Czech National Bank

Czech Economic Outlook

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Hitting the limits

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■ **Czech economy decelerating but inflationary pressures remain strong** Some sectors have been hitting production limits while parts of the economy lack support for quicker growth from the euro area. The slowdown is not being reflected in the labour market. There are more vacancies than job seekers, which will ensure that further wage growth propels inflation.

■ **Koruna set to appreciate gradually, CNB set to continue hiking rates** Ongoing excess of CZK liquidity will impede koruna's appreciation, especially given elevated political uncertainty. We think the CNB will respond to strengthening inflationary pressure by hiking rates. The repo rate should climb to 2.5% by the end of the next year.

■ **Yield curve to bear flatten further** While the short end of the IRS curve should rise on the back of CNB tightening, the long end should remain under pressure from mounting foreign risks. We also expect CZGB yields to increase. A higher budget deficit in 2019 coupled with the need to refinance a large amount of CZGBs, should see their yields grow faster than IRS.

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Growth limits must be broken

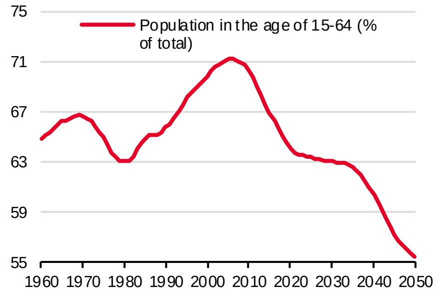
It will not be long before the Czech Republic enters its fifth year of its continuous economic growth. However, after the second-longest period of expansion in the past three decades or so, the **Czech economy has reached its limits in terms of capacities**. This is nothing new. We have discussed the numerous limits holding back the Czech economy in various previous editions of the *Czech Economic Outlook*. The special boxes in this edition highlight our views on the possible ways and means the country could use to **break through the limits and push the economy towards higher rates of economic growth again.**

Growth that relies on maximising the workforce has been exhausted. The total number of employed people is approaching the record level of the end of the 1980s. Involuntary unemployment is virtually non-existent in the Czech Republic and vacancies significantly outnumber applicants. Moreover, demographic trends are turning unfavourable. The number of people of productive age has started to decline, and is set to decline further over the coming years. Where can people be recruited from? Jana Steckerová answers this question in Box 1.

Number of employed people has approached the record levels of the 1980s

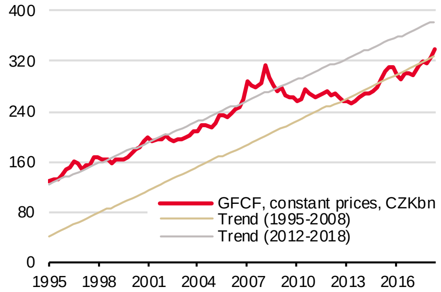
Source: OECD, Macrobond, Economic & Strategy Research, Komerční banka

Productive age population is declining



Source: World Bank, Macrobond, Economic & Strategy Research, Komerční banka

Investment failed to grow in the wake of the European debt crisis



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

From the long-term perspective, the only viable option is to switch to intensive growth through investment into productivity. The global recession in 2009 and the European debt crisis in 2012 and 2013 led to dramatic underinvestment in the Czech economy. Gross investment volumes only returned to pre-crisis 2008 levels last year, and this was only thanks to the private sector. Indeed, as Monika Junicke shows in Box 2, **enterprises under foreign control are making significant investments in research and development. But the public sector needs to wake up and invest in infrastructure again.** According to Jakub Matějů (Box 3), the country's transportation infrastructure is in a visibly poor state of repair while traffic volumes have continued to increase. The Czech Republic has one of the poorest quality road networks in Europe. In the current situation, public and private investment works hand in hand. Fortunately, there have been signals in recent months that public investment has started to pick up.

But investments take time to be implemented. The Czech economy has been running at the limit of its capacities since mid-2017. Economic growth is therefore expected to fall short of 3% this year and come in slightly lower next year. There are no more resources to spur growth. But the Czech economy is also confronted by external uncertainties, such as trade wars, Brexit, and the lack of competitiveness of the Italian economy. **An economic recession**, which we expect to hit the US in 2019/2020 and take the form of an economic slowdown in the euro area and Central Europe, **is looking increasingly likely**. Nevertheless, it is difficult to gauge the timing of the downturn with any accuracy as any negative shock could be a trigger. We are therefore preparing to revise our forecasts as soon as we obtain information that helps to clarify the timing of the US recession. And the change could be in either direction in terms of the timing of the recession, i.e. both sooner as well as later.

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External Environment and Assumptions

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Solid outlook, geopolitics remain a worry

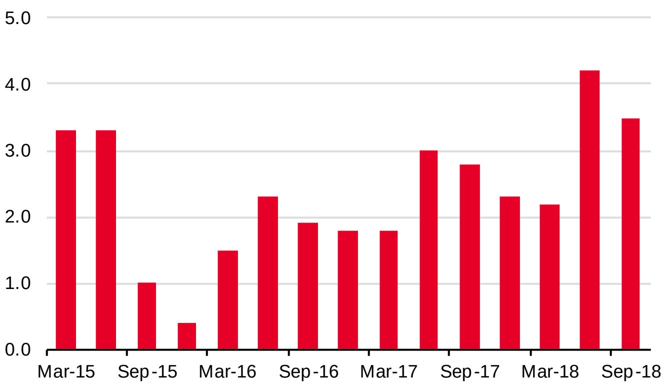
GDP dynamics in the US, euro area and CEE remain solid. The main driver is domestic demand, with net exports neutral or reducing growth. While we expect the Fed to gradually flag the end of its cycle of monetary tightening, the ECB will likely start preparing markets for a rate hike. This should support the euro. Next year, the Polish and Hungarian central banks are also likely to start hiking. Geopolitics – the Italian budget, Brexit or a further trade-war escalation – represent a risk to our prognosis

US: consumption and investment continue to grow

Tax cuts to support consumption until 1H19

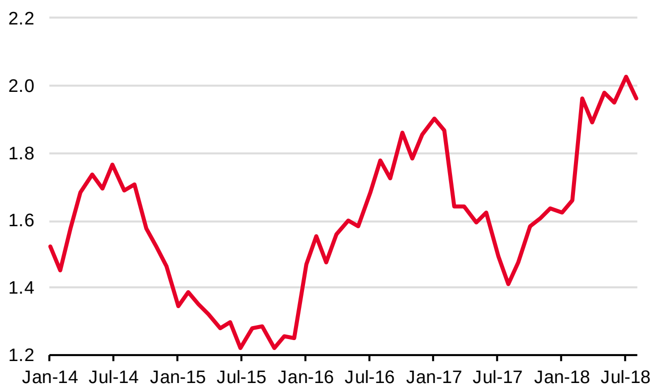
The US economy grew by 4.2% qoq annualised in 2Q, the highest level since 2014. Net exports contributed substantially, by 1pp. On the contrary, the drag from net exports in 3Q18 was the largest in 33 years. Consumer spending surprised, rising by 4%, while government spending rose by the most since 2016. The contribution of inventories was the largest since 2015. Overall, GDP growth in 3Q18 reached 3.5%. We expect real household consumption to remain strong given strong consumer confidence, tax cuts and solid new job creation. The tax cuts will likely boost consumption until mid-2019, by which time we expect real consumption growth of between 2.5-3.0%. Business investment disappointed in 3Q18. While we expect IT spending to remain robust, investment in oil drilling is likely to stagnate. We see the US economy growing by 2.8% in 2018 and 1.6% in 2019.

US: GDP growth (%, qoq, annualised)



Source: Bloomberg, Economic & Strategy Research, Komerční banka

Inflation on target (core PCE, %, yoy)



Source: Bloomberg, Economic & Strategy Research, Komerční banka

Another rate hike in December

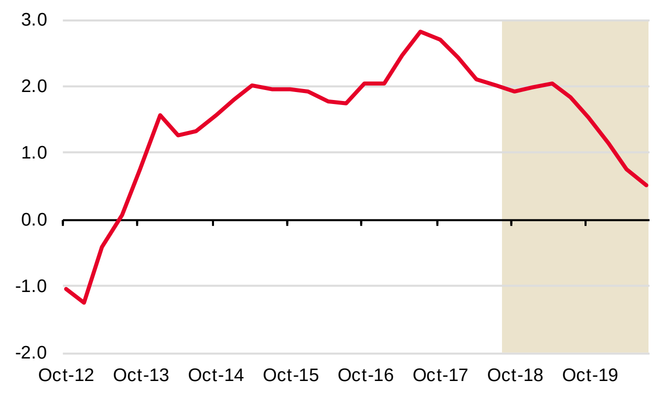
Inflation (core PCE) hovering around Fed's 2% inflation target. In the first half of this year, the Fed feared more significant consumer price growth. Due to the escalation of the trade war and strong dollar, however, it now sees the risks as balanced. Robust economic growth, on-target inflation, and below-NAIRU unemployment will allow the central bank to continue tightening monetary policy. The Fed last hiked rates in September, to 2.00-2.25%. It also signalled a strong intention to further raise rates in December. However, it indicated that the cycle of rate hikes is set to come to an end. According to the dot plot, the central bank will hike three times in 2019 and once in 2020 before discontinuing policy tightening. For 2021, some FOMC members now foresee rate cuts. We expect one more hike this year, in December, with the next two in March and June next year.

Euro area: 2H growth to improve

Household consumption expected to gather pace

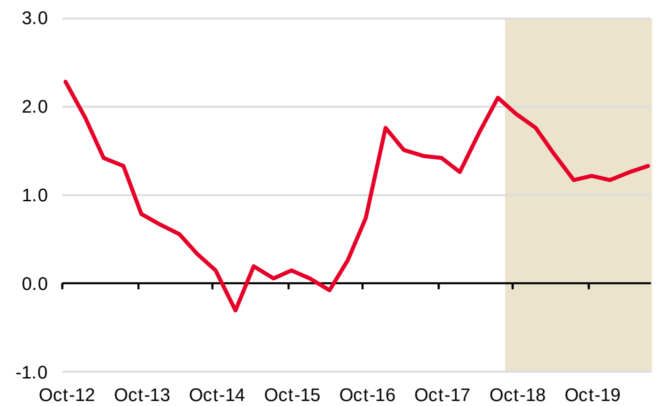
While quarterly GDP growth in the euro area in 2017 averaged 0.7%, the first half of 2018 brought disappointment with an average of 0.4% qoq. However, this result was affected by a series of factors that we think will not be repeated. There were strikes in Germany and France, the euro area was hit by a flu epidemic and extremely cold weather, and confidence was shaken by the fears of trade wars. Real disposable income growth slowed, mainly because of higher oil prices. In 3Q and 4Q, however, consumption should gather pace again amid wage growth, rising employment and improved consumer confidence. This will translate into a decline in the savings rate, in our view. The euro area economy is operating above its potential, net company profits are above the long-term average, and some corporations are already meeting capacity limits. The construction sector has bottomed out, and number of building permits is rising. Consequently, we expect investment to grow further. Overall, our outlook for the euro area economy remains positive. In 3Q and 4Q18, growth should stay at around 0.5% qoq. We forecast GDP at 2.1% yoy for 2018 and 1.9% for 2019.

Euro area: solid GDP growth to continue



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

Inflation in the euro area has peaked



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

We expect the first rate hike in the euro area to take place in June 2019.

Euro area inflation climbed to 2.1% in September, as higher oil prices and statistical base effects pushed the headline numbers higher. However, inflation is unlikely to remain at this level for long and headline inflation will return to 1.5% next year. Core inflation remains a problem. In September, it fell below 1.0%, and is unlikely to exceed 1.4% over the next three years. Robust economic growth and higher inflation allowed the European Central Bank to announce the end of its quantitative easing programme, which is scheduled for December. Nevertheless, the ECB still plans to reinvest the maturing bonds, even after the programme has ended. Balance sheet reduction is not on the agenda yet. While details of how the bonds are to be reinvested have not been made public yet, it is likely to be according to capital key (the share of the national central banks in the capital of the ECB). According to our forecast, the ECB will hike the deposit rate by 15bp in June 2019 and all rates by 25bp in September. While in the euro area, speculation about possible rate hikes will strengthen, in the US discussion is focused on when monetary policy tightening will come to an end. This should be reflected in the common European currency exchange rate. According to SG economist forecasts, EUR/USD should strengthen towards 1.19 by the end of this year and to 1.32 by the end of next year.

Germany: fiscal policy easing to protect the economy from external shocks

The third quarter will be weaker, but in 4Q18 the economy will gather the pace.

The German economy added 0.5% qoq in the second quarter of this year, or 2.0% yoy (WDA). The main growth driver was domestic demand. This was supported by government spending, which returned to growth following a drop in 1Q18. Household consumption was affected by uncertainty stemming from trade wars and future economic developments, so growth was lower than in the previous quarter. Investment grew slowly as well. Export growth is starting to reflect capacity constraints, while imports are growing faster as a result of solid domestic demand. Industry data has been disappointing recently. Car sales and new orders in the automotive industry have been on an unfavourable trend, as new emissions and fuel consumption tests have come into effect and hampered production and assembly of new cars. GDP growth is expected to come in at only 0.2% qoq in 3Q18 (our previous estimate was 0.5% qoq). However, in 4Q18 we expect growth to strengthen to 0.6% qoq. Overall, we expect the German economy to add 1.9% (WDA) in FY18, and the same level again in FY19. Fiscal easing should protect Germany from any shocks stemming from trade wars, Brexit and bargaining about the Italian state budget.

Geopolitics is the risk to our prognosis

Geopolitics represents the main risk to our prognosis. The financial markets are concerned about the Italian government's expansive fiscal policy, the failure to reach an agreement on Brexit and serious problems linked to Turkey, while the threat of an escalation of the trade war with the US still lingers. All these factors could trigger a fall in confidence and consequently bring down household consumption and investment.

It is not surprising that the EU doesn't like Italy's 2019 budget proposal. While according to the previous government proposal, the budget deficit was to come in at 0.8% of GDP, the latest proposed budget is three times higher (2.4% of GDP). In addition, it is not based on realistic assumptions, in our view, as it factors in GDP growth of 1.5% in 2019 while we forecast just 1.2% growth, and is based on unspecified spending cuts. For these reasons, we see a 2.4% deficit as unrealistic, and 2.8% as more likely. Italy then plans to reduce the deficit to 2.1% and 1.8% in 2020 and 2021, respectively, which is also unrealistic in our view. The EU has therefore called for corrective measures, which is not surprising given that Italy is, after Greece, the second most indebted country in the EU (debt to GDP at 131%). Italian government bonds will therefore remain under the pressure, the European single currency may suffer as well. Then there is the Brexit risk. Our main scenario is that an agreement will finally be reached between the UK and the EU. We do not think a second referendum will be held in the UK, even if Theresa May were to resign. In the event that the current UK PM were to resign, we believe a no-deal Brexit could occur, i.e. the UK would leave the EU without any agreements in place. The situation in Turkey remains problematic: inflation jumped to 25% in September; there are substantial external imbalances and a high dependence on external financing; President Erdogan's economic and political power is increasing and the credibility of the central bank is low. All these factors could lead investors to dump euro-area assets in favour of dollars, leading the euro to weaken and confidence in the euro area economy to decline.

CEE region: investment at full throttle

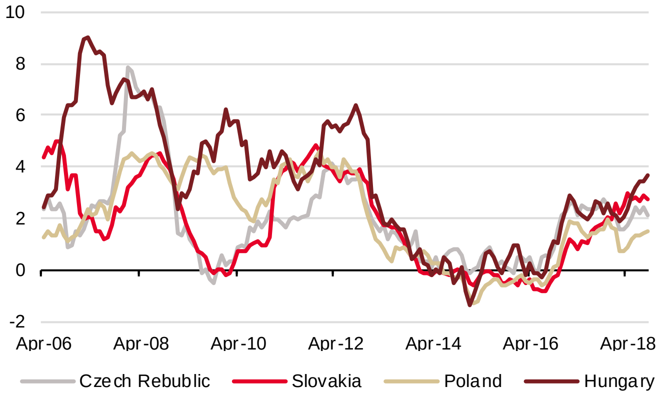
CEE region is performing well, but facing a labour shortage.

CEE economies performed well in 2Q18, with Poland, Hungary and Slovakia in particular posting strong growth. However, the Czech Republic was unable to keep up. The main growth driver remains household consumption. However, momentum is starting to deteriorate. The contribution from net exports was negative in 2Q18 in all CEE countries, as increases in investment and household consumption led to increased demand for imported products. Investment grew strongly in Slovakia and Hungary (Slovakia 20.4% yoy, Hungary 14.5% yoy) but disappointed in Poland. Over the rest of the year and in 2019 CEE countries should continue to show solid momentum (see graph below). Nevertheless, the entire region is facing an extremely tight labour market and labour shortages.

Hungarian and Polish central banks to hike rates next year.

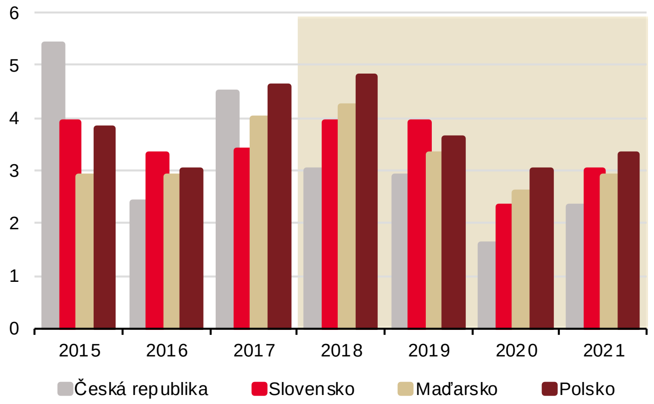
The Czech National Bank was the first in the region to begin tightening monetary policy. In our view, the Polish and Hungarian central banks will hike rates next year. Inflation has accelerated in both Hungary and Poland. In Poland, inflation has so far remained below the central bank's target of 2.5%, but in 1Q19 higher energy and food prices should raise consumer prices and push inflation above this level. We expect the first rate hike from the current 1.5% to take place in 2H19. This should result in the strengthening of the Polish zloty. We expect the EUR/PLN to move towards 4.22 over the coming 12 months. Inflation in Hungary has reached its highest level in five years (3.6% in September). Higher consumer taxes on tobacco have had some impact, but food and fuel prices have also risen. Inflation thus remains in the upper band of the MNB's target range. In the coming months, however, inflation should decelerate again due to statistical base effects. The central bank has already announced that it is ready to normalise monetary policy. However, we do not expect any rate hikes before 4Q19.

Inflation is accelerating in the CEE region (%, yoy)



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

Growth prospects remain solid (%, yoy)

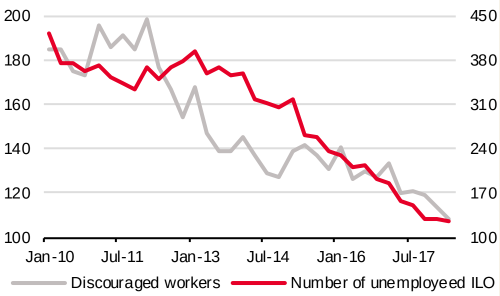


Source: Eurostat, Macrobond, Economic & Strategy Research, Komerční banka ,SG Cross Asset Research/Economics,

Box 1: Labour force – where to find it

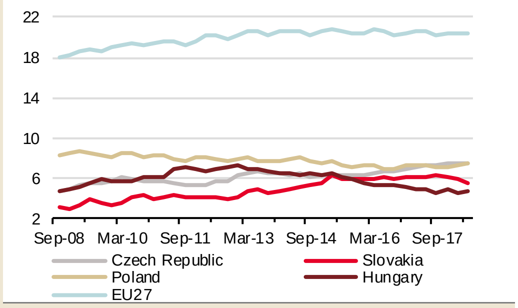
Companies now state the labour shortage is one of their main business barriers. However, the question is, where should companies be looking for labour? One answer is in the category called discouraged workers by the Czech statistical office. These people are economically inactive, i.e. are not actively looking for work, which is why they cannot be considered unemployed; however, they would like to work. The category includes pensioners, people on disability, women on maternity or parental leave or homemakers. According to the Czech Statistical Office's labour force survey, 108,000 people fall into the category of "discouraged workers". In an ideal world, they could fill one-third of job vacancies.

Discouraged workers and unemployed ('000)



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

Share of part time jobs (%)



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

However, how can discouraged workers get back into the workforce? In the Czech Republic, less than 8% of employees work part time compared with 20% in the euro area. In neighbouring Austria and Germany, the share is close to 30. Interestingly, 45% of respondents in the "Up ČR" survey stated they would welcome working five hours per day. Therefore, part-time jobs could be an interesting option for discouraged workers given the structure of the group, i.e. pensioners, women on parental leave, etc. It is true, that just one-third of the 108,000 discouraged workers would be willing and able to get a job within 14 days, but this number is not negligible given today's very tight labour market.

Macroeconomic outlook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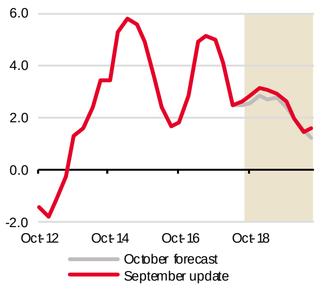
Main changes

GDP:
We have revised down our GDP growth forecast again. This time, we cut our estimate for 2018 by one tick to 2.9% and for 2019 from 2.9% to 2.7%.

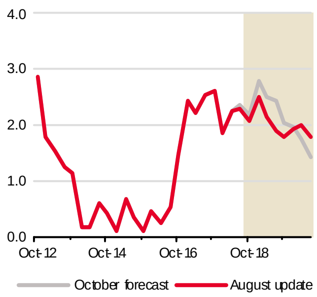
Inflation:
We revise our inflation forecast up by 0.1pp to 2.2%, as core inflation continues to surprise to the upside. Next year, we see inflation accelerating to 2.4%, up 0.3pp compared to our previous forecast.

Change to our GDP outlook (%)



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

Change in our inflation outlook (%)

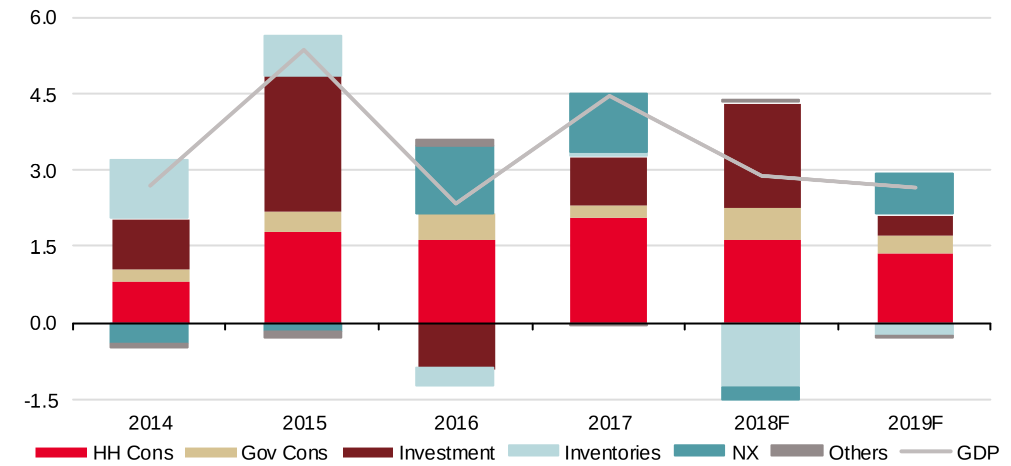


Source: CZSO, Macrobond, Economic & Strategy Research, Komerční banka

Retreat to long-term sustainable dynamics

The Czech economy has been slowing, partly due to some sectors hitting production limits and partly to a lack of support for quicker growth from the country's main trading partners. However, the labour market remains extremely tight, resulting in strong wage growth. Investment remains strong, but productivity gains are still limited. Low productivity growth, together with strong wage growth, is resulting in rising costs that businesses are partially transferring to consumers. Core inflation is thus set to stay high, keeping the headline figure above 2%.

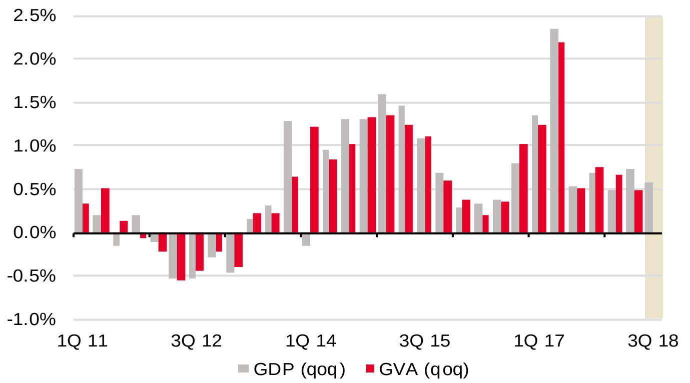
GDP growth easing due to worsening external trade balance and low capital formation (% yoy)



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

As among the main Czech trading partners, the domestic economy did not put in a great performance in the first half of this year. The monthly figures suggest that the economy did not accelerate in the third quarter either. Industrial production growth remains muted, as some sectors cannot increase output due to capacity constraints, while others are suffering due to slower economic growth in the euro area. After a surprisingly high trade balance surplus in the second quarter, trade should contribute negatively to qoq growth in 3Q. Domestic demand has been easing, with retail sales dropping further below 5% yoy. Households perceive an economic slowdown and have thus started putting aside precautionary savings. In contrast, investment should maintain its momentum, as capacity is a problem in many sectors and investment is thus the only way to expand. Moreover, public sector investment has increased given the need to tap EU funds (due to the N+3 rule) by the end of the year. **We expect the Czech economy to grow by 0.6% in 3Q, which corresponds to 2.5% yoy.**

GDP growth decelerating since second half of last year



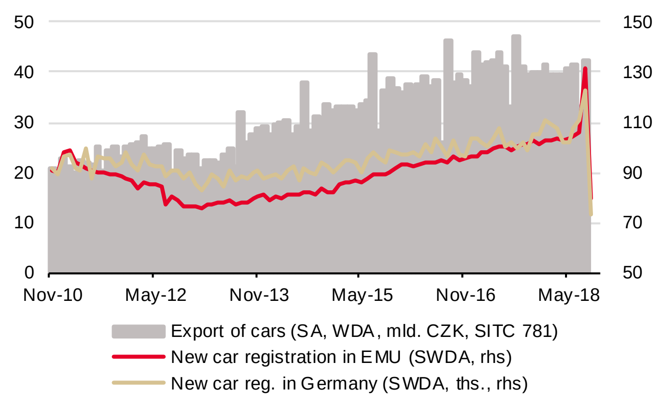
Source: CZSO, Macrobond, Economic & Strategy Research, Komerční banka

Industry facing increasing number of challenges

Acceleration of growth in the euro area and an expansion of production capacity will drive up industrial output. The automotive industry remains a risk.

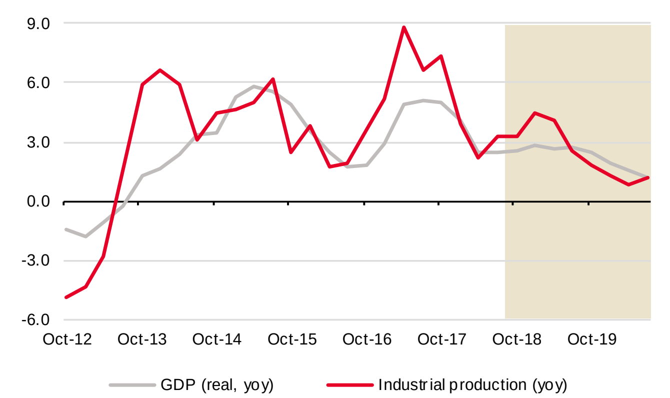
Industrial production has slowed this year but is still doing well. For some time, we have been pointing out that there are labour force shortages and other capacity constraints. These are a limiting factors in many manufacturing sectors. In addition, some producers are already perceiving a slowdown in the euro area and feeling the impact of Brexit uncertainty. **The situation in the car industry has become complicated.** Czech producers have had to deal with a drop in car imports into the UK, as the Brexit situation harmed demand. And now there are further challenges. **The adoption of new environmental regulations could temporarily impede production, having an adverse effect on the whole supply chain.** Moreover, the outlook for the automotive industry remains uncertain. Slowing European economies and a high degree of market saturation make further output growth difficult. On the other hand, **machinery companies should benefit from the limited capacity in some sectors and labour force shortages, with the expansion of production facilities likely boosting their order books.** Furthermore, SG economists remain positive about growth accelerating in the euro area towards year-end, so demand should keep increasing**. We believe that Czech industry will continue expanding next year, albeit printing at a somewhat subdued 3.2%.** The risks are skewed toward even slower growth.

Environmental regulations causing volatility and uncertainty in automotive sector



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

Industrial production to see modest growth

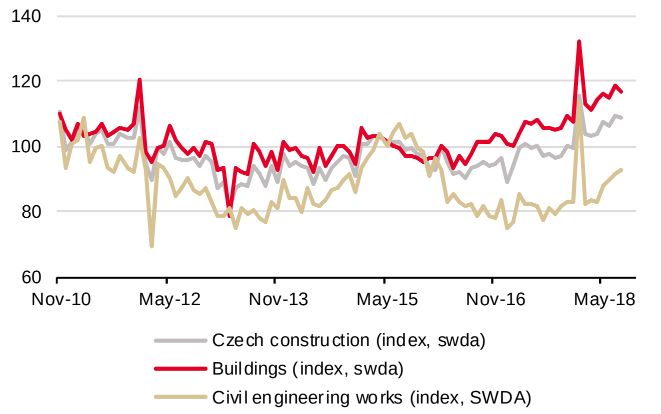


Source: CZSO, Macrobond, Economic & Strategy Research, Komerční banka

Construction output surging but will likely decelerate due to reduced capacity

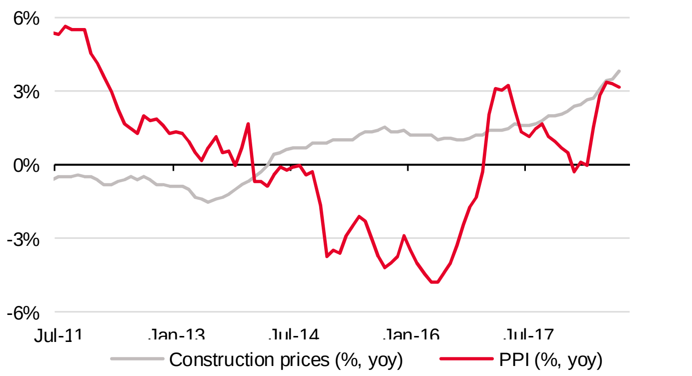
The construction sector continues to rally. The need to increase production capacity and demand for homes are the main drivers of strong demand in the private sector. Moreover, the public sector is speeding up too and must tap EU funds by the end of the year if it does not want to lose part of the money due to the N+3 rule. Thus, demand has surged from the public sector, especially for engineering works. It is set to remain strong (as we show in Box 3). **However, after many years of the construction sector suffering a lack of demand, capacity has shrunk – this is the biggest problem in the sector.** Thus, we think the double-digit growth that we expect this year will not be repeated next year. **Full-year 2018 growth should print at 11.1%, while we see the figure decelerating to 4.7% in 2019.** The mix of exhausted capacity and high demand has been pushing up construction prices. The trend is set to continue in the coming quarters, in our view.

Construction output picking up strongly



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

Construction prices growing dynamically



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

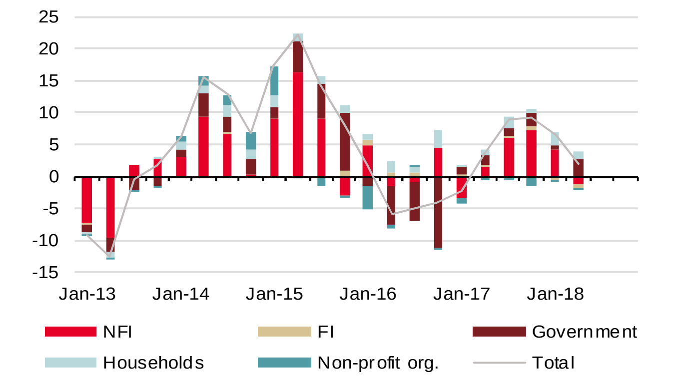
Investment curbed by uncertainty

Recent strong investment activity will likely be curbed by global uncertainty next year

Fixed capital formation surprised with stronger-than-expected growth in the second quarter. On the other hand, we saw a significant drop in inventories, which indicates that a large volume of unfinished investment was completed but without much new investment. We believe that this was a one-off, but there is a risk that it is the start of continuous slowdown in fixed capital formation. As we indicated above, **the public sector is seeing increased investment given the need to tap EU funds by the end of the year.** Some of these projects will continue into the beginning of next year. However, in the second half of 2019, public sector investment should reduce its pace.

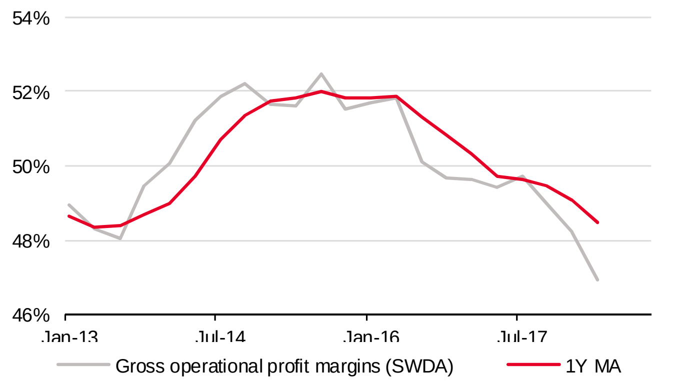
The uncertainty in the global economy caused by Brexit, trade wars and capacity constraints in Germany will weigh on private investment. The growth outlook has deteriorated and is less certain than before. Moreover, profit margins have been decreasing, as firms have to pay much more to their employees. Additionally interest rate rises are making loans more expensive. **We expect investment to remain strong this year, printing at 8.2%, but to drop substantially to 1.4% next year.**

Capital formation easing due to drop in inventory built (%, yoy)



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

NFCs' profit margins decreasing



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

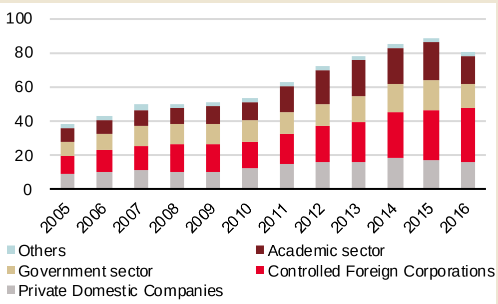
Box 2: Research and development in the Czech economy attracts attention

Investment in R&D significantly influences economic dynamics in the long run. Quality and quantity here are important for improving the economy's potential. R&D takes part at the private (60%) and public (40%) levels, and the results tend to be better when the two sectors work in cooperation.

In the private sector, it is largely foreign-controlled corporations that invest in R&D. The difference between the amount of R&D invested by pure Czech firms and foreign ownership has significantly increased over the past several years. In 2010, R&D was split almost equally between domestic companies and foreign entities, while corporations with foreign capital are currently spending twice as much as domestic firms on R&D. Thus, it is not only cheap labour that attracts foreign capital, qualified experts are also becoming increasingly appreciated.

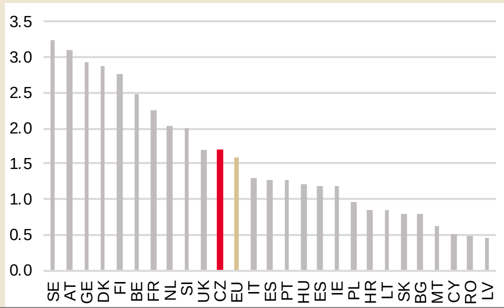
This is good news, in our view. The Czech economy's reputation as a low value-added factory has been slowly changing. The increasing importance of R&D in the economy points to a shift towards production with higher value-added in the future. Higher R&D spending will most likely lead to investment in a higher value-added production. Because the majority of companies are interested in modernisation and robotisation in industry, most of R&D expenditures are flowing into engineering.

R&D expenditure by sectors (CZKbn)



Source: CZSO, Economic & Strategy Research, Komerční banka

R&D expenditure in the EU (% of GDP)



Source: UNESCO, Economic & Strategy Research, Komerční banka

CZSO statistics show that overall R&D expenditures peaked in 2015. This was also the height of the inflow of EU funds. In 2015, 4.4% of R&D in the private sector was financed by EU funds, while in 2016 the share was just 1.25%. But the reduction in EU funds since 2015 has had a greater impact on R&D spending in the public sector than private sector, as the latter replaced the missing resources with its own funds, and its overall R&D expenditures here even increased. For public institutions, the 83% drop in EU funds led to a 23% yoy drop in public R&D expenditures in 2016. As a result, overall R&D investment dropped nearly 10%.

Despite this decrease, the level of R&D in the Czech Republic relative to GDP is slightly above the EU average, and much higher than in any other CEE country. According to OECD statistics, the level of education needed for R&D is also much higher than in the rest of the CEE region, but it is still some way below that in western Europe. As such, improving levels of education could help the Czech economy become a research centre of the region in the long term.

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Fiscal policy: risk of a deeper deficit in 2019

While this year the state budget is doing well, supported by healthy macroeconomic conditions and lower expenditure resulting from the late start of a number of large investment projects, next year we expect the good times to end. Planned increases in mandatory spending and public investment activity are expected to squeeze the budget. Meanwhile, public revenue collection is also set to slow on the back of weaker economy. Overall, we expect the public budget deficits to deepen over the coming years.

Government aims to lower the deficit in 2018…

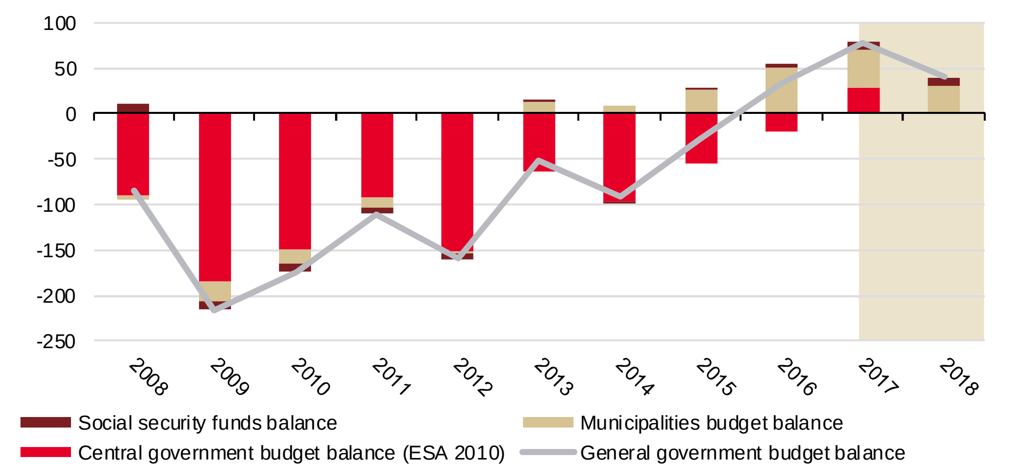
Central government budget to end the year in surplus again.

After the first nine months of the current year, the Czech state budget showed a surplus, as revenues collected up until September exceeded expenditures by CZK16.8bn. This is close to the situation observed for the same period last year, which ended with a record-high surplus under ESA methodology. The collection side has been bolstered mainly by rapidly growing VAT revenues, which aside from consumption strength reflect various administrative efforts, such as the VAT control statement.

… and local authorities have also been making positive contributions

The public sector recorded a record-high surplus last year according to ESA methodology, amounting to 1.6% of GDP. The central government budget balance has remained in positive territory, having recorded a surplus amounting to 3.1% of GDP in the first half of this year. This is slightly weaker than last year, but still a very solid number. Although the local authority budget surplus declined by some CZK2.6bn, local government continues to make a positive contribution to the general government budget. **In the yoy comparison, public debt declined by 4.2pp to reach 35.3% of GDP in 2Q.**

General government budget balance decomposition

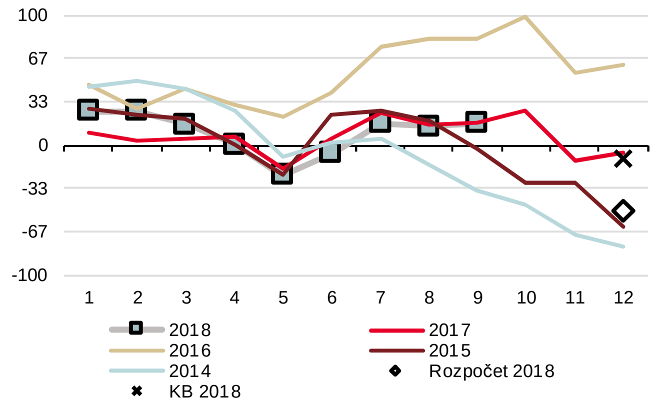


Source: Finance Ministry, Macrobond, Economic & Strategy Research, Komerční banka

Budget for 2019 is far less cautious

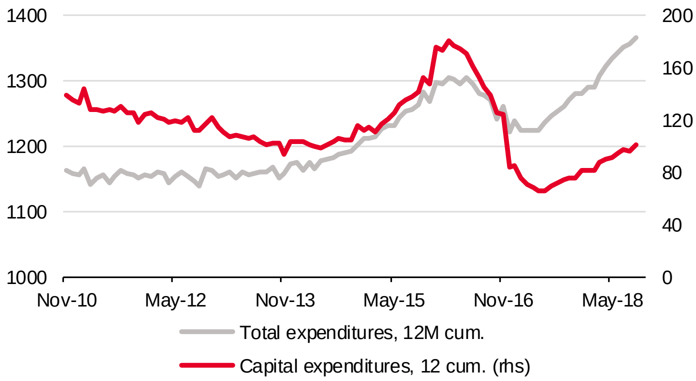
In recent years, government budgets have often ended up showing lower deficits or even surpluses compared with the original plans. This mainly reflected a stronger economic performance and rapid wage growth which led to higher tax revenues. Some improvements have also been made on the administrative side by the tax collection department. However, the 2019 budget reveals a less cautious plan, incorporating very strong expenditure growth, with a large portion attributable to increases to mandatory spending. Teachers' wages are set to increase by 15%, while other public servants will get an 8% wage boost on average. The government also plans to prop up investment spending. On the revenue side the finance ministry is not planning to introduce any new measures, and the economy is set to slow down next year according to both our forecast and that of the ministry. **We deduce from this that the official budgetary outlook for the coming years lacks the buffers of previous budgets.**

Budget fulfilment during the year



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

Public investment gaining momentum (CZKbn)



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

Capital expenditure is speeding up.

On the spending side, capital expenditure has rapidly accelerated. Public investment grew by a massive 47.2% in September vs the previous year. Over half of this investment is co-financed by EU funds; the capital expenditure related to EU funds rose by a whopping 86.9%. Despite this acceleration, investment activity remains below the budgeted level. In September, only 65.8% of the expenditure allocated for the current year had been spent. This reflects the late start of a number of large investment projects, the costs of which will be partially shifted to next year. We expect capital expenditure to increase further in accordance with finance ministry plans, which call for the investment allocation to rise by another 36% in the 2019 budget**. On the other hand, the execution of public investment projects has been slow in recent years mainly due to delays related to red tape and the lack of administrative staff at the central level. These obstacles seem set to prevail. We therefore believe some of the planned investment expenditure will be delayed again, and the related costs will be partly shifted to following years.** Investment activity also is also accelerating at the local authority level. This is partly down to the N+3 rule, according to which a large chunk of funds needs to be spent this year. However, local authority investment should continue to grow even in the coming years, which means that the local authority surpluses are set to decline.

Revenues to slow in line with GDP deceleration

On the revenue side, the situation has been rosy in recent years. Also in the current year tax revenues have exceeded the budget plan so far. VAT collection was up by 7.4% yoy at end-September. Also other revenues are on the rise, notably social security contributions (by 10.3%) but also excise duty. **All these revenues reflect the cyclical position of the economy, as wages and consumption are growing fast. This will not last indefinitely.** The budget for next year assumes revenue growth of more than 11%, while according to the Czech finance ministry's own projections nominal GDP will grow by only 5.2%. It is unclear where the optimism is coming from on the revenue side. Our growth outlook is even lower, we expect nominal GDP growth to reach 4.8% in 2019. **In summary, we see a substantial risk of the deficit moving higher in 2019.**

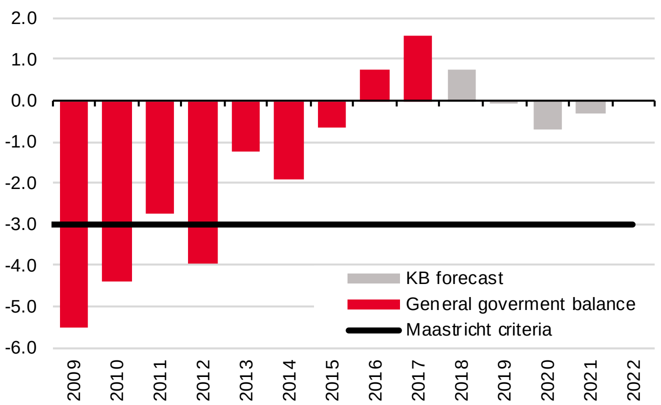
Public finance dynamics

	2017	2018f	2019f	2020f	2021f	2022f
Balance (% GDP)	1.6	0.7	-0.3	-0.7	-0.3	0.0
Fiscal effort (pp GDP)	1.1	-0.1	-0.9	-0.9	-0.6	-0.2
Public debt (CZKbn)	1,750	1,710	1,740	1,790	1,810	1,8100
Debt ratio (% GDP)	34.6	32.0	30.9	30.8	30.0	28.8

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

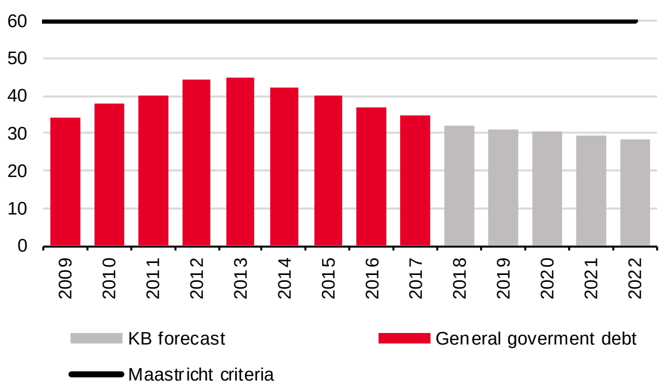
Based on the current budget fulfilment figures we expect the budget deficit to be much lower than initially planned this year, and to come in at a mere CZK10bn. By contrast, next year, we expect the deficit to be higher than envisaged by the ministry and to reach CZK50bn. This is because we expect tax revenues to be lower than the expectations set out in the budget plan due to weaker economic growth. Meanwhile on the expenditure side, the public sector wage increases will increase the mandatory spending burden while investment expenditure will also gather momentum.

Public finance balance (% of GDP)



Source: CZSO, Economic & Strategy Research, Komerční banka

Public debt (% of GDP)



Source: CZSO, Economic & Strategy Research, Komerční banka

Local government budgets should help move the central government budget into a surplus this year. Local authorities have increased their investment spending as a result of EU fund drawdowns, but their expenditure is not yet high enough to cancel out the local government budget surpluses. The central government will therefore print a significant surplus this year, in ESA methodology, amounting to 0.7% of GDP. Next year, the local government surpluses are likely to decline. The public sector should then end the year with a deficit of 0.3% of GDP.

Public debt is set to fall both in absolute terms and relative to GDP this year. In relative terms, debt is set to fall by 2.6pp to 32.0%. The trend of decreasing debt will be slowed by the public finance deficit next year. Nevertheless, given that economic conditions are likely to remain fairly strong, it should decline further to 31.6% of GDP.

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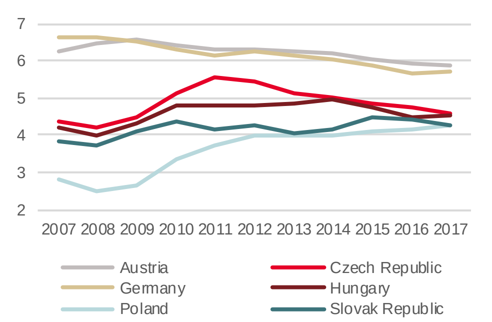
Box 3: Czech transportation infrastructure gap

The economy is hitting its production limits, the labour market is depleted and one of the few remaining ways to increase production to meet the country's high demand is to increase production investment. Beyond private investment, we see a lot of potential for public investment expenditures to improve productivity gains. **In terms of transportation infrastructure investment**

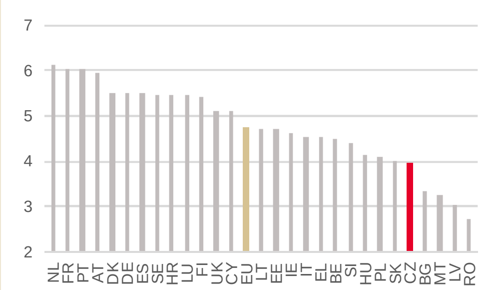
especially, governments have been lagging behind. Before 2011, the Czech Republic's transportation infrastructure was continuously improving according to the Global Competitiveness Index of the World Bank. Since then, its quality has deteriorated at the fastest pace of any country in Central Europe. **According to the quality of roads sub-index, the Czech Republic is ranked a dismal 25 out of 29 EU countries.**

Transport infrastructure quality (sub-index of GCI)



Source: World Bank, Economic & Strategy Research, Komerční banka

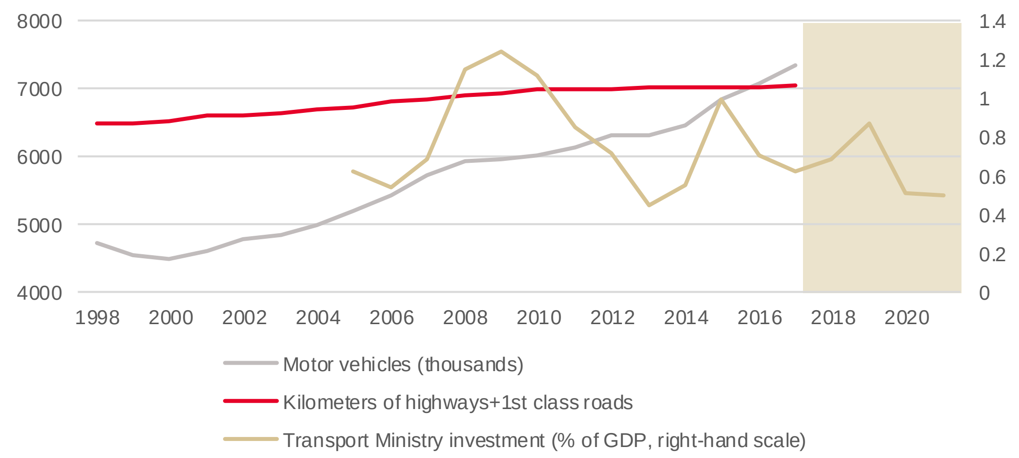
Road network quality (2017, sub-index of GCI)



Source: World Bank, Economic & Strategy Research, Komerční banka

Meanwhile, the number of motorised vehicles on Czech roads has increased by 2.6m since 1998 (growth of 56%), and the length of highways and motorways increased only by 573km, up 9%. Some roads have seen their capacity increase, but even then, it is clear that road network utilisation has risen dramatically. **On top of adding to costs, this has also resulted in delivery delays and an overall decline in economic efficiency. The timeliness of deliveries is lower than the EU average according to the World Bank index.** Furthermore, the increase in electrified railroad track mileage came to a halt around 2011, too. The plans to build high-speed train tracks remain on paper only, and progress has not been made, even on the high-priority extensions of core railroad and road connections included in the trans-European TEN-T network, according to the European Commission.

Number of motorised vehicles growing faster than highway and motorway kilometres; infrastructure investment has levelled out



Source: World Bank, Economic & Strategy Research, Komerční banka

The government is aware of the infrastructure gap, and the budget proposal for 2019 involves a boost to the capital expenditure allocated to the Transport Ministry from CZK37bn to CZK49bn (an increase of 32%). **Compared to GDP, however, even this growth would not lift the relative**

investment spending to the levels seen prior to 2011. Moreover, in the budget outlook for 2020 and 2021, investment expenditures allocated to transportation declined again to CZK31bn. By 2020/21, GDP will have grown further based on our forecasts as well as on those of the government, theoretically leading to higher tax revenues but also to increasing transportation network utilisation.

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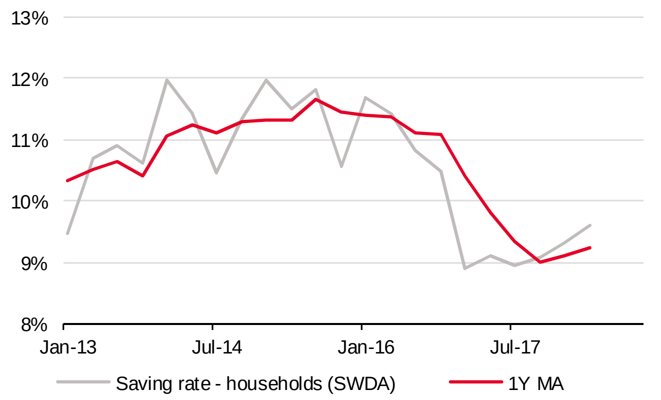
Wage growth not expected to decelerate notably

Labour market remains tight, but households slowly starting to put aside precautionary savings

The monthly labour market data have seen the first increase in the unemployment rate since January 2015. Nonetheless, we do not expect the rate to start on a rising trend. According to the CZSO, the rate increased as *"there were considerably more women on the labour market aged 25 to 49 years old".* This confirms the information we relayed in Box 1 that employees can still be found among discouraged workers. Despite the slight increase in the unemployment rate, **the labour market remains very tight.** There are still many more vacancies than job applicants, and the strong wage growth is set to continue. Moreover, the government will help support increased average wages, as it is planning a double-digit pay rise in the public sector.

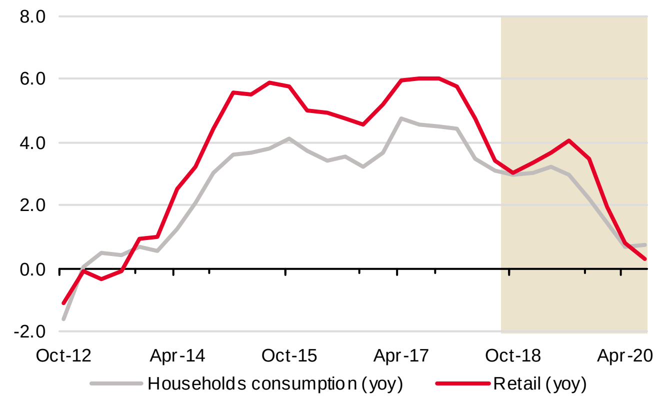
The narrative of a slowing economy has been relatively audible in the public space. That might be why the savings rate has bottomed and households are becoming more cautious. It could also explain the drop in household consumption, which has been decelerating since the second quarter of this year. **The savings rate will probably not fall further, and private consumption is thus set to grow at a slower pace than real wages. We expect private consumption to print at 3.5% this year and 2.9% in 2019.**

Savings rate bottoming out



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

Private consumption slowing (%)



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

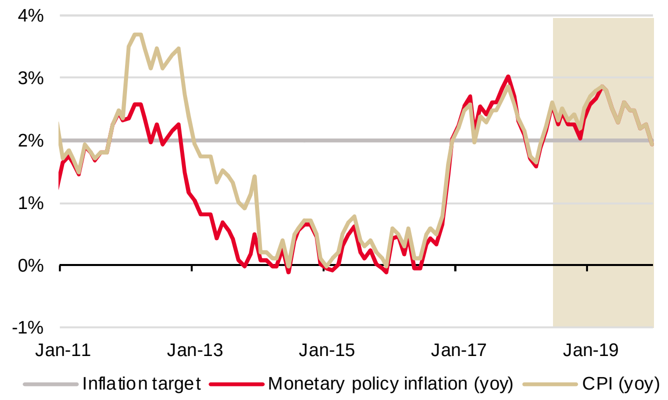
Inflation to accelerate at beginning of 2019

Inflationary pressures in the Czech economy have strengthened. Core inflation has been printing above 2% since April and is unlikely to decelerate. This year's poor harvest will put pressure on food prices, while fuel prices have been lifted by higher oil prices on global markets. At the beginning of 2019, we expect a major change in electricity distributors' prices, thereby boosting administered prices and raising headline inflation towards 3%. We see headline inflation printing at 2.2% this year and accelerating to 2.4% next year.

Core inflation to accelerate next year

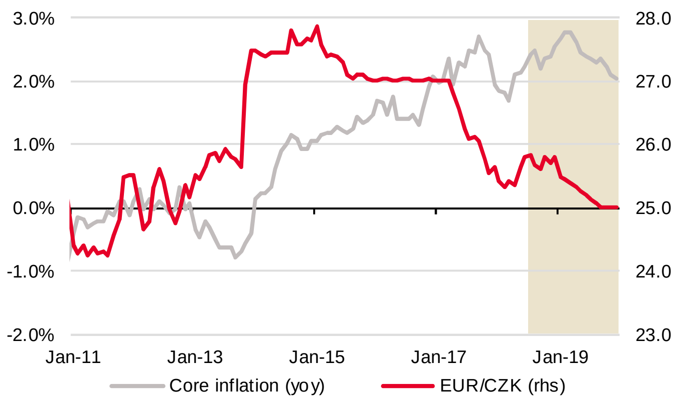
Core prices accelerated over the summer and are set to retain this momentum. Wage growth has been a substantial cost factor for companies, which are passing on part of their increased costs to consumers. CZK appreciation has halted but is poised to resume (see FX section). However, the strengthening will likely remain muted and thus not significantly impede core price growth. **We expect core prices to accelerate to 2.4% in 2019 after likely printing at 2.2% this year.**

Inflation to remain above 2%



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

Core inflation accelerates again after short pause



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

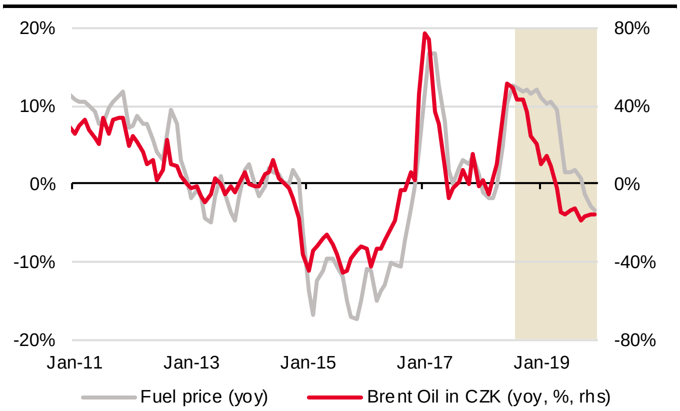
Poor harvest suggests higher food prices

Food prices have been very volatile recently and are likely to remain so, yet, on average, they have surprised with only relatively modest increase. However, a preliminary CZSO survey suggests that they will grow by almost 1.5% mom in October. Moreover, this year's poor harvest, together with higher oil prices, will push prices up. **All in all, we expect food prices to grow by 1.4% this year and accelerate to 2.1% in the next.**

Fuel price inflation to start easing

After taking a breather in August, Brent oil moved over USD85/bbl in October. This has prompted double-digit growth in **domestic fuel prices**. We expect Brent prices to stabilise, leading to a deceleration in yoy domestic fuel prices. This process will be amplified by the return of the CZK to its appreciation trend. **We expect fuel prices to grow by 6.7%, with the figure decelerating to 1.9% next year.**

Fuel prices surge but are set to come back down



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

Electricity prices set to surge at beginning of 2019

Administered prices are set to increase notably at the beginning of the next year, in our view. Energy prices have surged globally, and Czech distributors usually make significant changes to their price lists at the beginning of the year. **The unregulated part of electricity prices (c.40%) will increase by 10%, according to our estimates.** We still do not know by how much the regulator will allow distributors to increase the regulated price (60%), but we use a conservative assumption of 2%. Altogether, this generates strong upward pressure on administered prices. We expect them to grow by 2.8% in 2019 after this year's increase of 1.8%.

Risks: FX volatility remains the most imminent risk

There are persistent risks emanating from the external environment. They are not new, but they are not diminishing. Domestically, capacity constraints are also a risk. The main risks include:

Koruna highly volatile during political turmoil

- CZK volatility. The koruna has shown that it is prone to react to political turmoil. The risk of strong depreciation is thus high should an unfavourable global economic/political event occur.
- Sluggish EMU growth persists. While domestic demand remains solid, external demand is fragile. If the recent tepid growth in the euro area were to persist, it would curb Czech economic growth.
- Drop in demand for cars or car parts. This would significantly hit the Czech automotive industry, one of the main drivers of the current economic boom, and could arise from saturation of the market or new environmental regulations.
- Low or no productivity growth. This would slow growth, as the economy would lose competitiveness. It would also cause a short-term spike in inflation. In contrast, inflation in the longer term would be lower due to weaker demand.

Key economic indicators

	2Q18	3Q18	4Q18	1Q19	2Q19	3Q19	4Q19	1Q20	2017	2018	2019	2020	2021	2022
GDP and its breakdown														
GDP (real, yoy)	2.5	2.6	2.8	2.7	2.8	2.4	1.9	1.5	4.5	2.9	2.7	1.5	2.4	2.7
Household consumption (real, yoy)	3.1	3.0	3.1	3.3	3.0	2.2	1.5	0.7	4.4	3.5	2.9	1.0	1.7	2.8
Government consumption (real, yoy)	3.1	3.7	2.2	2.0	2.0	1.7	1.9	2.2	1.3	3.3	2.0	2.3	2.1	1.5
Fixed investments (real, yoy)	7.4	7.2	3.3	1.4	0.6	0.5	-0.2	-0.7	3.7	8.2	1.4	-0.4	1.4	2.5
Net exports (contribution to yoy)	0.0	0.2	0.8	0.3	1.1	0.9	0.5	0.8	1.1	-0.2	0.8	0.8	1.2	0.3
Inventories (contribution to yoy)	-1.5	-1.6	-0.8	0.2	-0.5	0.0	0.3	-0.2	0.1	-1.3	-0.3	-0.2	-0.2	-0.1
Monthly data from the real economy														
Foreign trade (CZK bn) (*) (***)	79	84	88	93	97	99	99	107	443	361	375	429	485	502
Exports (nominal, yoy) (*)	4.7	5.8	11.2	6.5	5.2	3.5	2.4	3.2	6.8	2.8	6.6	3.7	7.4	8.1
Imports (nominal, yoy) (*)	8.2	8.8	13.6	8.0	3.6	2.4	1.6	2.2	8.8	5.1	6.9	2.7	6.9	8.6
Industrial production (real, yoy)	4.4	3.2	4.4	4.1	2.6	2.0	1.3	0.8	6.5	3.1	3.3	1.3	5.4	7.0
Construction output (real, yoy)	13.4	12.4	1.6	7.5	4.6	5.3	5.3	5.2	3.2	11.1	4.7	5.0	1.2	5.6
Retail sales (real, yoy)	4.1	3.2	3.2	4.2	3.4	3.5	2.0	0.8	5.5	4.4	3.6	0.8	1.1	3.2
Labour market														
Wages (nominal, yoy)	8.3	7.9	7.8	6.7	6.0	5.1	3.2	2.8	6.2	8.3	6.4	2.7	3.1	5.1
Wages (real, yoy)	5.7	5.6	4.9	4.1	3.5	3.0	1.2	1.0	3.7	6.0	3.9	1.1	1.9	3.1
Unemployment rate (MLSA)	3.0	3.2	3.2	2.8	2.9	3.3	3.4	3.0	4.1	3.2	3.0	3.4	3.5	3.4
Unemployment rate (ILO 15+)	2.3	2.3	2.6	2.4	2.5	2.4	2.7	2.6	2.9	2.3	2.5	2.7	2.9	2.8
Employment (ILO 15+, yoy)	0.9	0.7	0.2	-0.1	0.0	0.0	-0.1	-0.3	1.6	1.3	0.0	-0.4	-0.3	0.1
Consumer and producer prices														
CPI Inflation (yoy)	2.4	2.2	2.8	2.5	2.4	2.0	2.0	1.8	2.5	2.2	2.4	1.6	1.2	2.0
Taxes (contribution to yoy inflation)	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.0	0.0	1.2	2.0
Core inflation (yoy) (**)	2.4	2.5	2.8	2.5	2.3	2.2	2.0	1.7	2.3	2.2	2.4	1.6	1.4	2.2
Food prices (yoy) (**)	0.6	-0.2	1.7	2.0	3.0	1.7	1.9	1.8	5.1	1.4	2.1	1.9	0.8	0.9
Fuel prices (yoy) (**)	12.2	11.4	9.0	3.2	-0.8	-3.7	-2.9	-3.8	6.6	6.7	1.9	-3.7	-4.2	-1.5
Regulated prices (yoy) (**)	2.2	1.7	2.5	2.7	3.0	3.0	3.1	3.1	0.0	1.8	2.8	2.7	1.9	2.9
Producer prices (yoy)	3.3	3.7	3.5	2.3	1.1	0.6	1.3	1.5	1.8	2.1	1.9	1.4	0.8	1.5
Financial variables														
2W Repo (%, average)	1.16	1.75	2.00	2.25	2.50	2.50	2.50	2.21	0.17	1.08	2.31	2.17	2.3	3.0
3M PRIBOR (%, average)	1.65	1.90	2.15	2.40	2.65	2.65	2.65	2.32	0.41	1.34	2.46	2.30	2.4	3.1
EUR/CZK (average)	25.72	25.77	25.45	25.27	25.07	25.07	25.87	25.95	26.3	25.6	25.2	25.8	24.9	24.1
USD/CZK (average)	22.12	21.66	21.03	20.38	19.28	18.99	19.16	18.80	23.4	21.5	19.9	19.0	18.6	17.8
External environment														
GDP in EMU (real, yoy)	2.0	1.9	2.0	2.1	1.8	1.6	1.1	0.8	2.5	2.1	1.9	0.7	1.0	1.5
GDP in Germany (real, yoy)	1.9	1.9	2.0	2.0	1.9	1.7	1.1	0.6	2.5	1.9	1.9	0.6	1.6	1.6
CPI in EMU (real, yoy)	2.1	1.9	1.8	1.5	1.2	1.2	1.2	1.3	1.5	1.8	1.4	1.3	1.4	1.4
Brent oil price (USD/brl, average)	77.0	78.0	73.0	70.0	73.0	75.0	73.0	71.0	55.1	74.2	72.8	70.0	65.0	65.0
EURIBOR 1Y (%, average)	-0.17	-0.14	-0.11	-0.10	-0.10	-0.11	-0.10	-0.04	-0.15	-0.17	-0.11	0.05	1.0	1.8
EUR/USD (average)	1.16	1.19	1.21	1.24	1.30	1.32	1.35	1.38	1.13	1.19	1.27	1.36	1.3	1.4

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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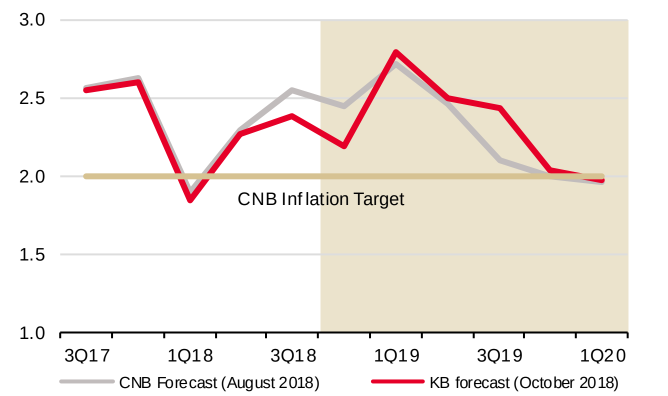
CNB to continue hiking despite slowing economy

Although the Czech economy has been slowing, inflationary pressures have strengthened. Wage dynamics remain stronger than we expected, and even more price pressures could emanate from the global economy. On top of that, the new CNB board members are not expected to be shy in calling for further monetary tightening. That said, we retain our forecast of four more rate hikes by the end of this cycle – one at the upcoming November meeting and three more next year. While the case for hikes has strengthened, we also see rising risks to our forecast, especially the uncertain external environment. This could delay a return to the estimated neutral rate (estimated between 2.5-3.5%).

FX unlikely to tighten monetary conditions as much as CNB expects

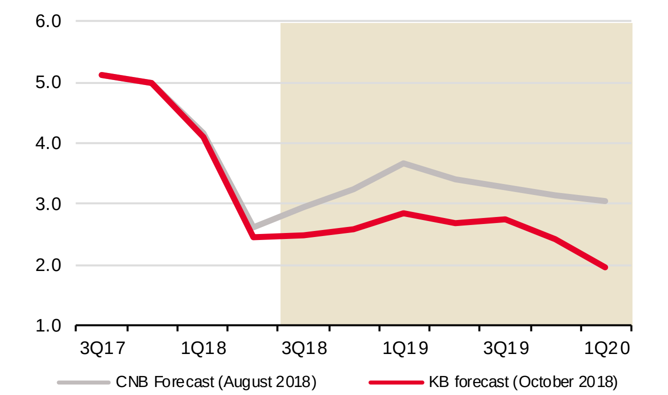
The CNB's August forecast saw three hikes by the end of 2018, and the bank has already delivered two, in August and September. However, **compared to that forecast, the recent data have been more pro-inflationary.** Although headline inflation is slightly lower than the CNB predicted, core inflation was three ticks higher (CNB calculation) in 3Q, while the negative surprise to headline inflation was mainly due to food prices. **The exchange rate is proving even more pro-inflationary. The central bank had expected the koruna to appreciate to EUR/CZK25.25 in the fourth quarter, but it is still hovering around 25.80.** That is a significant deviation that corresponds to 0.5pp in rates rise. Wage dynamics have been slightly weaker than the CNB expected, but given labour market tightness and government plans to further increase wages next year, **wage dynamics are unlikely to be an impediment to hikes.** We believe that the CNB will raise interest rates further, likely **hiking in November, as suggested by the August forecast.**

Inflation to strongly accelerate at beginning of next year (%)



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

Productivity gains to remain low (%)

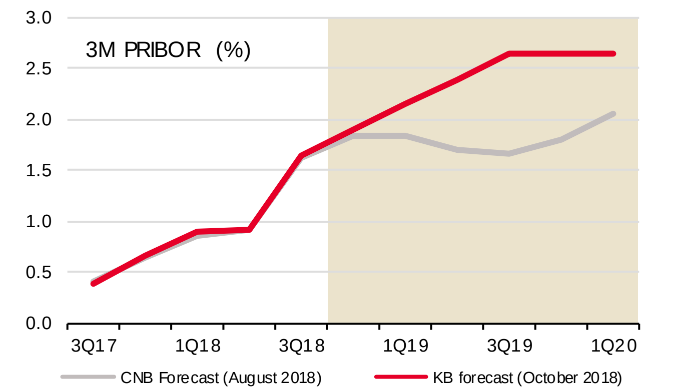


Source: CNB, CZSO, Macrobond, Economic & Strategy Research, Komerční banka

We also think the CNB will continue hiking next year. Although its forecasts suggest stable rates (or even one cut), **they also foresee expect rapid currency appreciation, which would provide the necessary conditions for monetary tightening.** This is not the first time the CNB has been very dovish in its medium-term rate forecast. The markets are not worried, already pricing in two hikes for next year. If we accept the CNB's assumption that a 25bp increase in rates equates to 1% currency appreciation, **we expect the same volume of monetary tightening as the CNB next year. However, we expect that it will be almost evenly split between FX and rates,** as we do not expect the koruna to appreciate as quickly as the CNB assumes. Our projection sees three hikes in 2019. **The repo rate should thus hit 2.5%, which is the lower bound of the neutral rate**

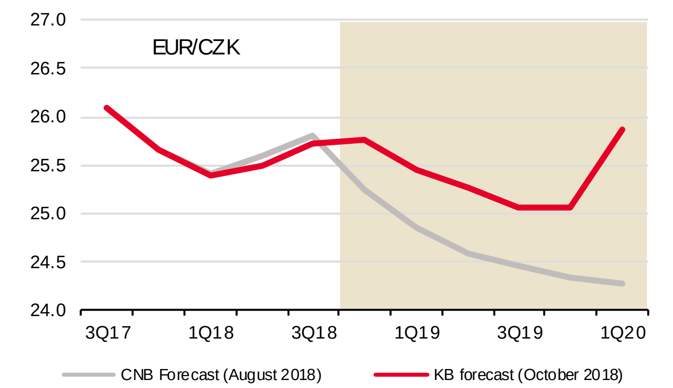
estimate, according to our models as well as CNB communication. In our view, the CNB will halt its hiking cycle at that point, as the financial sector should be showing signs of fragility before the beginning of the next significant economic slowdown that we expect in the beginning of 2020. **Given the current koruna weakness, we expect the CNB forecast to show one hike next year.** The markets should take this as a positive message, as the CNB would be moving toward market expectations. However, this could easily be overridden by an overall cautious tone at the press conference after the November meeting. Moreover, the decision will probably not be unanimous and might even be close, which will probably further mitigate the effect of the change in the forecast.

Monetary conditions to be tightened by interest rates…



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

… as CZK is set to appreciate only slowly



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

Risks threaten rate hikes only in long term

The external environment is generating several risks to the Czech economy. These include Brexit uncertainty, Italian turmoil, and a drop in car production Europe ie due to trade wars or, perhaps, new environmental regulations. These risks are not new, but they persist, and their probability of materialising is slowly increasing. Should they come about and an economic slowdown ensue, this might impede the hiking cycle in the medium to long term given the adverse effect on the labour market, including wage growth. However**, the impact on the labour market would come with a lag, and the current labour market tightness and public sector pay rises will ensure that domestic inflationary pressures do not fade in the short term.** Moreover, the risks threaten investment and thus productivity growth. That said, the materialisation of the risks paradoxically represents a short-term pro-inflationary risk, which would confirm our forecast for rate hikes at least for the first half of the next year. **The CNB would probably hike in reaction to more intense price pressures, even with the risk that it will have to cut rates later on.** In our view, such a course of action would correspond to the new composition of the bank board, which we expect to be more pro-active.

New board members will likely not hesitate to change the rates

Tomáš Holub

Source: CNB

During his post-graduate studies, Tomáš Holub began his career in the financial sector, joining Komercni banka as a macroeconomic analyst in 1996. After almost four years, he moved to the CNB. He first served as an adviser to Governor Tuma, and in 2004 he became executive director of the monetary department, where he remains to this day.

Under Holub, the monetary department has advised the CNB board to use monetary policy actively. **It often advised the board to move rates before the board actually took the step. That leads us to believe that as a board member, Holub will support pro-active monetary policy.** Thus, he will likely be a hawk in the current phase of the cycle and a dove when the cycle turns. Holub will likely be one of the first to call for rate cuts when he sees the initial signs of a slowdown of the economy.

Holub was one of the main defenders of the FX commitment. He appears to be a **prudent central banker who above all targets inflation despite the costs brought by the usage of extraordinary monetary policy measures.**

Aleš Michl

Source: Fond Quant

After graduating from the University of Economics in Prague, Aleš Michl joined the editorial staff of *Hospodarske noviny* newspaper in 2000. He went on to work as an advisor to the deputy prime minister for economic affairs. After two years, he moved to the banking sector, joining Raiffeisenbank as a macroeconomic analyst. He was later promoted to the position of chief investment strategist. Since 2014, Michl has served as an external advisor to Andrej Babis, who was initially finance minister and is now prime minister. Michl is one of the founders of the Prague-based Fond Quant investment fund.

Michl was one of the most vocal critics of the duration of the FX commitment. On several occasions, he came out in support of currency appreciation, which he sees as pushing businesses to innovate. In terms of interest rates, Michl believes that low rates do not motivate the government to shrink its deficits. That said, we assume that Michl will join the hawkish faction in the CNB, as he will likely be unconcerned about koruna appreciation and the related complaints from exporters. Michl has a cautious stance on euro adoption. He may not directly have objected to EMU entry, but he has criticised the Greek rescue plans. **He also often mentions the importance of an independent currency in terms of helping to mitigate external shocks.**

Czech FX Market

Why is the koruna not appreciating?

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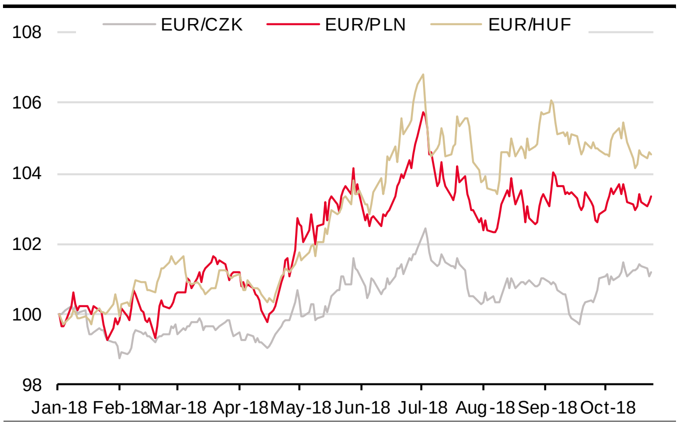
The koruna has disappointed us again, and we are not the only ones. The CNB expects the currency to reach an average of EUR/CZK25.25 in 4Q18, while it currently languishes around EUR/CZK25.80. The widening differential against EUR interest rates and Czech current account surpluses have failed to strengthen the currency. However, the fundamentals are supportive, and the koruna should appreciate. We expect it to reach EUR/CZK25 in the second half of 2019. After that, it will likely be hit again by mounting foreign economic weakness – it remains vulnerable to foreign factors.

Koruna strengthens temporarily after spring sell-off

Koruna only partially corrects previous losses in 3Q; weakening again since September

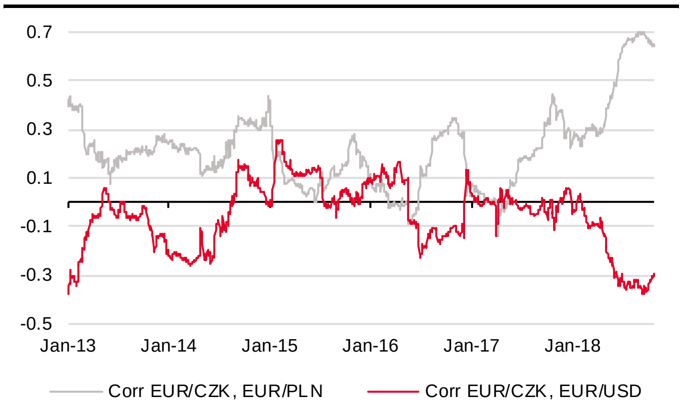
After the koruna suffered during the spring emerging-market sell-off, the summer months brought a partial recovery. However, by mid-September, the fragile positive trend had come to a halt again. The first impulse for this was the CNB's press conference after its September meeting, which failed to provide a sufficiently hawkish message. Since then, the market has been pricing the next rate hike in November, but the koruna has still not strengthened. **On the contrary, foreign risks have piled up and some have grown more serious, including Italian fiscal plans, the Brexit saga and German and euro area economic weakness.** These factors have further undermined the koruna.

No koruna appreciation this year, similarly to regional peers (1.1.2018 = 100)



Source: Bloomberg, Economic & Strategy Research, Komerční banka

Vulnerability to foreign developments prevails



Source: Bloomberg, Economic & Strategy Research, Komerční banka

Vulnerability to foreign events strengthened by year-end effect

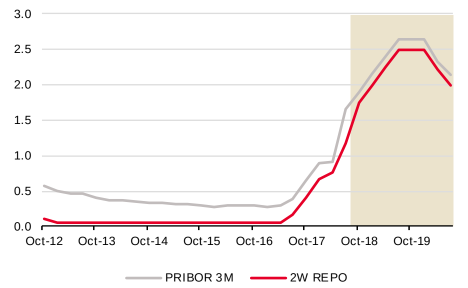
Koruna still vulnerable to external shocks and being weakened by year-end effect

EUR/CZK remains highly reactive to foreign developments. The correlation between EUR/CZK and EUR/PLN is still strong, as is the negative correlation between EUR/USD and EUR/CZK. The year-end effect has also recently kicked in. Because of the costs related to holding koruna deposits over year-end due to the computation of Resolution Fund contributions, investors and financial institutions usually aim to swap CZK into EUR for a limited period. This creates depreciation pressure towards year-end. **This effect is already being partially reflected in the exchange rate, and the koruna could weaken by a further 10-20 hellers at the very end of the year.**

Koruna to be supported by widening interest rate differential and current account surpluses

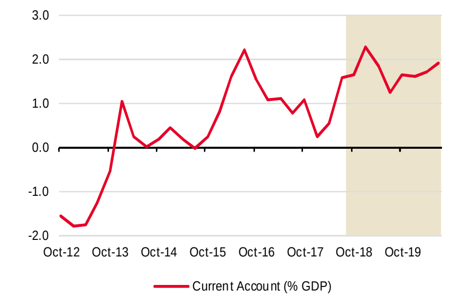
Fundamental factors still support koruna The koruna has fundamental reasons to appreciate. **The current account surplus indicates that real money inflows supply enough EUR liquidity to domestic companies.** The current account also looks set to print in positive territory in the next year. **At the same time, the interest rate differential against EUR has widened further.** The spread between CZK and EUR IRS amounts to more than 200bp at the shorter end of the curve. Moreover, CZGB yields are attractive and come with low risk. We expect a further rise in both IRS and government bond yields on the back of rising inflation expectations, solid CZGB supply and the tightening of CNB monetary policy, which is not yet fully priced.

Expected path of Czech money market rates



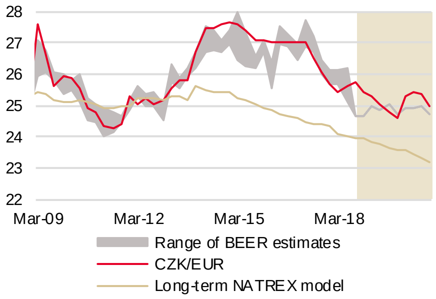
Source: CNB, Economic & Strategy Research, Komerční banka

Balance of payments C/A outlook



Source: CNB, Economic & Strategy Research, Komerční banka

EUR/CZK equilibrium exchange rate estimates (NATREX and BEER models)



Source: CNB, Economic & Strategy Research, Komerční banka

Equilibrium FX estimates are stronger, but the gap is not expected to close soon

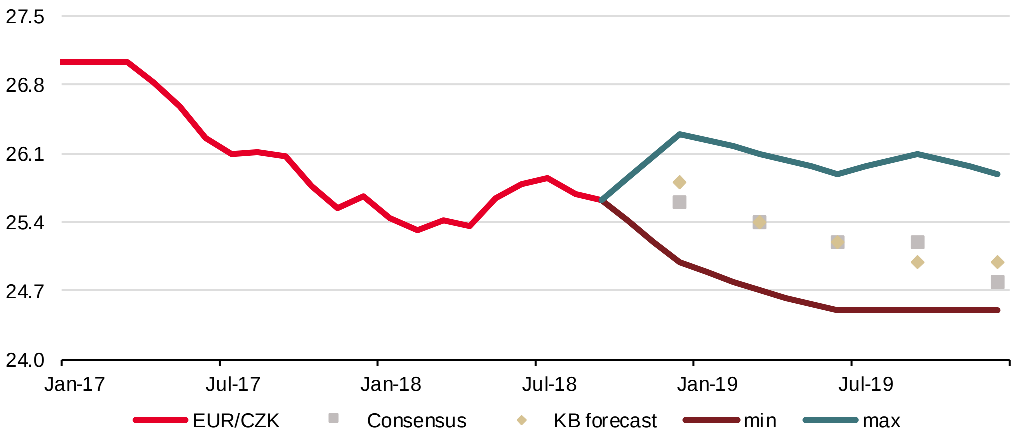
The NATREX equilibrium exchange rate model indicates a level close to EUR/CZK24 and foresees further gradual equilibrium koruna appreciation over the forecast horizon. According to our simulations, a large part of the current exchange rate gap can be attributed to the central bank's excessive FX reserves, which prevent strengthening towards the model's equilibrium. As we do not expect a significant reduction in the CNB's FX reserves during the forecast horizon, the koruna will likely stay biased towards weaker levels.

At the same time, the koruna will remain vulnerable to foreign uncertainties. **Short-term equilibrium estimates deriving from the BEER model are volatile and have recently ranged from EUR/CZK24.70 to EUR/CZK26.20.** This illustrates the uncertainty about the short-term koruna outlook.

Koruna to strengthen towards EUR/CZK25 only in 2H19

Our FX outlook for 2019 is mostly in line with the market consensus. We deviate by expecting weaker levels over the rest of this year due to the year-end effect, with the koruna not strengthening below EUR/CZK25.80. Next year, we see the exchange rate cautiously gaining and moving towards EUR/CZK25. We think it will hover around this level during the second half of 2019 before growing uncertainty kicks in as anticipation of a global economic slowdown brings negative sentiment to the markets.

Expected EUR/CZK exchange rate – market consensus, Bloomberg (24 October 2018)



Source: Bloomberg, Economic & Strategy Research, Komerční banka

Risk of weakening in event of global turmoil or different timing of slowdown

Given high level of foreign investment, koruna at risk of depreciation if foreign uncertainty increases

Sizeable foreign investment makes the koruna vulnerable. The central bank's FX commitment and intervention regime led foreign investors to speculate on CZK appreciation. These positions have since transformed into long-term carry trades, which make use of the interest rate differential against the euro area. The large position makes the koruna responsive to global sentiment. It could be adversely affected not only by an unexpected foreign shock but also if the global slowdown expected for 2019/2020 strikes earlier or ends up being more severe. In that event, the koruna could lose earlier or more substantially.

Conversely, a decrease in global uncertainty or a postponed global slowdown may lead to faster koruna appreciation compared to our baseline scenario.

EUR/CZK Technical Analysis *(updated on October 67 at 3:06pm)*

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Clear direction is still lacking

EUR/CZK has been showing a steady recovery after testing the multi month up channel support at 25.45/40 which also represents the 76.4% retracement from February lows. Formation of a monthly hammer further suggests 25.45/25.40 to be a medium-term support.

Shorter term, EUR/CZK has reclaimed the 200-day MA at 25.70/60 and is inching towards a projection at 25.90/26.00 also the 76.4% retracement from July. With daily indicators near ceiling, a move above 25.90/26.00 is needed for a larger recovery to take shape. In such a scenario, EUR/CZK will head first towards 26.20 and will perhaps even revisit the multi month up channel resistance at 26.40/26.48.

EUR/CZK, weekly and monthly charts

EUR/CZK, daily chart

Source: SG Cross Asset Research/Technical Analysis

Important Disclaimer: The recommendations in the part Technical analysis is based only on analytical methods of technical analysis and may be different from the fundamental opinion of KB (or SG) presented in other part s of this documents or of other documents of KB (or SG).

Czech government bonds and the IRS market

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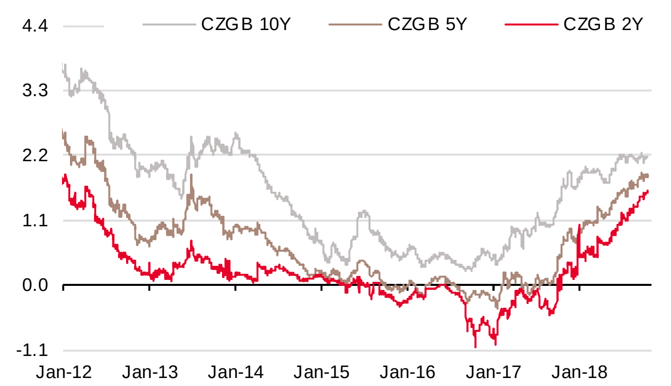
Yield curve flattening under way

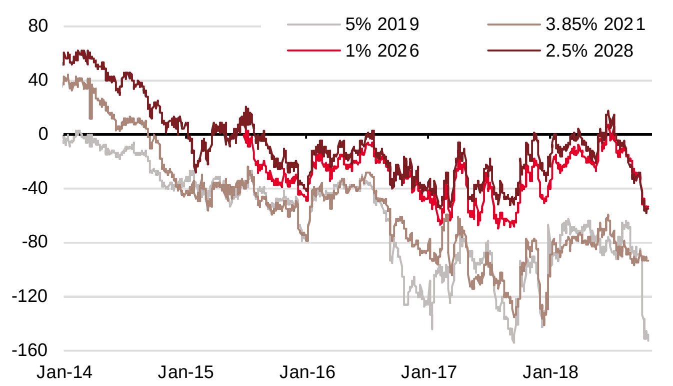
The yield curve is moving in line with our call for bear flattening, both on the IRS and CZGB markets. We expect the rise at the shorter end of the IRS curve to continue on the back of CNB hikes and robust inflation. The need to refinance large volumes of CZGBs next year together with a higher deficit is likely to push CZGB yields higher. That will lead ASWs to richen against the IRS curve.

CZGB yields, Bloomberg generic (%)



Source: Bloomberg, Economic and Strategy Research, Komerční banka

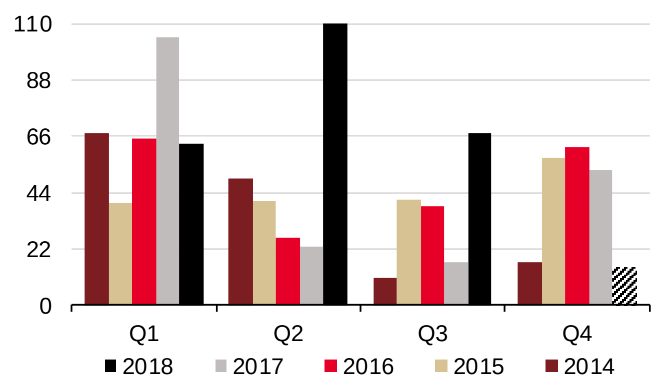
ASW spreads (bp)



Source: Bloomberg, Economic and Strategy Research, Komerční banka

Czech government bond prices continued to increase in 3Q. This was driven by the gradual tightening of CNB monetary policy. Yields are also being pushed up by inflation expectations as inflation is above 2% and set to remain there for some time. Solid CZGB supply contributed to the increase in CZGB yields too, as also the net issuance reached CZK80bn. The Eurobond maturing this August was refinanced using EUR loans with maturities up to 1 year, and we believe that high CZGB issuance might help the ministry to repay these loans if market conditions become less favorable.

Quarterly CZGB issuance on the primary market (CZKbn)



Source: Finance Ministry, Economic & Strategy Research, Komerční banka * 2Q-4Q18 is KB forecast

It was mainly short-term yields that rose, also reflecting the IRS curve flattening. ASW points have tightened substantially as the IRS curve was much faster to react to monetary policy tightening than CZGB yields. The most significant ASW tightening was observed in the bonds maturing next year. This reflects the year-end effect as many investors are trying to avoid the related negative rates.

Supply in 4Q18: time to pull the brake

Financing needs for this year are almost covered.

We expect government gross borrowing needs to reach CZK311bn this year, which is CZK40bn below the amount projected by the finance ministry. In our view, the difference stems from a lower budget deficit, which is indicated by the budget fulfillment figures from January to September. Year to date, the ministry has issued CZK245bn worth of long- and medium-term bonds. According to our calculations, it has therefore covered over 90% of this year's borrowing needs, which have declined substantially compared with its original plans. The government is set to end the year with a much smaller budget deficit than the ministry originally envisaged. Therefore this year's financing needs are almost covered. The November auction calendar indicates only one auction day with a mere CZK5bn to be issued. We don't expect much more in December. **The ministry plans to issue T-Bills worth up to CZK10bn. These will meet strong demand related to the year-end effect, as CZK holders try to avoid negative rates resulting from the computation of contributions to the resolution fund. We can easily see yields on the issued T-Bills turning negative, similar to a year ago.**

Gross borrowing needs and financing (CZKbn)

	2018e		2019e	
	MF June 2018	**KB Oct 2018**	**MF June 2018**	**KB Oct 2018**
Borrowing needs				
Budget deficit	50.0	10.0	40.0*	50.0
Buybacks of CZGBs		0.0		0.0
Redemption of CZGBs	236.1	185.0	240.9	240.9
Redemption of Eurobonds		51.1		0
Redemption of retail bonds	16.4	10.0	2.7	2.7
Redemption of T-bills	44.0	44.0	50	10
Redemption of other money market instruments	0.0	0.0		0.0
Redemption of EIB loans	4.8	5.8	4.7	4.7
Total	**351.3**	**305.9**	**338.3**	**308.3**
Financing				
Gross T-bill issuance		10.0		30.0
Gross CZGB issuance (in auctions)	min 150.0	255.0		240.0
Tap sales		10.0		10.0
Gross issuance of Eurobonds		0.0		0.0
Gross issuance of retail bonds		0.0		0.0
Tapping of financial reserve		30.9		28.3
Net effect of CZGB switches		0.0		0.0
Total financing		**305.9**		**308.3**
Net CZGB issuance		*80.0*		*9.1*

Note: *according to budget update from August 2018. Original plan CZK50bn.
Source: Economic & Strategy Research, Komerční banka, Finance Ministry

There is no new Eurobond issuance planned, but market conditions may be favourable next year.

Further Eurobond issuance does not seem to be on the radar. While the current year's financing needs are almost covered, the Eurobond could be an attractive financing option for next year. Comparable EUR-denominated bonds (such as Slovak, Belgian or French) are traded in the range of 0.8-1.0% yields. However, the ministry would need to at least partially hedge against the exchange rate risk, which involves swapping to CZK using an xccy basis and respective asset swaps. Given the recent values of ASW on the EUR and CZK legs, a hypothetical fully-hedged Eurobond would now offer the Czech ministry only marginally cheaper financing. We call for CZK ASW richening, which could make an interesting alternative to CZGB issuance next year. Also a further move in the xccy basis to the left could make this option more attractive.

Supply in 2019: high bond redemptions and a marginal decline in gross issuance

In 2019, CZK240.9bn of maturing CZGBs need to be rolled over. In addition to that, we expect T-Bill redemptions of CZK10bn and a budget deficit of CZK50bn, i.e. higher than indicated by the 2019 budget plan. To sum up, financing needs are likely to be quite high again. **We expect gross CZGB issuance to reach CZK240bn in 2019.** A lower amount of bonds (CZK10bn) is likely to be sold by the ministry on the secondary market. **Net issuance will reach CZK10bn. In the following year we also expect higher T-Bill issuance at the end of the year.** We still don't expect the ministry to issue any Eurobonds.

CZGB yields to rise in 4Q18 and 2019 due to CNB and strong supply

We have raised our CZGB yield forecasts both at the short and long end of the curve.

Growth in CZGB yields stayed close to our previous forecast. Strong supply in the current year related to the refinancing of a maturing Eurobond on the CZGB market sent yields upwards. Other contributing factors were the increase in inflation expectations and the tightening of monetary policy by the CNB. Nevertheless, the increase in yields was mitigated by a large foreign investment position in CZK assets. We expect the 10y CZGB to reach 2.30% at the end of the year. A temporary increase in demand, mainly at the shorter end of the curve, can be expected due to the liquidity constraints related contributions to the resolution fund.

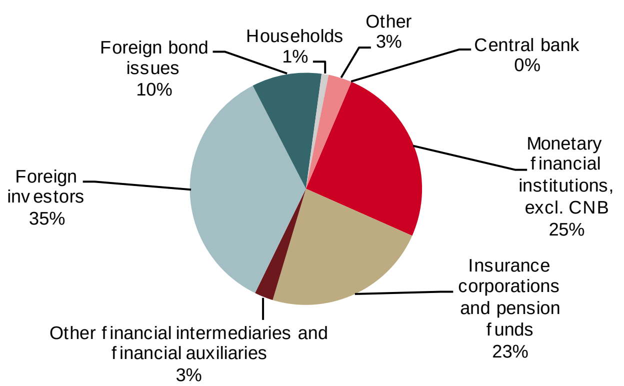
CZGB yield forecast

	4Q18f	1Q19f	2Q19f	3Q19f	4Q19f
2y CZGB yield (%)	1.70	2.00	2.20	2.30	2.20
10y CZGB yield (%)	2.30	2.50	2.70	2.80	2.70
10y CZGB ASW (bp)	-50	-40	-30	-20	-15

Source: Economic & Strategy Research, Komerční banka

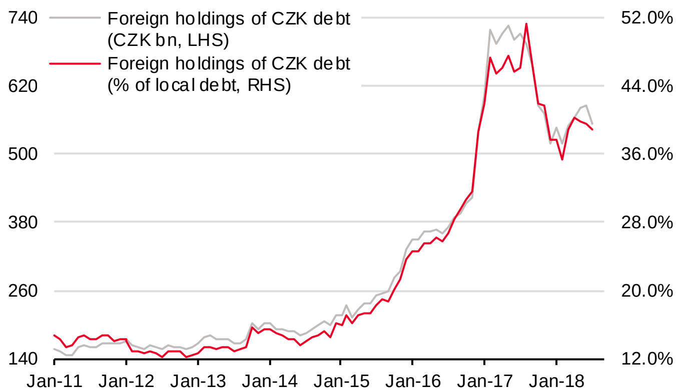
Next year, the CNB looks set to tighten monetary policy gradually further, by 25bp per quarter before reaching 2.50% in 3Q. Inflation will stay above 2%, while CZGB supply will be strong again with a higher budget deficit. These factors will contribute to a further increase in CZGB yields. 10y CZGB yields will reach 2.80% next year while 2y yields should climb to 2.30% before the slowdown of global growth kicks in. After that, IRS are likely to decline and demand for safe assets will soar. This means CZGB yields are likely to fall again in 2020.

Holdings of CZK government debt, end-August 2018



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

Share of non-resident holders has stabilised at around 40%

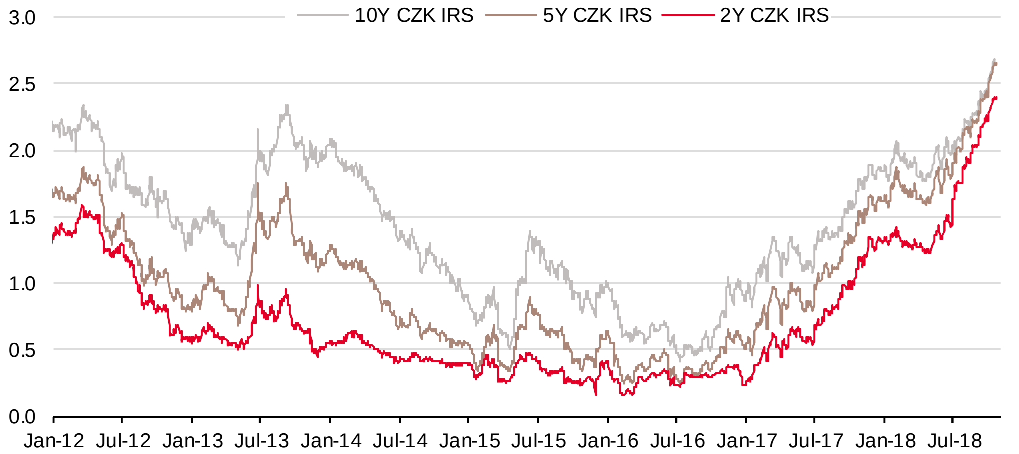


Source: Finance Ministry, Economic & Strategy Research, Komerční banka

CZGB holding structure expected to be stable

The share of non-residents has stabilised at around 40%. That is a relatively low level compared to the previous year, when foreign investors were lured in by the expected CZK appreciation related to the exit from the exchange rate floor policy maintained by the CNB. Nevertheless, the share of foreign bondholders still remains well above pre-intervention levels. We expect it to stay close to current levels, as CZGBs offer an attractive carry for long-term investors in the context of low foreign yields. Thus, the carry investors have gradually replaced short-term speculators on CZK appreciation related to the exit. Also, the CNB does not plan to reduce its FX reserves substantially, which could partially absorb the ample CZK liquidity.

CZK IRS trend (%)



Source: Bloomberg, Economic & Strategy Research, Komerční banka

CZK interest rate swaps: yield curve flattening continues

Revised call on CNB monetary policy results in a higher CZK IRS trajectory.

Based on further CNB tightening over the course of next year, IRS are set to further increase. We expect the 10y IRS to reach 2.50% by the year-end. In addition to the expected increase in EUR rates, the shift is driven by our expectation of more hawkish CNB monetary policy than is currently priced in by the market. We believe that the new CNB forecast to be published in November will show more tightening next year, contributing to an upward adjustment of the IRS. Also the longer end of the curve is expected to increase slightly, with the 10y IRS reaching 2.80% by the year-end due to strong domestic inflation raising inflation expectations.

CZK IRS outlook (%)

	4Q18f	1Q19f	2Q19f	3Q19f	4Q19f
2y	2.50	2.70	2.80	2.90	2.80
5y	2.80	2.90	3.00	3.00	2.90
10y	2.80	2.90	3.00	3.00	2.90

Source: Economic & Strategy Research, Komerční banka

IRS yield curve flattening is moving in line with our expectations. The 5y10y spread has declined to zero. **We expect further bear-flattening at the shorter end over the rest of 2018 and early 2019.** This reflects one additional CNB hike above current market pricing. Meanwhile, the belly and the long end are expected to come under mounting pressure from uncertainties relating to global economic slowdown expected for the end of 2019/early 2020.

Banking Sector

Regulation and high prices to slow housing loan momentum

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Stricter CNB housing loan recommendations have come into force since October. In line with our previous forecast, quarter-on-quarter housing loan growth in 3Q confirmed the momentum of the first two quarters (2% qoq). **We expect tighter regulation to lead to a quarter-on-quarter decline at the end of the year and consequently weaker growth momentum next year.** Consumer loans continue to draw their strength from the power play of the labor force on the labor market. Indeed, wage dynamics culminated in the second half of this year, boosting consumer loans. And recently, lending momentum to non-financial corporations has also accelerated. Investment loans have grown in the past few months as have operating and specific purpose loans. Despite this acceleration, we expect the pace of these loans to slow again next year, signalling the beginning of a global economic slowdown that is set to hit the Czech economy at the turn of 2019/2020.

Rising interest rates stimulate deposit business. The significant upward revision of our overall forecast for this year is due to one-off factors, a revision of the time series for other deposits, and an increase of government deposits in the banking sector owing to higher issuance activity during the summer months.

Interest rates on commercial loans to increase in line with the expected tightening of monetary policy as described in the *CNB Focus* section of this report above. A faster rise in housing loans rates likely will be dampened by weaker demand on the back of regulation, higher property prices and stiff competition among banks. Moreover, consumer loan rates likely will rise on the back of the greater risk of default, as consumers contend with worsening economic conditions on the forecast horizon. A rise in housing loan NPLs, however, will be more gradual as compared to consumer loans.

Bank loans and deposits (% yoy)

	3Q18	4Q18	1Q19	2Q19	3Q19	4Q19	1Q20	2Q20	2017	2018	2019	2020	2021	2022	2023
Bank loans															
Total	5.4	7.7	6.3	5.1	3.8	3.2	3.9	4.0	**6.3**	**5.5**	**4.6**	**4.2**	**4.0**	**5.1**	**5.4**
Households - real estate loans	8.2	5.6	5.0	3.6	2.6	3.8	4.1	4.6	**9.3**	**7.7**	**3.7**	**4.9**	**5.3**	**5.8**	**5.9**
Households - consumer loans	5.7	6.4	6.3	5.0	4.6	3.4	3.8	4.3	**4.4**	**5.5**	**4.8**	**4.5**	**5.4**	**6.9**	**7.0**
Corporate loans	5.5	8.4	8.1	5.3	3.7	1.6	3.2	3.8	**4.9**	**5.2**	**4.6**	**3.9**	**3.1**	**4.3**	**4.9**
Deposits															
Total	6.2	8.4	8.2	6.5	5.5	4.4	4.1	3.7	**12.0**	**6.7**	**6.1**	**3.7**	**3.4**	**4.4**	**4.7**
Households	7.7	9.1	9.2	8.4	8.1	6.7	6.0	4.8	**8.5**	**7.6**	**8.1**	**4.5**	**2.9**	**4.3**	**4.7**
Non-financial corporations	1.1	5.9	5.8	3.9	4.5	3.3	3.2	3.7	**9.9**	**2.6**	**4.4**	**3.8**	**4.6**	**4.8**	**4.7**
Others	7.9	9.4	8.3	5.1	1.3	0.4	1.1	1.5	**22.1**	**8.6**	**3.8**	**2.2**	**3.4**	**4.4**	**4.5**
Ratios															
Loans/GDP	63.2	62.6	62.6	62.4	62.6	61.6	62.2	62.4	**62.7**	**62.4**	**62.3**	**62.6**	**63.0**	**63.4**	**63.6**
Deposits/GDP	86.3	85.0	88.6	86.9	86.8	84.7	88.1	86.6	**85.1**	**85.6**	**86.7**	**86.7**	**86.9**	**86.8**	**86.6**
Loans/deposits	73.2	73.5	70.6	71.9	72.1	72.7	70.5	72.1	**73.7**	**72.9**	**71.8**	**72.1**	**72.5**	**73.0**	**73.5**
Interest rates															
Real estate loans	2.7	2.8	2.9	3.0	3.1	3.1	3.1	3.1	**2.3**	**2.7**	**3.0**	**3.1**	**3.1**	**3.3**	**3.5**
Consumer loans	8.4	8.8	9.3	9.6	10.0	10.3	10.5	10.6	**9.2**	**8.6**	**9.8**	**10.6**	**11.0**	**11.6**	**11.9**
Corporate loans	2.8	3.3	3.6	3.9	4.1	4.1	4.1	3.8	**2.0**	**2.7**	**3.9**	**3.8**	**4.0**	**4.7**	**5.1**
Share of NPL															
Real estate loans	1.7	1.7	1.7	1.7	1.8	1.8	1.9	1.9	**1.8**	**1.7**	**1.7**	**2.0**	**2.2**	**2.4**	**2.5**
Consumer loans	5.4	5.4	5.4	5.7	6.0	6.5	7.0	7.6	**6.9**	**5.5**	**5.9**	**7.7**	**9.0**	**9.7**	**10.0**
Corporate loans	3.5	3.5	3.6	3.7	3.9	4	4.2	4.4	**4.6**	**3.6**	**3.8**	**4.6**	**5.5**	**5.7**	**5.8**

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

Key Economic Indicators

Macroeconomic indicators – long-term outlook

		2016	2017	2018	2019	2020	2021	2022	2023
GDP	real. %	2.4	4.5	2.9	2.7	1.5	2.4	2.7	2.5
Inflation	average. %	0.7	2.5	2.2	2.4	1.6	1.2	2.0	2.2
Current account	% of GDP	1.6	1.1	1.7	1.6	1.8	2.1	1.6	1.5
3M PRIBOR	average. %	0.3	0.4	1.3	2.5	2.3	2.4	3.1	3.5
EUR/CZK	average	27.0	26.3	25.6	25.2	25.8	24.9	24.1	23.5
USD/CZK	average	24.4	23.4	21.5	19.9	19.0	18.6	17.8	17.4

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

FX & interest-rate outlook

		28-Oct-2018	Dec-18	Mar-19	Jun-19	Sep-19	Dec-19
EUR/CZK	end of period	25.9	25.8	25.4	25.2	25.0	25.0
USD/EUR	end of period	1.14	1.19	1.21	1.24	1.30	1.32
CZK/USD	end of period	22.7	20.8	20.3	19.8	19.4	18.9
3M PRIBOR	end of period	1.80	2.00	2.25	2.50	2.65	2.65
10Y IRS	end of period	2.52	2.80	2.80	2.95	3.00	3.00

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

Monthly macroeconomic data

		1-18	2-18	3-18	4-18	5-18	6-18	7-18	8-18	9-18
Inflation (CPI)	%. mom	0.6	0.0	-0.1	0.3	0.5	0.4	0.2	0.1	-0.3
Inflation (CPI)	%. yoy	2.1	1.8	1.7	1.9	2.2	2.6	2.3	2.5	2.3
Producer prices (PPI)	%. mom	0.5	-0.4	0.3	0.2	1.0	0.6	0.3	0.1	0.3
Producer prices (PPI)	%. yoy	0.5	-0.3	0.1	0.0	1.5	2.9	3.4	3.3	3.2
Unemployment rate	% (MLSA)	3.9	3.7	3.5	3.2	3.0	2.9	3.1	3.1	3.0
Industrial sales	%. yoy. c.p.	4.4	0.7	-4.7	4.4	-0.6	2.8	11.3	4.1	n.a.
Industrial production	%. yoy. c.p.	5.1	2.7	-1.5	5.2	0.7	3.1	10.3	1.9	n.a.
Construction output	%. yoy. c.p.	32.8	11.0	0.4	6.6	8.2	5.5	15.8	11.9	n.a.
Retail sales	%. yoy. c.p.	6.8	3.0	-1.2	5.2	2.3	1.4	7.0	2.5	n.a.
External trade	CZK bn (national met.)	20.6	20.1	20.1	18.4	10.2	15.8	-6.6	2.3	n.a.
Current account	CZK bn	35.0	31.2	-10.4	30.5	0.4	-22.4	-0.1	-7.0	n.a.
Financial account	CZK bn	27.1	39.3	-20.9	18.6	17.2	-49.2	22.1	-8.2	n.a.
M2 growth	%. yoy	7.0	6.6	4.9	3.9	5.0	5.3	4.7	4.9	n.a.
State budget	CZK bn (YTD cum.)	26.5	25.8	16.3	0.8	-23.1	-5.9	16.6	14.8	16.8
PRIBOR 3M	%. average	0.77	0.90	0.90	0.90	0.90	0.95	1.18	1.45	1.54
EUR/CZK	average	25.44	25.33	25.42	25.37	25.64	25.79	25.84	25.70	25.62
USD/CZK	average	20.87	20.52	20.61	20.67	21.71	22.10	22.11	22.26	21.97

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

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