Bonds and the IRS Market

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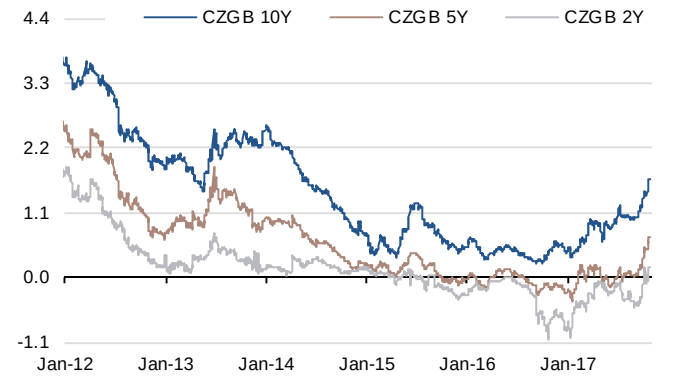
CZGB sell-off to continue in 2018

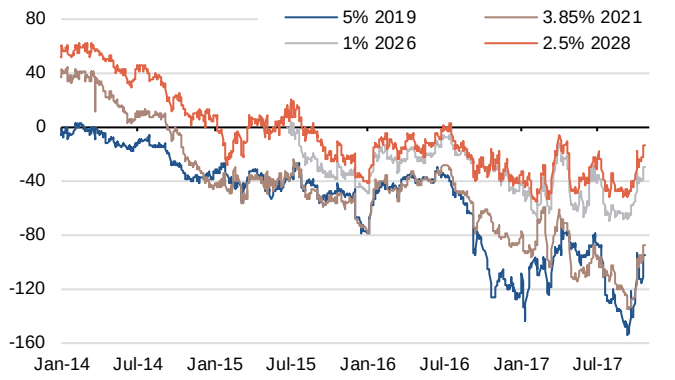
Given the strong economic performance, CNB tightening and the recent increase in rates and yields, we have revised higher our outlook for CZGB yields and CZK interest rate swaps. We continue to expect the Finance Ministry to increase CZGB supply sharply in 2018.

CZGB yields, Bloomberg generic (%)



Source: Bloomberg, Economic & Strategy Research, Komerční banka

ASW spreads (bp)



Source: Bloomberg, Economic & Strategy Research, Komerční banka

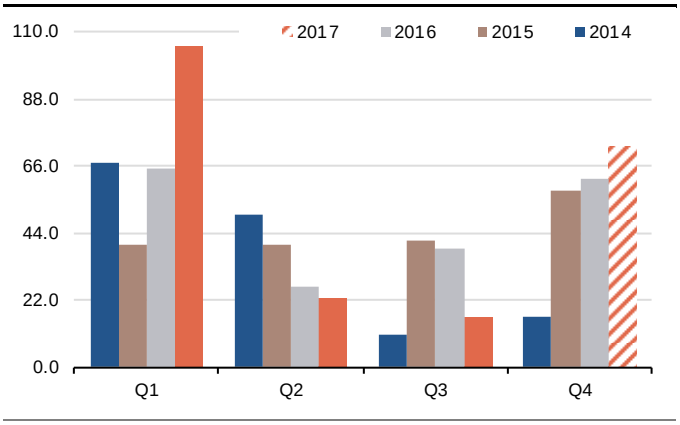
Czech government bonds have sold off strongly since we published our previous report. In September and October, yields increased massively driven by CNB tightening, newsflow around sharp economic expansion in 2Q17, prospects for higher debt supply and normalisation of CZK implied yields in CZK forward markets.

Recently, the short end of the yield curve turned positive after a year in deeply negative territory, and the 10Y benchmark yield has surpassed the 1.50% mark for the first time since June 2014.

Supply side for the remainder of 2017 and 2018: higher CZGB sales

In line with our expectations, the Finance Ministry slashed bond supply and did not roll over T-bills in 3Q17, resulting in a sharp quarter-on-quarter drop in government debt at the end of September. However, **supply is rising in 4Q17 due to the upcoming redemption of the old 0% 2017 paper worth CZK70bn**. We assume the ministry will sell new bonds in the same amount

Quarterly CZGB issuance on the primary market, CZKbn (dashed bars mark our expectations)



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

(CZK70bn) in primary auctions and a small CZK5bn batch of T-bills with maturity in 2018 (the latter indicated in the Finance Ministry's strategy statement) in the remainder of the year. The CZK70bn CZGB issuance would constitute a significant increase in supply compared with 2Q17 and 3Q17, when respectively only CZK23bn and CZK17bn were sold. **The expected budget deficit of CZK25bn would be covered by a tap of the liquidity reserve**, in our view. Such a strategy would result in a mild decline in government debt due to revaluation of FX debt.

2017 gross borrowing needs and financing, CZKbn

	MinFin Jun-17	KB Oct-17
Borrowing needs		
Budget deficit	60.0	25.0
Buybacks of CZGBs		0.0
Redemption of CZGBs	208.1	208.1
Redemption of Eurobonds		0.0
Redemption of retail bonds	16.9	16.9
Redemption of T-bills	4.2	4.2
Redemption of other money market instruments	0.0	0.0
Redemption of EIB loans	1.7	1.7
Total	**290.9**	**255.9**
Financing		
Gross T-bill issuance		5.0
Other money market instruments		0.0
Gross CZGB issuance (in auctions)	min 150.0	*(-5.0)* 215.0
Tap sales		11.9
Gross issuance of eurobonds		0.0
Gross issuance of retail bonds		0.0
Tapping of financial reserve		*(-15.0)* 25.0
Net effect of CZGB switches		-1.0
Total financing		**255.9**
Net CZGB issuance		*(-4.0) 18.8*

Source: Economic & Strategy Research, Komerční banka, Finance Ministry, (numbers in brackets mark the changes in the outlook)

On the financing side, we still expect the Finance Ministry will increase CZGB issuance heavily.

We keep our expectation for 2018 borrowing needs and financing almost unchanged, with only cosmetic changes reflecting this year's CZGB switches affecting redemptions in 2018. **On the financing side, we still expect the Finance Ministry will increase CZGB issuance heavily** (in net terms, we call for new sales of bonds of CZK65.6bn versus CZK18.8bn expected for 2017). We have also shifted the expected T-bills issuance slightly higher by CZK5bn. **A part of the expected budget deficit will be covered by a tap of government's liquidity reserve** (CZK32bn), and we expect no eurobonds to be sold.

2018 gross borrowing needs and financing, CZKbn

	MinFin Jun-17	KB Oct-17
Borrowing needs		
Budget deficit	50.0	50.0
Buybacks of CZGBs		0.0
Redemption of CZGBs *	*238.8	(-1.0) 185.0
Redemption of Eurobonds *		(-0.6) 52.0
Redemption of retail bonds	16.4	16.4
Redemption of T-bills	5.0	5.0
Redemption of other money market instruments	0.0	0.0
Redemption of EIB loans	4.8	4.8
Total	**315.0**	**312.0**

Financing	
Gross T-bill issuance	*(+5.0)* 30.0
Other money market instruments	0.0
Gross CZGB issuance (in auctions)	*(-10.0)* 240.0
Tap sales	10.0
Gross issuance of eurobonds	0.0
Gross issuance of retail bonds	0.0
Tapping of financial reserve	*(+19.8)* 32.0
Net effect of CZGB switches	0.0
Total financing	**312.0**
Net CZGB issuance	*(-9.4) 65.6*

Source: Economic & Strategy Research, Komerční banka, Finance Ministry * the difference in bonds' redemption is due to EUR/CZK level, (numbers in brackets mark the changes in the outlook)

Bond yields in 4Q17 and 2018: increase to continue

We have revised our forecast for CZGB yields sharply higher.

We have revised our forecast for CZGB yields sharply higher to reflect better economic fundamentals, faster monetary policy tightening by the CNB, and the normalisation of implied yields, which has resulted in a recent significant cheapening of CZGBs. That being said, we continue to expect that the year-end effect and domestic liquidity constraints due to the Resolution fund will result in a mild downward correction in yields at the end of 2017. In 2018, CZGBs should cheapen and the yield curve should bear flatten, in our view. In this forecast, we assume supply will grow as per the table above, implied yields will remain tight, the CNB will deliver four hikes in 2018, and the economy will continue to see fast expansion. We expect the 10Y CZGB yield to peak at 2.0% at the end of 2018.

CZGB yield forecast

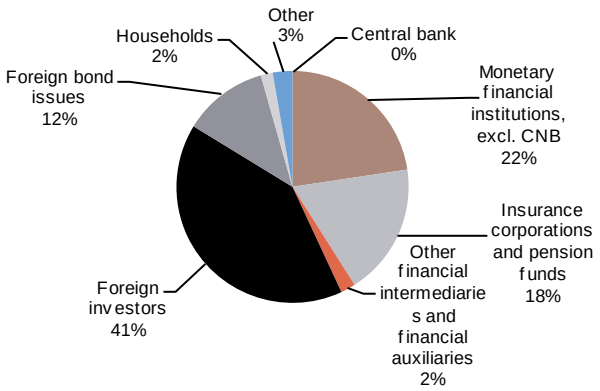
	4Q17f	1Q18f	2Q18f	3Q18f	4Q18f
2y CZGB yield (%)	0.05	0.60	0.85	1.10	1.20
10y CZGB yield (%)	1.55	1.70	1.80	1.90	2.00
10y CZGB ASW (bp)	-30	-25	-25	-25	-30

Source: Economic & Strategy Research, Komerční banka

CZGB holders: foreign ownership still at elevated levels

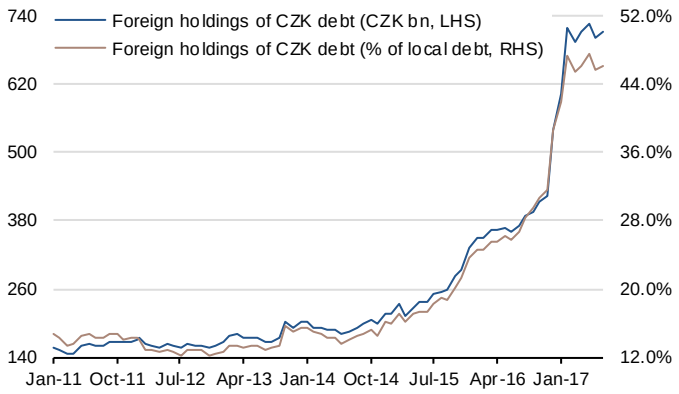
Non-resident investors continued to own a significant share of CZK-denominated government debt as at the end of August. There was no major drop, as implied yields remained favourable for foreign investors, and the Finance Ministry continued T-bills sales even in August.

Holdings of Czech Republic's debt securities, end-August 2017



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

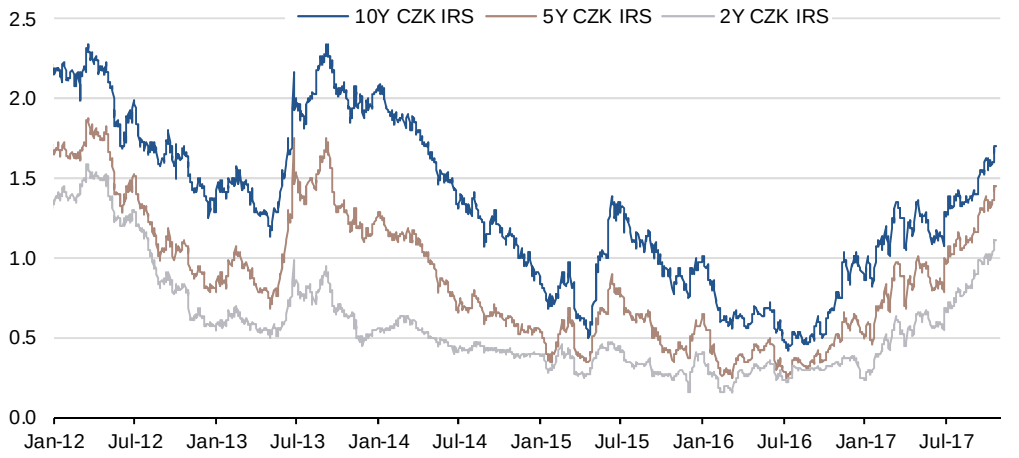
Non-resident holdings peaked in June 2017



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

However, as maturity of all the T-bills was no later than September and there was no roll-over (T-bills issued in October were relatively small), and given the normalisation of implied yields, it is probable non-resident holdings declined with the increase in yields in September and October. We still see foreign investment as a risk to CZGBs in the case of severe global market turmoil, **but demand from local investors should keep CZGBs in demand in our base scenario** (see Box 4).

Recent developments of CZK IRS (%)



Source: Bloomberg, Economic & Strategy Research, Komerční banka

CZK interest rate swaps: going up

Along with the forecast increase in CZGB yields, we have shifted the expected trajectory of CZK IRS higher for the remainder of 2017 and for 2018.

Along with the forecast increase in CZGB yields, we have shifted the expected trajectory of CZK IRS higher for the remainder of 2017 and for 2018. This reflects the steep path of CNB's policy rates (we have added one more hike in our 2018 view - see the CNB Focus section), very strong economic expansion (and significantly wider output gap), still-elevated inflation despite the CNB hikes and koruna strength, and the revision in SG's outlook for EUR IRS. While SG strategists see 20bp lower 10Y EUR IRS at the end of 2017, the end-2018 view was shifted 20bp up to 1.60%.

CZK IRS outlook (%)

	4Q17f	1Q18f	2Q18f	3Q18f	4Q18f
2Y	1.25	1.40	1.55	1.70	1.90
10Y	1.85	1.95	2.05	2.15	2.30

Source: Economic & Strategy Research, Komerční banka

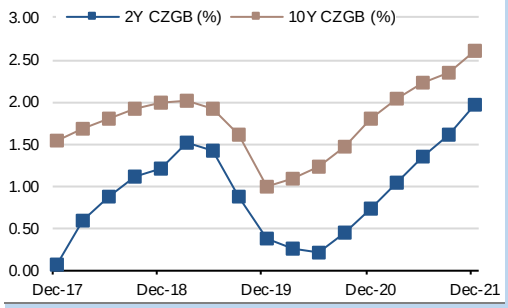
We assume the short end of the CZK IRS curve will rise faster than the long end, resulting in a bear flattening of the curve, as it will incorporate the higher PRIBOR due to CNB's tightening. On the long end of the curve, we expect the 10Y IRS to hit 2.30% at the end of 2018.

Box 4: Expected economic slowdown in 2019-20 likely to slash 100bp off 10Y CZGB yields

The economic slowdown we expect in 2019 is likely to result in a drop in core bond yields, cuts in the CNB's policy rates, an increase in risk aversion and flight-to-quality trends. All of these factors are likely to support CZGB prices, as they have been perceived as a (regional) safe-haven asset.

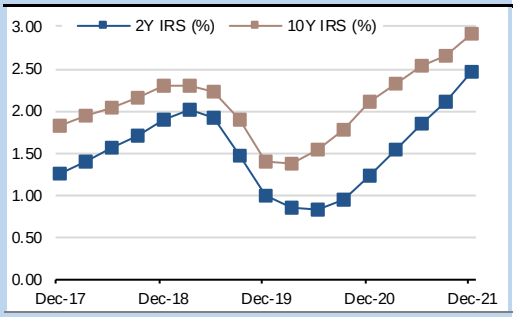
We expect the short end of the curve to drop faster in reaction to any CNB cuts, forecast 2Y yields would fall from a pre-recession peak of 1.50% to as low as 0.25% in early 2020, on our estimates. On the long end of the curve, our outlook calls for a relatively moderate drop from its 2% apex to 1% for the 10Y yield in 2019, and a mild increase in yield afterwards. The development on the long end is driven mainly by our outlook for Bund yields, which should see no major drop in the context of an economic slowdown (only a 35bp decline in 2H19 is expected, in our view).

Expected development of bond yields including the time of the recession



Source: Economic & Strategy Research, Komerční banka

Expected development of CZK IRS including the time of the recession



Source: Economic & Strategy Research, Komerční banka

The upward trend in interest rate swaps looks set to come to an end. On the long end of the curve, we expect the 10Y swap to decrease by 90bp in 2019, but to recover quickly in 2020. On the short end, the drop is set to be more pronounced due to the CNB's likely cuts in late 2019 and early 2020, but the rebound should be faster in 2020 and beyond.

Banking Sector

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No major change in credit outlook, deposits revised upwards

We continue to expect that credit growth will decelerate next year versus 2017. Most importantly, mortgages are set to see a massive slowdown due to the elevated statistical base this year (i.e. frontloading of mortgage lending during a period of extremely low rates), an increase in prices (albeit only a minor one), and a tighter recommendation by the regulator toward banks.

Bank loans and deposits (yoy, %)

	1Q17	2Q17	3Q17	4Q17	1Q18	2Q18	3Q18	4Q18	2016	2017	2018	2019	2020	2021	2022
Bank loans															
Total	7.3	6.7	7.2	7.8	5.5	5.0	3.6	3.3	**6.5**	**7.2**	**4.4**	**4.1**	**4.4**	**5.3**	**4.9**
Households - real estate loans	9.4	9.6	9.5	8.2	6.4	3.4	0.9	0.6	**8.1**	**9.2**	**2.8**	**2.8**	**5.7**	**8.3**	**6.5**
Households - consumer loans	5.0	4.7	5.3	5.2	5.9	5.4	4.9	5.6	**4.7**	**5.0**	**5.5**	**5.6**	**6.1**	**7.6**	**6.4**
Corporate loans	4.7	5.8	5.1	6.6	5.2	4.9	4.5	3.7	**6.8**	**5.5**	**4.6**	**4.1**	**3.4**	**3.2**	**4.1**
Deposits															
Total	10.1	13.3	13.5	8.5	4.7	3.1	1.7	5.6	**6.4**	**11.3**	**3.8**	**3.7**	**2.3**	**2.5**	**3.4**
Households	9.2	9.1	8.8	8.3	7.4	6.7	6.3	6.2	**7.4**	**8.9**	**6.7**	**5.5**	**2.6**	**2.5**	**3.3**
Non-financial corporations	11.6	10.4	9.1	13.4	2.2	5.0	2.8	7.6	**4.6**	**11.1**	**4.4**	**5.2**	**1.3**	**2.0**	**3.4**
Others	10.5	25.6	28.4	3.4	1.6	-5.4	-8.0	1.8	**6.5**	**17.0**	**-2.5**	**-1.3**	**2.7**	**2.9**	**3.4**
Ratios															
Loan-to-GDP ratio	63.2	63.1	63.8	63.0	62.5	62.1	62.0	61.4	**61.6**	**63.3**	**62.0**	**61.5**	**62.5**	**64.5**	**65.3**
Deposit-to-GDP ratio	86.0	85.8	85.9	81.0	84.5	83.0	81.9	80.6	**79.4**	**84.7**	**82.5**	**81.6**	**81.2**	**81.6**	**81.4**
Loan-to-deposit ratio	73.4	73.5	74.3	77.8	74.0	74.9	75.7	76.1	**77.6**	**74.8**	**75.2**	**75.4**	**77.0**	**79.1**	**80.3**
Interest rates															
Real estate loans	2.3	2.3	2.3	2.4	2.5	2.7	2.8	2.9	**2.3**	**2.3**	**2.7**	**3.1**	**3.2**	**3.8**	**4.4**
Consumer loans	9.4	9.3	9.6	9.3	9.6	9.7	9.9	9.9	**10.6**	**9.4**	**9.8**	**10.3**	**9.9**	**10.6**	**11.9**
Corporate loans	1.8	2.1	2.1	2.3	2.6	2.8	3.0	3.2	**2.0**	**2.1**	**2.9**	**3.1**	**2.2**	**3.2**	**4.6**
Share of NPL															
Real estate loans	1.9	1.8	1.7	1.7	1.7	1.6	1.6	1.6	**2.2**	**1.8**	**1.6**	**1.7**	**1.8**	**2.0**	**2.3**
Consumer loans	7.8	7.4	7.3	7.5	7.1	7.0	7.0	7.1	**9.4**	**7.5**	**7.1**	**7.6**	**8.4**	**9.0**	**10.0**
Corporate loans	5.0	4.6	4.5	4.3	4.3	4.2	4.1	4.0	**5.2**	**4.6**	**4.1**	**4.1**	**4.5**	**5.1**	**5.8**

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

The growth of corporate loans in 2017 has been purely driven by FX loans, while koruna loans have seen a minor year-on-year drop. We see this mainly as an effect of the 'euro-isation' of the Czech economy and the end of the FX floor (thus the rise in FX lending), and at the same time due time the favourable financial position of companies – as shown by still elevated profit margins (thus the drop in koruna loans). **Next year, we expect a mild recovery in koruna lending** with the pickup in investment and a probable decline in profit margins due to businesses having higher wage costs.

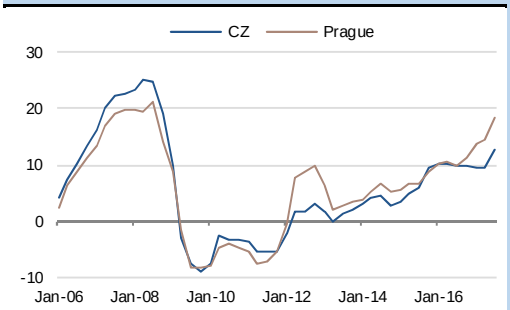
We have revised our outlook for deposits upwards because of the faster trajectory of wages this year and next, and also due to stability in the 'Others' category, which comprises of deposits from government and financial institutions. We had expected that the latter would gradually decline with the removal of the FX floor and the strengthening of the koruna, but there has been no such movement towards that over the past months. We assume some relatively small outflow of liquidity may occur only in 2018.

Box 5: Reaction of housing prices to further crisis: only slight decrease

Real estate price inflation, which is seen most readily in residential housing prices, will persist as the conditions in the labour market tighten. This demand effect can only be dampened by rising interest rates. Supply is unlikely to be able to absorb this demand given that the available data shows that residential housing is not a priority area for developers. In this box, we will also focus on identifying the specific supply and demand factors of the housing market and effects of economic recession on the market.

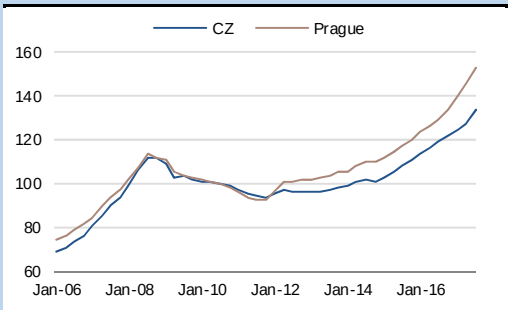
Year-on-year growth in housing prices in the Czech Republic and in Prague has not yet hit the record levels recorded in the pre-crisis 2008-2009 period. Nevertheless, prices are even higher than in the pre-crisis years. The markedly higher rate of growth in Prague has been observed since 2012 and has accelerated recently.

Apartment price trend (%, yoy)[3]



Source: CZSO, Economic & Strategy Research, Komerční banka

Apartment price level (index, 2010 = 100)



Source: CZSO, Economic & Strategy Research, Komerční banka

Demand factors affecting housing prices naturally arise from rising living standards and tightened labour market conditions. A more detailed description of labour market demand factors can be found in the relevant section of this *Economic outlook*.

The supply side of the apartment housing market also contributes to price increases due to the shortfall in meeting demand. The number of started and completed dwellings has increased since 2014, but the growth is only very slight. The six-month moving average is at 60% of pre-crisis values. A reviving supply of apartments is also evident from the data on residential buildings that have been granted a building permit. However, this recovery is insignificant, and in addition, the area earmarked for housing with such buildings has stagnated in recent years by between 200-300 thousand square meters a year, which is slightly more than half the area covered by building permits issued in 2005[4]. On the other hand, there is a certain exodus of developers from residential housing since the total area of buildings for which building permits were issued last year reached 81% of the 2005 level.

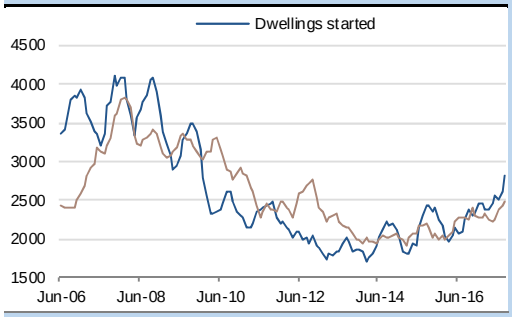
As can be seen from the previous analysis, **housing prices will most likely continue to rise**. The driving factor, which will mostly determine the development of housing prices, remains weak supply. For this reason, **we believe that a more severe economic slowdown than seen at the forecast horizon will result in a very marginal decline in prices**. We assume

[3] Both charts show the offer prices of apartments as monitored by the Czech Statistical Office. Although other price indices are slightly different, they generally confirm the trend nonetheless. For clarity, we have not used them in the charts.

[4] This year was chosen as a benchmark because it was the year in which the largest area of new dwellings had building permits issued, during the 2005-2016 monitored period.

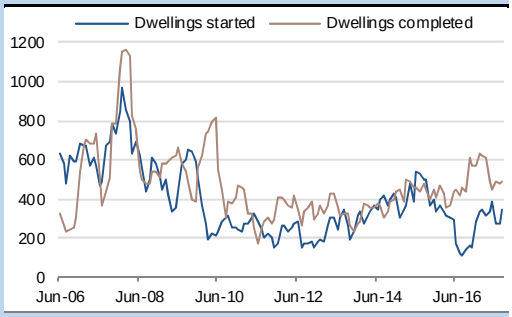
that real estate purchases for investment purposes are concentrated only in a small number of locations in Prague, where the price drop would be higher. However, such a development would have **no major impact on the banking sector**.

Dwellings started and completed – CZ (6M moving average)



Source: CZSO, Economic & Strategy Research, Komerční banka

Dwellings started and completed – Prague (6M moving average)



Source: CZSO, Economic & Strategy Research, Komerční banka

The magnitude of the economic slowdown and expectations surrounding it play a major role in the development of property prices. **An unexpected or deeper recession would hit the demand side more severely, which could then lead to a more substantial decline in property prices. However, we currently attribute a low probability to this risk.**

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Key Economic Indicators

Macroeconomic indicators – long-term outlook

		2015	2016	2017	2018	2019	2020	2021	2022
GDP	real, %	5.4	2.5	4.4	3.6	2.6	1.9	2.1	2.5
Inflation	average, %	0.3	0.7	2.4	2.2	1.7	0.7	0.6	1.4
Current account	% of GDP	0.2	1.1	1.2	1.0	1.4	1.8	1.6	1.3
3M PRIBOR	average, %	0.3	0.3	0.4	1.3	1.5	0.6	1.6	2.9
EUR/CZK	average	27.3	27.0	26.3	25.1	24.8	23.7	22.4	21.6
USD/CZK	average	24.6	24.4	23.4	20.3	18.8	17.6	16.9	16.2

Source: CZSO, CNB, Macrobond, Economic & Strategy Research, Komerční banka, SG Economic Research
Note: KB forecasts are in blue

FX & interest-rate outlook

		23-Oct-2017	Dec-17	Mar-18	Jun-18	Sep-18	Dec-18
EUR/CZK	end of period	25.64	25.7	25.4	25.1	25.0	24.7
USD/EUR	end of period	1.176	1.18	1.21	1.23	1.25	1.27
CZK/USD	end of period	21.80	21.8	21.0	20.4	20.0	19.4
3M PRIBOR	end of period	0.53	0.70	0.95	1.20	1.45	1.65
10Y IRS	end of period	1.69	1.85	1.95	2.05	2.15	2.30

Source: CZSO, CNB, Macrobond, Economic & Strategy Research, Komerční banka, SG Economic Research
Note: KB forecasts are in blue

Monthly macroeconomic data

		1-17	2-17	3-17	4-17	5-17	6-17	7-17	8-17	9-17
Inflation (CPI)	%, mom	0.8	0.4	0.0	0.0	0.2	0.0	0.5	-0.1	-0.1
Inflation (CPI)	%, yoy	2.2	2.5	2.6	2.0	2.4	2.3	2.4	2.5	2.7
Producer prices (PPI)	%, mom	0.7	0.4	-0.1	0.3	-0.5	-0.7	-0.2	0.2	0.4
Producer prices (PPI)	%, yoy	2.1	3.1	3.0	3.2	2.3	1.3	1.1	1.4	1.7
Unemployment rate	% (MLSA)	5.3	5.1	4.8	4.4	4.1	4.0	4.1	4.0	3.8
Industrial sales	%, yoy, c.p.	12.6	4.5	14.2	0.3	11.8	5.0	7.0	5.5	n.a.
Industrial production	%, yoy, c.p.	10.1	2.0	10.2	-1.8	8.3	3.1	3.2	5.8	n.a.
Construction output	%, yoy, c.p.	-2.2	-8.2	7.1	4.1	3.9	8.0	1.8	1.9	n.a.
Retail sales	%, yoy, c.p.	8.3	1.0	10.7	0.5	5.6	4.7	2.5	3.7	n.a.
External trade	CZK bn (national met.)	21.5	22.2	25.4	13.0	14.3	20.1	-2.5	5.9	n.a.
Current account	CZK bn	30.2	34.0	33.4	10.5	-6.5	-11.6	-27.4	-8.1	n.a.
Financial account	CZK bn	40.2	35.1	21.0	29.0	-5.7	4.0	-22.5	10.4	n.a.
M2 growth	%, yoy	8.1	8.9	10.6	11.5	10.6	10.0	9.9	10.1	n.a.
State budget	CZK bn (YTD cum.)	9.1	3.7	4.7	6.3	-18.7	4.6	25.0	15.6	17.4
PRIBOR 3M	%, average	0.28	0.28	0.28	0.29	0.30	0.30	0.30	0.43	0.46
EUR/CZK	average	27.02	27.02	27.03	26.82	26.57	26.26	26.09	26.11	26.08
USD/CZK	average	25.42	25.40	25.29	25.03	24.04	23.37	22.63	22.10	21.90

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

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